# User Guide

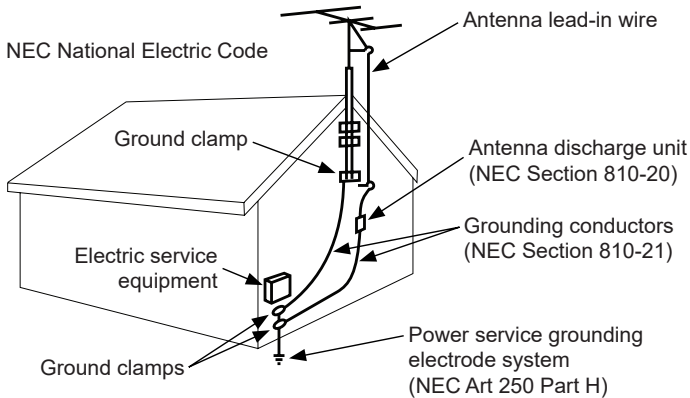## XTREME™ HIGH BRIGHT OUTDOOR DISPLAY

**MODEL:** XHB432, XHB492, XHB552

# SYSTEM INSTALLATION AND ELECTRICAL REQUIREMENTS

## Electrical Code

**Note:** To the display system installer: This reminder is provided to call attention to Article 820-44 of the National Electric Code that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the facility. Outlet shall be installed near the equipment and shall be easily accessible.



NEC National Electric Code

Antenna lead-in wire

Ground clamp

Antenna discharge unit (NEC Section 810-20)

Grounding conductors (NEC Section 810-21)

Electric service equipment

Ground clamps

Power service grounding electrode system (NEC Art 250 Part H)

**Note:** Installation shall incorporate UL Listed external surge protection rated 2500 Vpk or less, for 150 to 300 Vac mains, installed in accordance with Article 285 of ANSI/NFPA 70 or applicable local codes.

## Power Source

The display must be connected to a mains socket outlet with a protective grounding connection.

The mains plug is used as the disconnect device and shall remain readily accessible.

Electrical installation shall be in accordance with the applicable parts of Chapter 8 of ANSI/NFPA70.

An outdoor antenna should not be located near overhead electrical lines or any electrical circuits.

If an outside antenna is connected to the receiver, confirm that the antenna system is grounded to protect against voltage surges and built up static charges. Section 810 of the National Electric Code, ANSI/NFPA No 70-1984, provides information with respect to proper grounding for the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding connectors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.

This display operates on 110-220 volts 50-60 Hz, AC current. Insert the power cord into a 120 volt 60 Hz outlet. Never connect the display to direct current or anything other than the specified voltage.

To prevent electric shock from the display, do not use with an extension cord, receptacle, or other outlet unless the blades and ground terminal can be fully inserted to prevent blade exposure.

## FCC CAUTION

To assure continued compliance and possible undesirable interference, ferrite cores may be used when connecting this display to video equipment; maintain at least 400mm (15.75 inches) spacing to other peripheral devices.

## FCC STATEMENT

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

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

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

• This device may not cause harmful interference.
• This device must accept any interference received, including interference that may cause undesired operation.

## Relevant Information

Record your display's model and serial number here for future reference. Keep this user manual in an accessible location in the event service is required.

Note: Your display's serial number can be found on the box and underneath the rear cover plate.

Model Number _____

Serial Number _____

# GENERAL SAFETY PRECAUTIONS

## Read before operating equipment

Thank you for purchasing our product. Before using it, please read this user guide carefully and follow the instructions for safe operation. Please keep this manual for future reference and always include it when transferring or transporting this product to a different location.

## ⚠ WARNING

In case of emergency such as fire or electric shock caused by the product, immediately contact 911 or proper emergency police/fire service agencies in your country.

To reduce the risk of electric shock or fire, heed the following:

- In case of product malfunction or unusual events such as electrical burning smell, smoke, or loss of content signals due to internal overheating, immediately turn off, unplug the electrical cord and contact the manufacturer.
- Do NOT disassemble, modify or service product in any way other than that contained in this instruction. Any unauthorized modifications made to the product automatically void product warranty.
- Do NOT touch antenna lines or wires, electrical cables or plugs when lightning or thunder is present or with wet hands
- Do NOT submerge in water.
- Do NOT destroy, process, or place close to any heat source.
- Do NOT install near poisonous gas or chemically unstable atmosphere.
- Do NOT install near strong magnetic or electrical current field.
- Do NOT install the product in unstable locations or near moving objects, constantly vibrating equipment, or uneven surfaces.
- Do NOT leave any fire source, such as candles, close to or on the product.
- Do NOT operate the product if it has been dropped or struck. Severe physical impact to the product may cause components to fall out of place within and break.
- Do NOT bend or twist electrical cords, electrical plugs, cables, or wires with excessive force.
- Do NOT block ventilation slots or place any heavy object on the product.
- Use properly rated electrical voltage.
- Do NOT use any electrical sockets or power strips with many other devices jointly plugged in. Use a single, directly dedicated and rated GFCI electrical outlet for the product for safe operation.
- Do NOT move or transport with any cables (electrical, content connectivity) plugged in to the source devices.
- Always connect the electrical plug firmly and completely. When disconnecting any cables, always pull on the plug and not the cord.
- Always leave the power off when plugging or unplugging the electrical cords or connection cables.
- Do not defeat the safety purpose of the polarized or grounding type electrical plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the electrical cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

## ⚠ WARNING

- Never apply pressure to the exterior of the LCD screen.
- If monitor or glass is broken, do not come in contact with the liquid crystal and handle with care.
- Do NOT climb on the product.
- Do NOT install within five feet from a body of water.
- Do NOT use if ambient air temperature exceeds the operating limits.
- The product is to be secured to building before operation.
- Product must be carried and supported by at least two persons.
- Periodically clean dust off the electrical plug to keep it clean and dry, ensuring proper and safe operation.
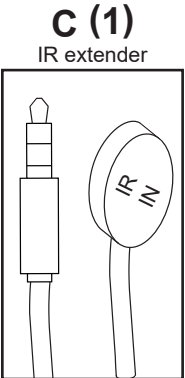- Only use attachments/accessories specified by the manufacturer.

# CONTENTS

# SET UP INSTRUCTIONS

## Parts List

|   | Description | Qty | XHB432 Part # | XHB492 Part # | XHB552 Part # |
|---|---|---|---|---|---|
| A | display | 1 | 180-W1663 | 180-W1664 | 180-W1665 |
| B | remote | 1 | 410-0049 | 410-0049 | 410-0049 |
| C | IR extender | 1 | 600-0711 | 600-0711 | 600-0711 |
| D | power cord | 1 | 410-0163 | 410-0163 | 410-0163 |
| E | 4mm allen wrench | 1 | 560-9646 | 560-9646 | 560-9646 |
| F | M6 x 12mm | 4 | 560-D1734 | 560-D1734 | 560-D1734 |
| G | user guide | 1 | 180-9116 | 180-9116 | 180-9116 |
| H | monitoring addendum | 1 | 180-9020 | 180-9020 | 180-9020 |
| I | technical support insert | 1 | 983-0721 | 983-0721 | 983-0721 |
| J | accessory insert | 1 | 983-0738 | 983-0738 | 983-0738 |

## A (1)
display



## B (1)
remote



## C (1)
IR extender



## D (1)
power cord



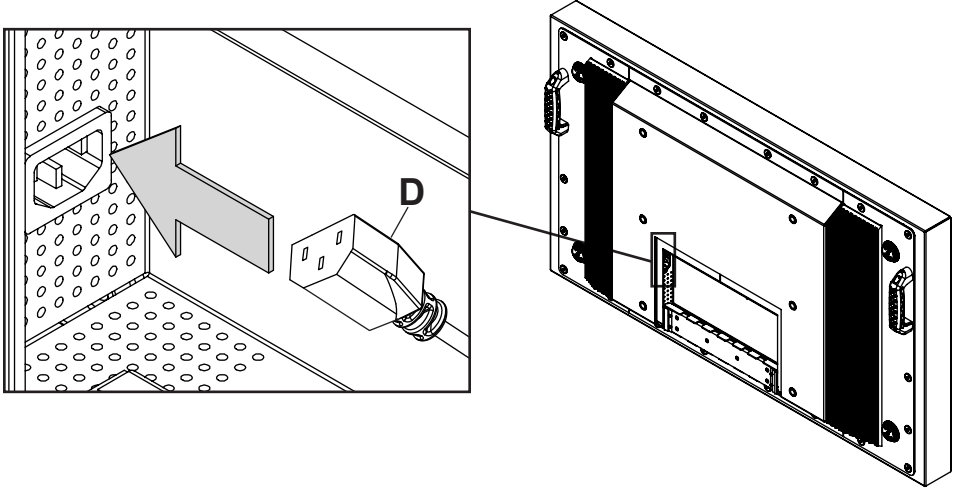## E (1)
4mm allen wrench



## F (4)
M6 x 12mm
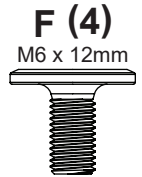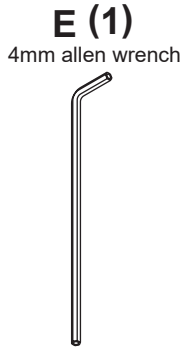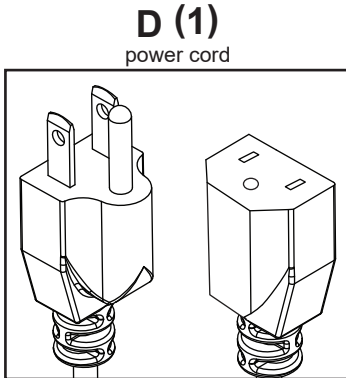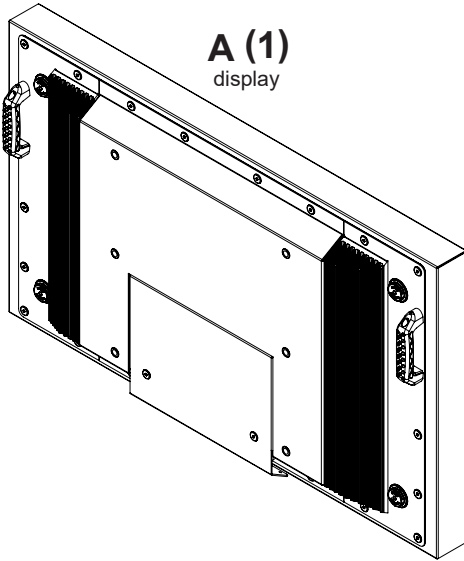
## Removing Cord Cover

1. Remove (2) M6 low-profile hex screws and rear cover plate using 4mm allen wrench (E). Do not disconnect lanyard.
2. Remove (6) M5 hex screws and cord cover using 4mm allen wrench (E).



lanyard
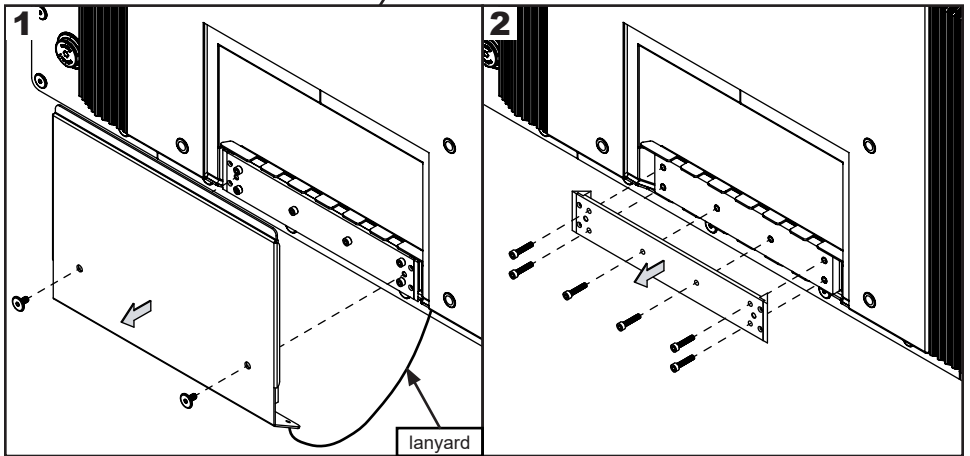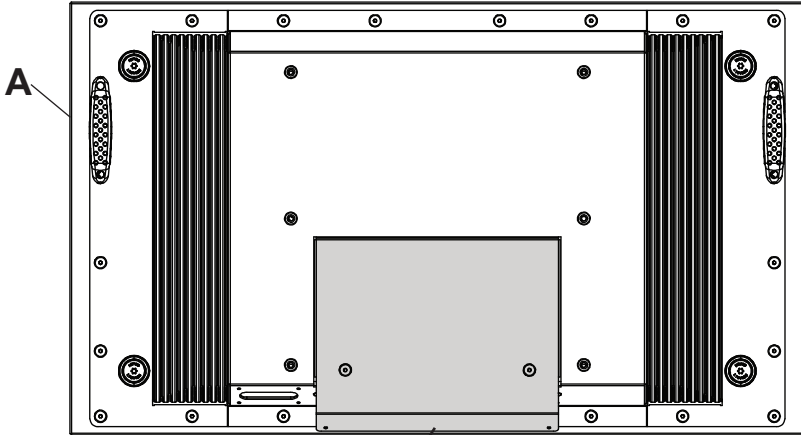
## Installing Power Cord

Insert female end of power cord (D) into power port located inside the input compartment.



## Installing IR Extender (Optional)

Insert the 3.5mm end of the included 5V IR extender into the IR Extender port on the input panel of the display. IR extender port may not be compatible with other 3rd party extenders.
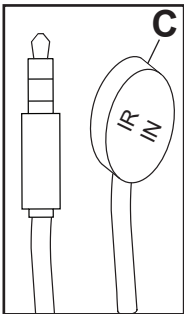


## Installing Ambient Light Sensor (ALS) Extender (Optional)

Insert the 3.5mm end of the ALS Extender (ACCD-ALS sold separately) into the ALS Extender port on the input panel of the display. Connecting the ALS Extender will disable the ALS that is built into the display.
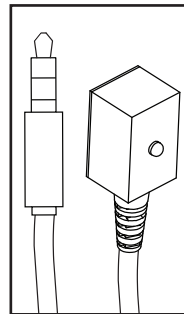
# Connecting Cords

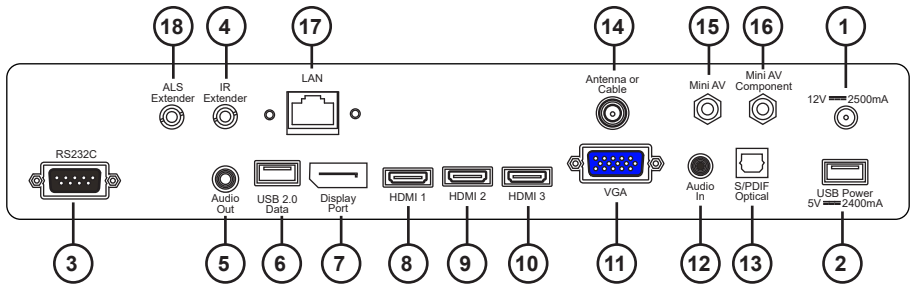Connect source devices to appropriate display input. Make all connections prior to powering on the display. The USB 2.0 Data port is for service and media only. For 5VDC power, use the 5VDC power port.



1. **2.5mm DC Power Port** – Provides 12 VDC @ 2.5 A for powering locally stored extenders and source devices. 12 VDC accessory kits (ACCD-12K) are sold separately from Peerless-AV by contacting Customer Care at 800-865-2112.

2. **USB DC Power Port** – Provides 5 VDC @ 2.4 A for powering locally stored extenders and source devices. 5 VDC accessory kits (ACCD-05K) are sold separately from Peerless-AV by contacting Customer Care at 800-865-2112.

3. **RS232C DB9 Port** – Allows for control of the display using RS232 commands from a connected PC or control system. Pin Out: Pin 2 (RX), Pin 3 (TX), Pin 5 (GROUND)

4. **3.5mm IR Extender Port** – Allows flexibility for integration with controls systems. The IR extender can be used to position the IR receiver in a convenient position in the event the IR receiver on the front of the display is obscured.

5. **3.5mm Analog Audio Out Port** – Provides analog stereo audio for soundbars, headphones, and amplifiers.

6. **USB 2.0 Data Port** – Allows content to be displayed using a USB flash drive. This feature supports text, photo, audio and video. This port also serves as a service port for firmware upgrades. This port should not be used for powering 5 VDC devices.

7. **DisplayPort** – Connects a digital source device with the display and allows for FHD video and digital audio to be output on the display. DisplayPort is version 1.2 and is HDCP 1.3 compliant.

8. **HDMI 1 (ARC)** - Connects a digital source device with the display and allows for FHD video and digital audio signal to be output to the display. HDMI 1 is HDMI version 2.0 and is HDCP 2.2 compliant. All 3 of the HDMI inputs also support consumer electronics control (CEC). CEC allows for intelligent communication between CEC-enabled devices through the use of the HDMI connection with either the source remote control or the display remote control. HDMI 1 also supports the audio return channel (ARC) allowing audio content from the display to be output to an AVR using a single HDMI cable eliminating the need to backfeed audio.

9. **HDMI 2** - Connects a digital source device with the display and allows for FHD video and digital audio signal to be output to the display. HDMI 2 is HDMI version 2.0 and is HDCP 2.2 compliant. All 3 of the HDMI inputs also support consumer electronics control (CEC). CEC allows for intelligent communication between CEC-enabled devices through the use of the HDMI connection with either the source remote control or the display remote control.

10. **HDMI 3** - Connects a digital source device with the display and allows for FHD video and digital audio signal to be output to the display. All 3 of the HDMI inputs also support consumer electronics control (CEC). CEC allows for intelligent communication between CEC-enabled devices through the use of the HDMI connection with either the source remote control or the display remote control. HDMI 3 is HDMI version 2.0 and is HDCP 2.2 compliant. HDMI 3 also supports mobile high definition link (MHL3.0) allowing MHL compatible mobile devices to output HD content to the display, transport control and charge the connected device.

## Connecting Cords

11. VGA – Connects an analog source device with the display and allows FHD video signals to be output to the display. VGA does not support audio. When using a VGA connection the audio output from the source device will need to be connected to the 3.5mm Audio In port on the display.

12. 3.5mm Analog Audio In – Accepts the incoming stereo analog audio signal coming from a VGA connected source device.

13. S/PDIF Optical Output – Outputs uncompressed digital audio to a connected soundbar or AVR with an optical digital audio input.

14. Antenna/Cable Coaxial Input – Supports ATSC, NTSC and QAM256 signals. It can be used with an over-the-air antenna or in a distributed coaxial network. This connection supports both analog and digital signals.

15. 3.5mm Mini AV – Connects an analog source device with the display and allows for SD video and analog stereo audio signals to be output to the display. This connection also supports the audio portion of a connected component device. Requires a 3.5mm to RCA female composite accessory dongle. Analog accessory kits (ACCD-ALG) are sold separately from Peerless-AV by contacting Customer Care at 800-865-2112.

16. 3.5mm Mini Component – Connects an analog source device with the display and allows for HD video and analog stereo audio signals to be output to the display.  Requires a 3.5mm to RCA female component accessory dongle for video signals. If audio is required when using the component connection, the stereo audio signal will need to connect to the red and white female RCA connectors on the composite accessory dongle. Analog accessory kits (ACCD-ALG) are sold separately from Peerless-AV by contacting Customer Care at 800-865-2112.

17. LAN Port – Supports local and remote monitoring and control. The displays have the ability to monitor humidity, temperature, power draw and backlight and send alerts if any of these parameters are out of normal operating range. (See manual addendum)

18. 3.5mm Ambient Light Sensor (ALS) Extender – Automatically adjusts the brightness of the display based on ambient lighting conditions. The ALS extender overrides the built-in ambient light sensor when it is connected allowing flexibility for installations where the built-in ALS may have shadows being cast on it by surrounding structures or vegetation. The ALS extender can be placed in a location that is more representative of the actual ambient light conditions. ALS Extenders (ACCD-ALS) are sold separately from Peerless-AV by contacting Customer Care at 800-865-2112.

## Replacing Cord Cover

1.  Run power and signal cords through notches. To prevent unwanted interference, route the power cord through the left most notch (see image 1 below).
2.  Place the cord cover over the cords being careful not to pinch any of the cords. Loosely install (6) M5 hex cap screws then tighten screws on the cord cover using 4mm allen wrench (E) until the gasket on the cover is fully compressed to the cord gasket .
3.  Replace the rear cover plate ensuring that the cords are running through the notches on the display and not getting pinched. Fasten the (2) hex screws on the rear cover plate to secure it in place using 4mm allen wrench (E). Ensure that rear cover plate is fully compressed to the back of the display.



**1**

power cord | notch

**2**

M5 hex cap screw

**3**

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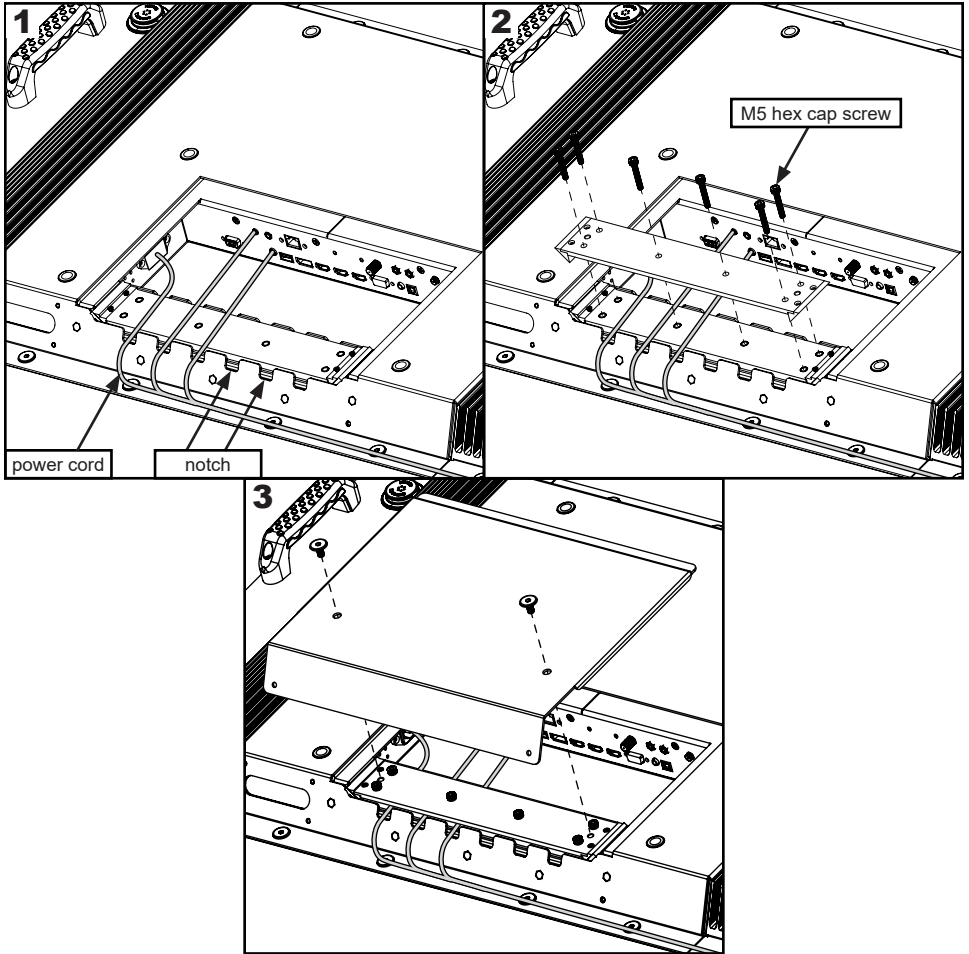
## CAUTION

- Ensure cord bend radius does not exceed limits set by the manufacturer.
- Ensure cords are seated properly in the cable channels to avoid potential damage to cords when rear cover plate is installed.
- Do not remove lanyard that connects the rear cover plate to the display.
- Ensure cables exiting input compartment are routed downward when installing display in portrait orientation. If the installation requires the cabling to be routed upward, ensure that the cables are routed with a drip loop.

⚠ Do not overtighten screws
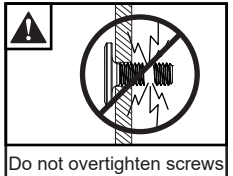
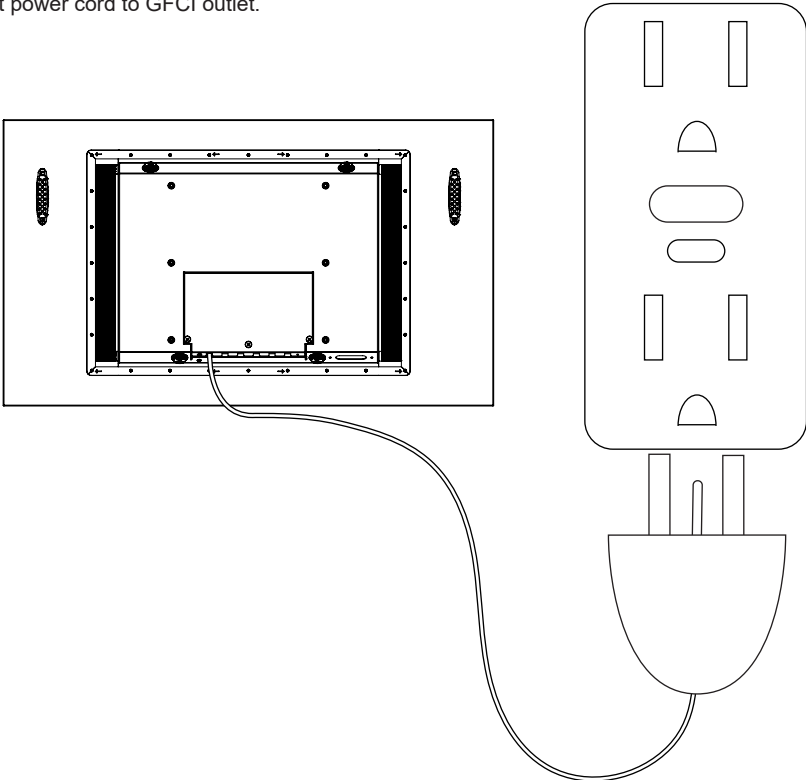## Replacing Handle Hardware

Optional: If removing handles, replace with harware provided.



F (4)
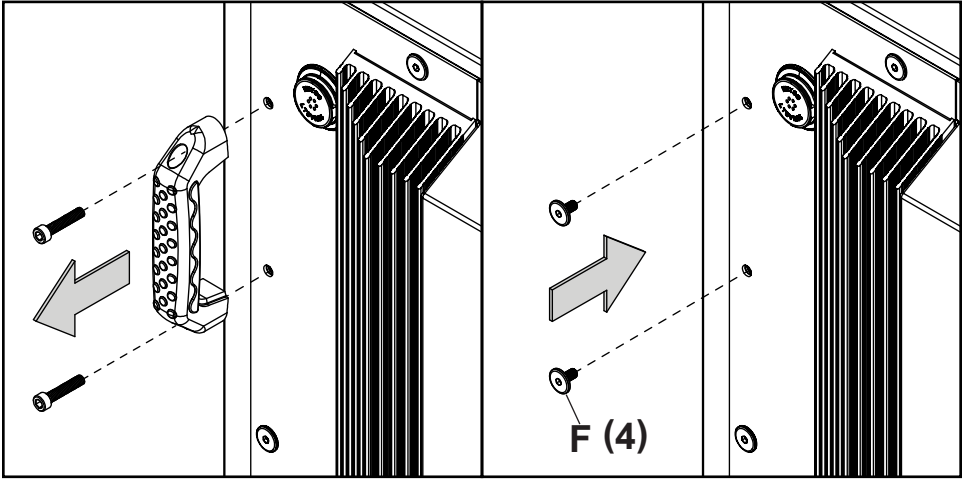
## Connect To The Power Source

Connect power cord to GFCI outlet.

## Prepare The Display For Mounting

Install cords prior to mounting your display. Input panel may be obstructed once the display is mounted.

A mounting solution is sold separately. Contact your Peerless-AV representative for an outdoor rated mounting solution for your particular application.

For your safety, only install an outdoor-rated mount that is suitable for the application and supports the weight of the display. When mounting a display outdoors, use proper environmentally rated mounts to ensure longevity in harsh environments.

Examine the chart below to determine the mounting specifications for your display:

| Model | Mounting Hole Pattern | Required Mounting Screws |
|---|---|---|
| XHB432<br>XHB492<br>XHB552 | 400x200mm<br>400x400mm | (4) M8 screws<br>(25mm long) |

| Model | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| XHB432 | 15.75"<br>(400mm) | 15.75"<br>(400mm) | 11.87"<br>(302mm) | 3.77"<br>(96mm) | 4.89"<br>(124mm) | 7.87"<br>(200mm) |
| XHB492 | 15.75"<br>(400mm) | 15.75"<br>(400mm) | 14.49"<br>(368mm) | 5.24"<br>(133mm) | 3.92"<br>(100mm) | 7.87"<br>(200mm) |
| XHB552 | 15.75"<br>(400mm) | 15.75"<br>(400mm) | 17.16"<br>(436mm) | 6.74"<br>(171mm) | 3.92"<br>(100mm) | 7.87"<br>(200mm) |



**REAR VIEW**　　　　　　**SIDE VIEW**
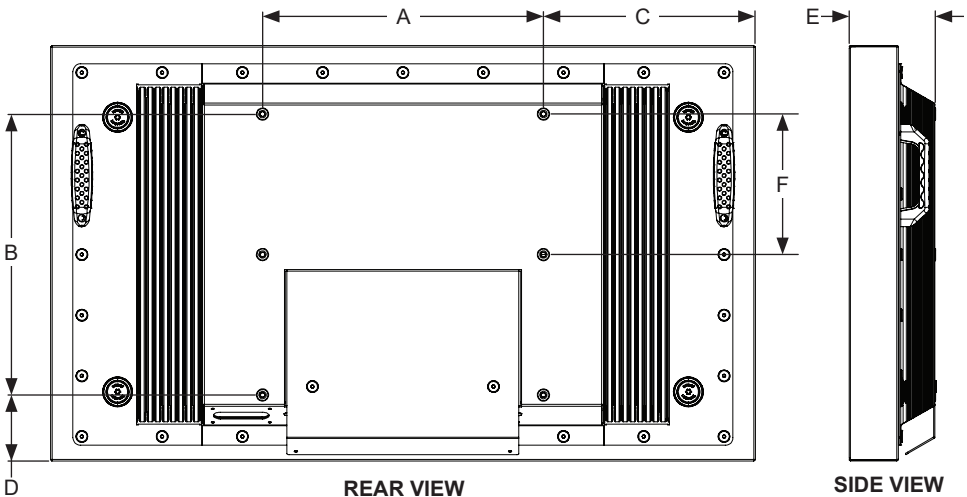
## Prepare The Display For Mounting

| Model | A | B | C | D | E | F |
|-------|---|---|---|---|---|---|
| XHB432 | 39.50" (1003mm) | 23.28" (591mm) | 37.06" (941mm) | 20.84" (529mm) | 42.51" (1080mm) | 0.33" (8mm) |
| XHB492 | 44.72" (1136mm) | 26.22" (666mm) | 42.27" (1074mm) | 23.78" (604mm) | 48.50" (1232mm) | 0.33" (8mm) |
| XHB552 | 50.07" (1272mm) | 29.23" (742mm) | 47.62" (1210mm) | 26.79" (680mm) | 54.64" (1388mm) | 0.42" (11mm) |
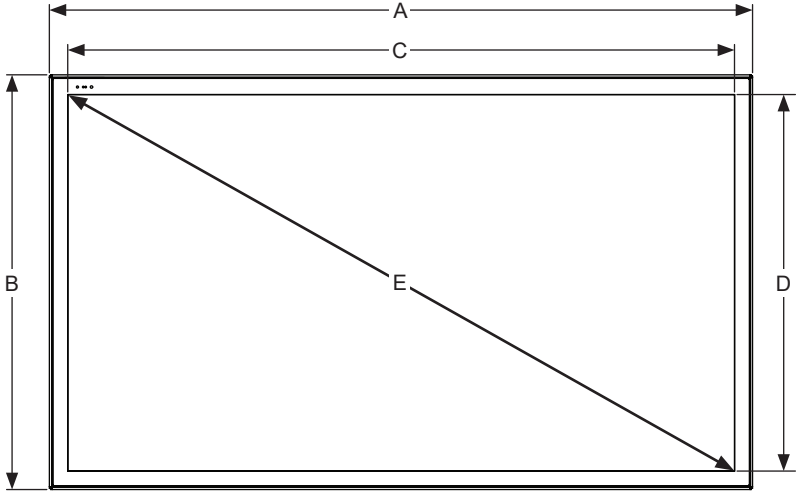
**FRONT VIEW**
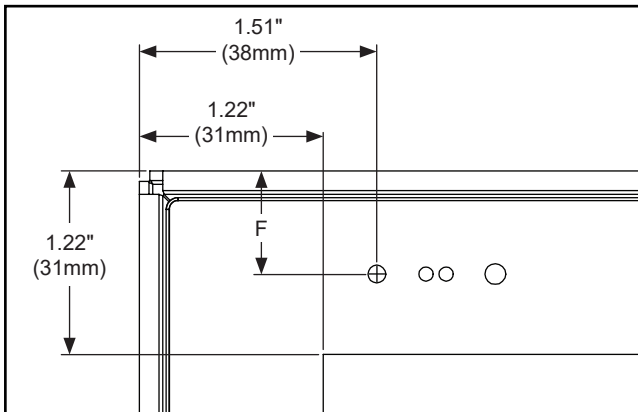
**BEZEL / IR DETAIL VIEW**

# Remote Control Battery Installation And Replacement

The remote control is powered by two 1.5V AAA batteries installed at the factory.

To install or replace batteries:

1. To remove the battery module of the remote control, remove the two screws on the end of the battery module. Slide the battery module out of the remote control.

2. Insert two new "AAA" size batteries into the battery module.

3. Slide the battery module back into the remote control and reinsert the two screws in the end of the battery module.

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### ⚠ CAUTION

Incorrect usage of batteries can result in leaks or bursting. Peerless-AV recommends the following battery use:

- Do not mix battery brands.

- Do not combine new and old batteries. This can shorten the battery life or cause battery acid leaks.

- Remove dead batteries immediately to prevent battery acid from leaking into the battery compartment.

- Do not touch exposed battery acid as it may injure skin.

- Remove the batteries if you do not intend to use the remote control for a long period of time.

- The batteries must not be exposed to excessive heat due to sunlight, fire or other heat sources or batteries could explode.

**B**

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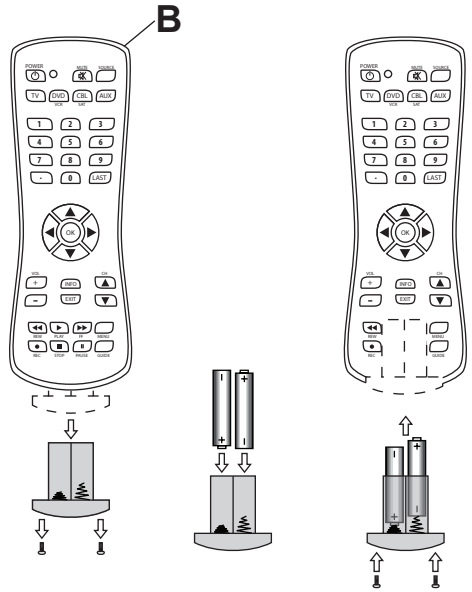
# OPERATING INSTRUCTIONS

## Power On/Off The Display

Power on your display by using the remote control or the power button on the bottom, left-hand side of the display. The display will power on but image may not appear for several seconds as it completes its power up sequence.

Point the remote control at the IR sensor located at the top, left-hand corner of the display and press the power button
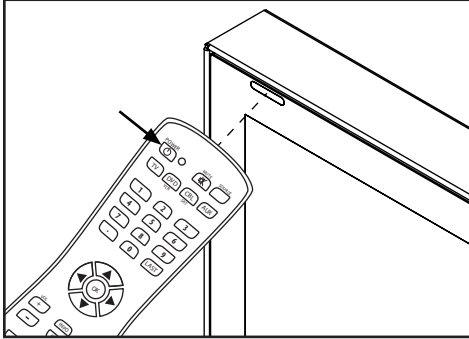
| LED Light | TV Status |
|-----------|-----------|
| Solid | Off |
| Blinking | Boot up |
| Off | On |

## Onboard Controls

**Direct Mode**: Allows for quick access to source selection, volume settings and channel selection.

**Menu Mode**: Press the Menu button to access Menu Mode and activate the On Screen Display (OSD). For a description of OSD operation refer to the next section.

The keypad buttons are assigned as indicated in the table below.

| Direct Mode | Menu Mode | |
|-------------|-----------|---|
| Channel Up | Up | |
| Channel Down | Down | |
| Menu | Return | |
| Volume Up | Right/OK | |
| Volume Down | Left/OK | |
| Input Select | Input Select | |
| On/Off | On/Off | |

| Channel | |
|---|---|
| **Air / Cable** | Choose between antenna and cable |
| **Auto Scan** | Searches for available channels |
| **Favorite** | Shows favorite channels |
| **Show/Hide** | Show or hide channels |
| **DTV Signal** | Displays channel info and signal strength |

| Audio | |
|---|---|
| **Equalizer** | Standard<br>Music<br>Movie<br>Sports<br>Personal |
| **Digital Output** (Optical) | PCM / Raw / Off |
| **Surround** | On / Off |
| **Audio Only** | On / Off |
| **AVC** | On / Off |

| Picture | |
|---|---|
| **Picture Mode** | Theater<br>Personal<br>Standard<br>Dynamic |
| **Color Temp.** | Normal<br>Warm<br>Personal<br>Cool |
| **HDMI Mode** | Video Mode<br>PC Mode |
| **Screen** | H Position<br>V Position<br>Clock<br>Phase<br>Auto |
| **Zoom Mode** | 4:3<br>16:9<br>Cinema<br>Zoom<br>Point to Point |
| **Backlight** | 0 - 100 |
| **DLC** (Dynamic Backlight) | On / Off |
| **Color Range** | Auto<br>0 - 255<br>16 - 235 |
| **3DNR** | Off<br>Weak<br>Middle<br>Strong |
| **ECO** (Set ambient light output levels using ALS extender) | Low (25% brightness)<br>Middle (50% brightness)<br>High (75% brightness)<br>Personal<br>Auto |

| | | | | |
|---|---|---|---|---|
| | **Navigate** | **OK**<br>Enter | **EXIT**<br>Exit | **MENU**<br>Return |

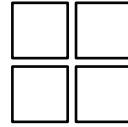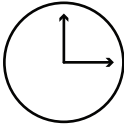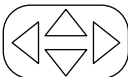| Time | | |
|---|---|---|
| **Sleep Timer** | off | 60 min |
| | 5 min | 90 min |
| | 10 min | 120 min |
| | 15 min | 180 min |
| | 30 min | 240 min |
| **Time Zone** | Atlantic | Pacific |
| | Eastern | Alaska |
| | Central | Hawaii |
| | Mountain | Korean |
| **Time Format** | 12-hour | |
| | 24-hour | |
| **Auto Sync** | On / Off | |
| **Clock** | Enter Current Time | |
| **Wake Up** | Enter desired time when display will turn on | |

| Setup | |
|---|---|
| **Menu Languages** | English |
| | Spanish |
| | French |
| **Transparent** (Menu Transparency) | 0% |
| | 25% |
| | 50% |
| | 75% |
| | 100% |
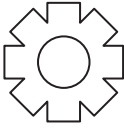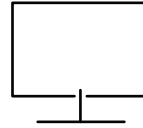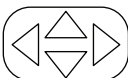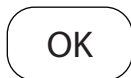
## Closed Caption

| | |
|---|---|
| **CC Mode** | CC Off / CC On / CC On Mute |
| **Restore Defaults** | Factory reset all options |
| **Setup Wizard** | |
| **Software Update** | Yes / No |

## CEC

| | |
|---|---|
| **CEC Control** | On / Off |
| **Device Auto Power Off** | On / Off |
| **TV Auto Power On** | On / Off |
| **Audio Receiver** | On / Off |
| **Device Lists** | Lists connected CEC devices |
| **Connect** | (future use) |
| **Root Menu** | Menu of connected souce device |
| **No Signal Auto Power Off** | On / Off / Backlight |

| | | | | |
|---|---|---|---|---|
| | **Navigate** | **OK** Enter | **EXIT** Exit | **MENU** Return |

| Lock | |
|---|---|
| **System Lock** | |
| Enter Password to enter System Lock settings Defaut Password: 0000 | |
| **Change password** | Allows the password to be changed |
| **System Lock** | On / Off |
| **Input Block** | TV, AV, Component, DP, HDMI 1, HDMI 2, HDMI 3, PC, USB |
| **US** | TV, MPAA |
| **Canada** | Canadian English, Canadian French |
| **RRT Setting** | |
| **Reset RRT** | |
| **Unrated** | On /Off |
| **Hotel Mode** | |
| Enter password to enter hotel mode settings Defaut Password: 0000 | |
| **Hotel Mode** | On / Off |
| **Change Password** | Allows the password to be changed |
| **Picture Mode** | Standard, Dynamic, Theater, Personal |
| **Sound Mode** | Standard, Music, Movie, Sports, Personal |
| **Key Lock** | On / Off |
| **Power On Source** | TV, AV, Component, DP, HDMI 1, HDMI 2, HDMI 3, PC, USB |
| **Air / Cable** | Air, Cable |
| **Power On Channel** | Set channel that display will tune to when powered on |
| **Power On Volume** | Set volume that display will output when turned on |

| | | | |
|---|---|---|---|
| **Navigate** | **OK** Enter | **EXIT** Exit | **MENU** Return |
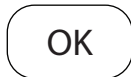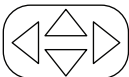
## USB Functionality

ENG Insert USB flash drive into USB 2.0 Data port on the input panel of the display.

USB 2.0
Data

ENG Select USB source to access content.

| Input Source |
| --- |
| TV |
| AV |
| Component |
| DP |
| HDMI1 |
| HDMI2 |
| HDMI3 |
| PC |
| USB ← |

## USB Functionality

**3**

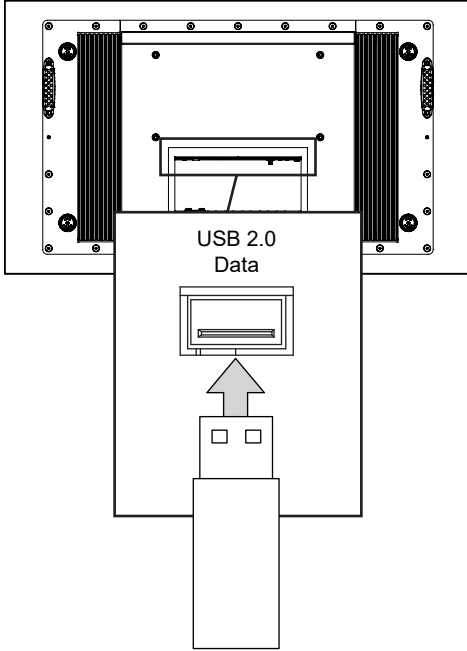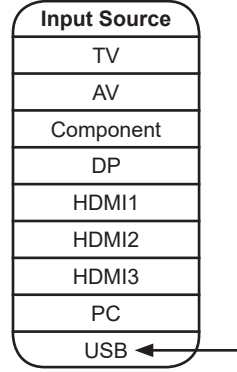ENG Select media type and folder where content is stored.

| PHOTO | MUSIC | MOVIE | TEXT |

| Return | C |
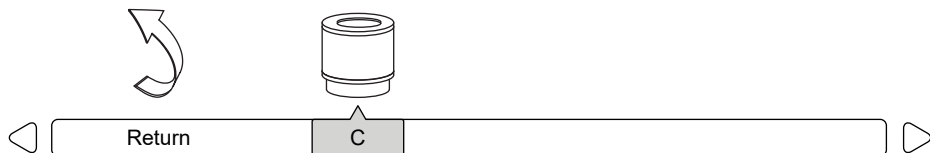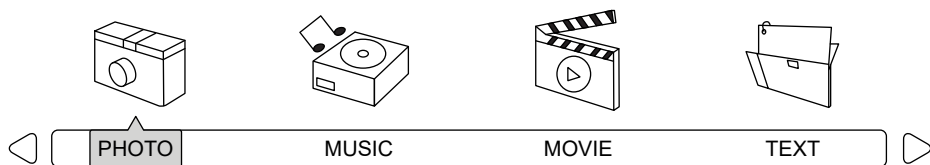
**4**

**Photos** – To view a single photo, select photo and press play. To view a slide show, select multiple photos and press play. Use on screen menu to control slide show.

**Movies** – To view a single video, select video and press play. To view a playlist, select multiple videos and press play. Use on screen menu to control playlist.

**Music** – To listen to a single song, select song and press play. To listen to a playlist, select multiple songs and press play. Use on screen menu to control playlist.

**Text** – To view to a single text file, select file and press play. To view a playlist, select multiple files and press play. Use on screen menu to control playlist.
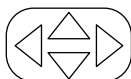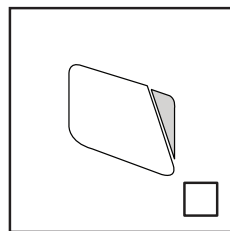
| Navigate | OK — Enter | EXIT — Exit | Hide Menu |

# (RS-232C) Serial Control Of The Display

Attach an RS-232C cable (straight through type) to the supplied D-Sub RS-232C for the connections. This operation system should be used by a person who is accustomed to using computers.
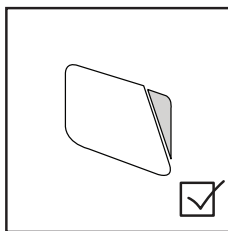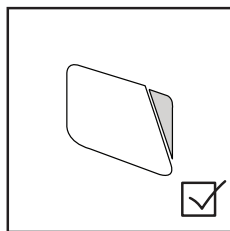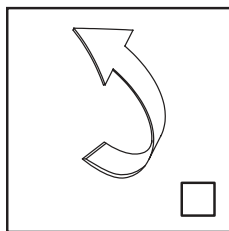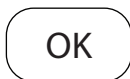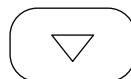
| | | | |
|---|---|---|---|
| Menu: | A0, F0, 55, FF, 4E, B1 | Mute: | A0, F0, 55, FF, 14, EB |
| Right: | A0, F0, 55, FF, 05, FA | Sleep: | A0, F0, 55, FF, 53, AC |
| OK: | A0, F0, 55, FF, 02, FD | AV: | A0, F0, 55, FF, ED, 12 |
| Down: | A0, F0, 55, FF, 0D, F2 | VGA: | A0, F0, 55, FF, EA, 15 |
| Up: | A0, F0, 55, FF, 17, E8 | HDMI Toggle: | A0, F0, 55, FF, EC, 13 |
| Left: | A0, F0, 55, FF, 0C, F3 | HDMI1: | A0, F0, 55, FF, DE, 21 |
| Source: | A0, F0, 55, FF, 01, FE | HDMI2: | A0, F0, 55, FF, DF, 20 |
| (1): | A0, F0, 55, FF, 42, BD | HDMI3: | A0, F0, 55, FF, E0, 1F |
| (2): | A0, F0, 55, FF, 43, BC | DisplayPort: | A0, F0, 55, FF, E4, 1B |
| (3): | A0, F0, 55, FF, 0F, F0 | TV: | A0, F0, 55, FF, E8, 17 |
| (4): | A0, F0, 55, FF, 1E, E1 | DTV: | A0, F0, 55, FF, E9, 16 |
| (5): | A0, F0, 55, FF, 1D, E2 | Component: | A0, F0, 55, FF, E7, 18 |
| (6): | A0, F0, 55, FF, 1C, E3 | USB: | A0, F0, 55, FF, 57, A8 |
| (7): | A0, F0, 55, FF, 18, E7 | PMODE: | A0, F0, 55, FF, 4B, B4 |
| (8): | A0, F0, 55, FF, 45, BA | Zoom: | A0, F0, 55, FF, 51, AE |
| (9): | A0, F0, 55, FF, 4C, B3 | SMODE: | A0, F0, 55, FF, 5B, A4 |
| (0): | A0, F0, 55, FF, 56, A9 | VOL 0%: | A0, F0, 55, FF, 20, DF |
| Exit: | A0, F0, 55, FF, 1B, E4 | VOL 25%: | A0, F0, 55, FF, 21, DE |
| Power On: | A0, F0, 55, FF, AE, 51 | VOL 50%: | A0, F0, 55, FF, 22, DD |
| Power Off: | A0, F0, 55, FF, AD, 52 | VOL 75%: | A0, F0, 55, FF, 23, DC |
| Power On/Off: | A0, F0, 55, FF, 0B, F4 | VOL 100%: | A0, F0, 55, FF, 24, DB |
| Volume +: | A0, F0, 55, FF, 0A, F5 | Brightness 0%: | A0, F0, 55, FF, 25, DA |
| Volume -: | A0, F0, 55, FF, 40, BF | Brightness 25%: | A0, F0, 55, FF, 26, D9 |
| Channel +: | A0, F0, 55, FF, 55, AA | Brightness 50%: | A0, F0, 55, FF, 27, D8 |
| Channel -: | A0, F0, 55, FF, 5A, A5 | Brightness 75%: | A0, F0, 55, FF, 28, D7 |
| Surround: | A0, F0, 55, FF, C7, 38 | Brightness 100%: | A0, F0, 55, FF, 29, D6 |
| CC: | A0, F0, 55, FF, 44, BB | Dash: | A0,F0, 55, FF, 2E, D1 |
| EPG: | A0, F0, 55, FF, 49, B6 | Channel Fav List: | A0, F0, 55, FF, 1A, E5 |
| Info: | A0, F0, 55, FF, 50, AF | Channel List: | A0, F0, 55, FF, 59, A6 |
| MTS: | A0, F0, 55, FF, 11, EE | Channel Return: | A0, F0, 55, FF, 15, EA |

| COM Settings | |
|---|---|
| Baud Rate | 38400 |
| Data Bits | 8 |
| Parity | None |
| Stop Bits | 1 |

# MAINTENANCE

## Care Of The Screen

Do not rub or strike the screen with anything hard as this may scratch, mark, or even damage the screen permanently. Ensure that the display is installed in a location where it will be safe from abrasives and flying debris, which could damage the LCD panel. Never use ammonia or any product containing ammonia, as it will damage the anti-glare coating on the face of the display. Only use an approved screen cleaner to clean the display face. Unplug the power cord before cleaning the screen. Dust the display by wiping the screen and the cabinet with a soft, clean cloth. If the screen requires additional cleaning, use a clean, damp cloth. Do not use liquid cleaners, aerosol cleaners, or solvents of any kind. Do not use any chemical such as paint thinner or benzene to clean the product's exterior. It may cause scratches on the surface, erasing proper indications, identification labels, or instructions on the exterior, which may cause misuse and improper operation of the product.

## Mobile Telephone Caution

Keep your mobile telephone away from your display to avoid disturbances in the picture or sound, possibly causing permanent damage to your display.

## End Of Life Directives

In an effort to produce environmentally friendly products, your new display contains materials that can be recycled and reused. At the end of your display's life, specialized companies can minimize display waste by separating reusable materials from non-reusable materials. Please ensure you dispose of your display according to local regulations.

# PRODUCT SPECIFICATIONS

Specifications subject to change without notice.

## Display

| | |
|---|---|
| **Screen Size (diagonal)** | XHB432: 43"<br>XHB492: 49"<br>XHB552: 55" |
| **Aspect Ratio** | 16:9 |
| **Resolution** | 1920 x 1080 |
| **Brightness** | 2,500 cd/m$^2$ |
| **Backlight Adjustment** | Automatic (Ambient Light Sensor) |
| **Contrast Ratio** | 1300:1 |
| **Viewing Angle** | 178° vertical / horizontal |
| **Response Time (gray to gray)** | XHB432: 12ms<br>XHB492: 8ms<br>XHB552: 12ms |
| **Refresh Rate** | 60 Hz |

## Display Controller Features

| | |
|---|---|
| **Analog Display** | NTSC |
| **Digital Display** | ATSC / QAM 256 / MPEG4 / H.264 |
| **Picture Adjustment** | Brightness / Contrast / Tint / Sharpness / Color |
| **Picture Mode** | Standard, Dynamic, Theater, Personal |
| **Color Temperature Adjustment** | Cool, Normal, Warm, Personal |
| **Screen Adjustment** | 16:9 / Full / Zoom / 4:3 / Point to Point |
| **Clock, Sleep Timer** | Yes |
| **MTS** | Yes |
| **V-chip** | Yes |
| **Closed Caption** | Yes |
| **Electronic Program Guide** | Yes |
| **3-D Comb Filter and De-interlace** | Yes |
| **Mute** | Yes |
| **OSD Language** | English, French, Spanish |

## Power

| | |
|---|---|
| **AC Input** | 100 VAC to 240 VAC, 50 to 60 Hz |

## Environmental

| | |
|---|---|
| **Operating Temperature** | -31° F to 140° F (-35° C to 60° C) |
| **Storage Temperature** | -4° F to 140° F (-20° C to 60° C) |
| **IP Rating** | IP68 |
| **Safety/EMC** | FCC Class A |

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| Mechanical | |
|---|---|
| **Display Size**: | (W x H x D) |
| XHB432 | 39.5" x 23.28" x 4.89" (1003 x 591 x 124mm) |
| XHB492 | 44.72" x 26.22" x 3.92" (1136 x 666 x 100mm) |
| XHB552 | 50.07" x 29.23" x 3.92" (1272 x 742 x 100mm) |
| **Enclosure Color** | Black |
| **VESA Mount** | 400x200mm, 400x400mm |
| **Net Weight** | |
| XHB432 | 88 lbs. (39.91kg) |
| XHB492 | 92 lbs. (41.70kg) |
| XHB552 | 133 lbs. (60.00kg) |
| **Shipping Size** | (W x H x D) |
| XHB432 | 45.5" x 28.25" x 10.63" (1156 x 718 x 270mm) |
| XHB492 | 50.25" x 30.75" x 10.63" (1276 x 781 x 270mm) |
| XHB552 | 55.625" x 34.125" x 10.63" (1413 x 867 x 270mm) |
| **Shipping Weight:** | |
| XHB432 | 98 lbs. (44.45kg) |
| XHB492 | 103 lbs. (46.72kg) |
| XHB552 | 145 lbs. (65.77kg) |
| **Glass** | IK10 Rated, Tempered & Anti-reflective |

| Input/Output Connections | |
|---|---|
| **Display Input** | Coax (x1), 75 ohm, NTSC, ATSC, H.264, QAM 256 |
| **VGA Input** | 15 pin D-SUB (x1), up to 1920x1080@60Hz |
| **HDMI Input** | HDMI (x3), 480i, 480p, 576i, 576p, 720p, 1080i, 1080p |
| **DisplayPort** | DisplayPort (x1), 480i, 480p, 576i, 576p, 720p, 1080i, 1080p |
| **CVBS Input** | 3.5mm (x1), 480i, 567i |
| **YPbPr Input** | 3.5mm (x1), 480i, 480p, 720p, 1080i |
| **VGA Stereo Audio Input** | 3.5mm Analog Audio (x1) |
| **Audio Output** | 3.5mm Stereo Headphone (x1) |
| **RS232 Control** | 9 pin D-SUB (Female) (x1) |
| **TosLink Digital Audio Output** | Optical (x1) |
| **IR Extender** | 3.5mm (x1) |
| **USB 2.0 Data** | USB A (Female) (x1) |
| **5VDC 2.4A Output (USB Power)** | USB A (Female) (x1) |
| **12VDC 2.5A Output** | Barrel 2.5mm (ID) 5.5mm (OD) (x1) |
| **LAN Input** | RJ45 (x1) |
| **ALS Extender** | 3.5mm (x1) |

# LIMITED TWO-YEAR WARRANTY

**TWO-YEAR PARTS & LABOR LIMITED WARRANTY**

**Terms of Peerless-AV®**

The Peerless-AV Outdoor TV/Display is warrantied to be free of defects in material and workmanship from the time of purchase by the original owner. If this product is proven to be defective under the terms and conditions of this warranty, Peerless-AV will repair or replace defective parts with new and/or reconditioned parts at no charge for the parts and labor to the original owner, subject to the terms and conditions of this Limited Warranty. This Limited Warranty covers failures due to defects in material or workmanship that occur during normal use as follows:

- Parts – the warranty period for parts is: two (2) years from the date of original purchase. During the applicable Limited Warranty period for parts, defective parts will be replaced at no charge. Parts used for the repair will be warrantied for the remainder of the original warranty period for those parts.
- Labor – the warranty period for labor is: two (2) years from the date of original purchase. During the applicable Limited Warranty period for labor, Peerless-AV will provide the labor for warranty repair at no charge for a period of two (2) years from the date of original purchase.
- Original owner must provide verification of the date of purchase when requesting Limited Warranty Services. A copy of the original Dated Sales Receipt is required together with the product serial number to obtain service under this Limited Warranty.
- All repairs must be performed by a Peerless-AV Authorized Service Provider.
- Customer is responsible for returning (including any freight and shipping cost) defective unit to Peerless-AV Authorized Service Provider. If the product is found to have no defects, the customer will be responsible for return shipping costs as well the diagnostic bench fee. If the product is found to be covered by the manufacturer's warranty, Peerless will assume responsibility for return freight charges.

**THIS LIMITED WARRANTY DOES NOT COVER:**

- Labor to uninstall and reinstall the display / TV.
- Shipping damage.
- Damage caused during customer unpacking, and/or removal of protective packing materials.
- Damage due to improper, incorrect or insufficient AC voltage, power surges or lightning strikes.
- Damage due to inadequate signal pickup, incorporation into other products or repairs by anyone other than a Peerless-AV Technician.
- Damage due to tampering or removal of any gasket material, including but not limited to the cable gland gaskets within the cable entry way.
- Damage which results from fire, flood, lightning, tornado, hurricane, large hail, extremely gusty winds, sand storms, vandalism, terrorism or other acts of nature.
- Any unit which has been modified or damaged due to improper installation or failure to obey the operating instructions provided in the User Manual.
- Any failure, loss, damage or personal injury due to accident, neglect, misuse, abuse, improper operation, improper storage, alteration to the unit, or failure by the consumer to follow operating instructions provided in the User Manual.
- Any owner other than the original owner.
- Any unit purchased from an unauthorized seller.
- If the original product serial number has been removed, defaced or tampered with in any way.
- Any packaging or transportation charges incurred in connection with warranty services.
- Indirect, consequential, or special damages except as required by federal or state laws.
- Any unit tampered with, modified, adjusted, or repaired by any party other than the Peerless-AV Authorized Service Provider.
- Any cosmetic damages to the surface or exterior that has been defaced or faded, or caused by normal wear and tear or exposure to chemicals, acid rain, large hail or adverse weather conditions.
- Minor cabinet blemishes or minor scratches to the exterior of the unit or other cosmetic imperfections that are *not within the viewable area of the LCD*.

- The LCD is a Class 2 ISO panel. As such, the Pixel Fault for Class II Panels states:
  - Type 1 = Hot Pixel (always on – white);
  - Type 2 = Dead Pixel (always off – black); or
  - Type 3 = A Stuck Pixel (one or more sub-pixels (red, blue or green) are always on or always off.
  - The total number of permitted defects per 2 million pixels:
    - Type 1 = (4)
    - Type 2 = (4)
    - Type 3 = (10)
- Picture quality when installed in direct sunlight where sun is shining directly on the face of the LCD.
- Any damage, scratches or blemishes to the face of the LCD and/or exterior cabinet due to end-user cleaning.
- Dirty air waves, and/or unusual signal interference due to weak signal from multi-wire runs, weak signal from cable or satellite service providers, or unusual signal interference.
- Any damage incurred through improper packaging. If the Outdoor TV/Display needs to be returned, original packaging is required. (If packaging is needed, the end user is required to contact a Peerless-AV Care Customer Representative to request a new box to be delivered to customer shipping site)
- Return shipping when no defect is found.

For Non-Warrantied Repairs, or for claims found to not be covered by the Limited Warranty, the customer will be responsible for the diagnostic bench fee, the cost of replacement parts, and any applicable shipping charges. Repaired Non-Warrantied claims require payment in full before repaired products are returned to customer.

Peerless-AV and its representatives or agents shall in no event be liable for any general, indirect or consequential damages arising out of/or caused by the use of/or inability to use this product.

The Warranty is made in lieu of all other warranties, expressed or implied, and all other liabilities on the part of Peerless-AV. Any other warranties, including warranties of merchantability and fitness for a particular purpose are hereby disclaimed by Peerless-AV and its representatives and/or agents.

The laws of some states do not allow exclusion of implied warranties; therefore, this warranty shall be deemed modified to be consistent with such laws. This limited Warranty gives you specific legal rights. You may also have other rights that vary from state to state.

All warranty inspections and repairs must be performed by Peerless-AV or its authorized service representatives.

Please call **800.865.2112** or **630.375.5100** so that the Peerless-AV technical support team can assist with proper troubleshooting steps. Please have your receipt and serial number available during the time of call while onsite. Technical support will determine whether the product will need to be replaced or returned for repair. If a repair is needed Customer Care will issue a Return Material Authorization (RMA) number. The product will need to be in the original packaging and banded to a skid in the upright position. If the product is not covered by the warranty, Peerless-AV will contact you with repair estimates after inspection.

**peerless-AV®**