Planar QE Series
User Manual
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Introduction

Offered in sizes ranging from 75” to 98”, the Planar® QE Series is the first of its kind family of displays that offer an end-to-end affordable display solution for designing, scheduling, distributing, and playing back digital signage content in ultra-high resolution. Featuring embedded Planar® ContentSmart™ 4K media player and software, the Planar QE Series provides a simple and cost-effective way to create digital signage messaging for a single display or multiple displays within a network, dramatically reducing installation cost and complexity.

With cutting edge 4K @ 60Hz support through DisplayPort 1.2 and HDMI 2.0, single- or quad-source viewing, and multiple display control options, the Planar QE Series is also ideal for collaborative meeting spaces when paired with a compatible source. For those seeking to collaborate or annotate using a large viewing area, multi-touch models are also available. Each touch display ships with Planar® TouchMark™, the premier collaboration solution for annotation and whiteboarding needs.

Featuring a logo-free bezel, the Planar QE Series is perfect for use in retail stores, restaurants, medical offices, corporate meeting areas, huddle rooms and hospitality. Designed for up to 24 x 7 operation in commercial installations, the Planar QE Series is backed by Planar’s industry-leading 3-year warranty. Featuring LED backlight technology, the Planar QE Series displays operate at lower power, reducing total cost of ownership. From its comprehensive set of inputs and control to its easy to use embedded media player, the Planar QE Series LCD displays redefine affordable 4K displays with features including:

- Sizes ranging from 75” to 98”
- Ultra HD resolution (3840 x 2160) LCD displays
- Embedded Planar ContentSmart media player and software for quick and easy design, deployment and management of 4K content
- Cutting edge video performance supporting up to 4K @ 60Hz
- Fully integrated multi-touch models available
- Fanless, whisper-quiet
Safety Information

Before using the Planar QE Series, please read this manual thoroughly to help protect against damage to property, and to ensure personal safety.

- Be sure to observe the following instructions.
- For your safety, be sure to observe ALL the warnings detailed in this manual.
- For installation or adjustment, please follow this manual’s instructions, and refer all servicing to qualified service personnel.

Safety Precautions

- If water is spilled or objects are dropped inside the display, remove the power plug from the outlet immediately. Failure to do so may result in fire or electrical shock. Contact your dealer for inspection.
- If the display is dropped or the chassis is damaged, remove the power plug from the outlet immediately. Failure to do so may result in fire or electrical shock. Contact your dealer for inspection.

**WARNING!** Wall mounts must be secure.

- If the display is hung on a wall, the wall must be strong enough to hold it. Simply mounting it to wallboard or wall paneling won’t be adequate or safe.

**Caution:** The screen could be damaged by heavy pressure.

- Slight pressure on the LCD will cause distortion of the image. Heavier pressure will cause permanent damage. Displays should be mounted where viewers cannot touch the screen or insert small objects in the openings that will create hazards by contacting bare conductive parts.

**Caution:** The front polarizer is soft and subject to scratches from sharp objects.

- The polarizer is a thin sheet of film laminated to the outside layer of glass on the LCD screen. Take care when handling items near the screen.
- If the power cord or plug is damaged or becomes hot, turn off the main power switch of the display. Make sure the power plug has cooled down and remove the power plug from the outlet. If the display is still used in this condition, it may cause a fire or an electrical shock. Contact your dealer for a replacement.
Important Safety Instructions

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use the display near water.

6. Clean the LCD screens with an LCD screen cleaner or LCD wipes.

7. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.

8. Do not defeat the safety purpose of the polarized or grounding type 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 is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for the replacement of the obsolete outlet.

9. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from any of the displays.

10. Only use the attachments/accessories specified by the manufacturer.

11. Unplug all displays during lightning storms or when unused for long periods of time.

12. You must follow all National Electrical Code regulations. In addition, be aware of local codes and ordinances when installing your system.

13. Refer all servicing to qualified service personnel. Servicing is required when any of the displays have been damaged in any way. For example, if the AC power cord or plug is damaged, liquid has been spilled or objects have fallen into a display, the displays have been exposed to rain or moisture, do not operate normally or have been dropped.

14. Keep the packing material in case the equipment should ever need to be shipped.
Recommended Usage

In order to get the most out of your LCD, use the following recommended guidelines to optimize the display.

Burn-In Versus Temporary Image Retention

Burn-in causes the screen to retain an image essentially forever, with little or no way to correct the problem. Under normal use, an LCD will not experience burn-in, as plasma displays do, nor will it retain images in any way.

Normal use of an LCD is defined as displaying continuously changing video patterns or images. However, LCDs can experience temporary image retention when recommended usage guidelines are not followed.

What is Temporary Image Retention?

Temporary image retention (TIR) can occur when a static image is displayed continuously for extended periods of time (12 hours or longer). An electrical charge differential may build up between the electrodes of the liquid crystal, which causes a negative-color video image (color-inverted and brightness-inverted version of the previous image) to be retained when a new image is displayed. This behavior is true for any LCD device from any LCD manufacturer.

TIR is not covered under warranty. See standard warranty terms and conditions for details. Here are some guidelines to help you avoid TIR:

- Use the LCD to show a screen saver, moving images or still pictures that change regularly. When using high-contrast images, reposition the images frequently.
- Turn off the LCD when it is not in use. To use your source computer’s Power Options Properties, set up your computer to turn off the display when not in use.

Warranty Coverage

The following models are warranted for 24 x 7 usage:

- 75”: QE7550, QE7550T
- 86”: QE8650, QE8650T
- 98”: QE9850, QE9850T

Planar recommends turning off the power for 4 hours per day for optimal performance.

For complete warranty details, please visit www.planar.com/warranty.
Important Waste Disposal Information

Please recycle or dispose of all electronic waste in accordance with local, state, and federal laws. Additional resources can be found online at http://www.planar.com/about/green/.

The crossed-out wheelie bin symbol is to notify consumers in areas subject to Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU that the product was placed on the market after August 13, 2005 and must not be disposed of with other waste. Separate collection and recycling of electronic waste at the time of disposal ensures that it is recycled in a manner that minimizes impacts to human health and the environment. For more information about the proper disposal of electronic waste, please contact your local authority, your household waste disposal service, or the seller from whom you purchased the product.

Normal Usage Guidelines

Normal use of the LCD is defined as operating in the open air to prevent heat buildup, and without direct or indirect heat sources such as lighting fixtures, heating ducts, or direct sunlight that can cause the displays to experience high operating temperatures. For all displays, do not block fans or ventilation openings. If the LCD display will be installed in a recessed area with an LCD surround or enclosure, ensure adequate openings are applied for proper air flow and ventilation.

It is up to the installer to ensure that display placement is changed, thermal shielding is provided and/or additional ventilation is provided to keep the display within its nominal operating parameters. Maximum ambient operating temperatures for the Planar QE Series are:

- 75", 86" and 98” Planar QE Series models: 0-35°C at up to 1500 meters and 0-30°C at up to 3000 meters

Cooling Requirements

For optimal performance, active cooling by the installer should be planned for when the ambient temperature anywhere in the wall is predicted to be above the specified ambient temperature for the display.
Mounting with a VESA Mount

VESA mounts are used to secure the Planar QE Series for display. The display can be installed using a variety of VESA mounts available through Planar. If you do not have a VESA mount and would like to purchase one, contact Planar.

If you purchased a VESA mount, you should have a received a separate box with mounting supplies and an Installation manual. Follow these instructions carefully.

Keep in mind the following general installation guidelines:

- Screw length is crucial and will vary depending on the type of mount you use. Total screw length will include the penetration length plus the length required by the type of VESA mount in use.

Caution: Shorter screws will result in insufficient mounting strength and longer screws could puncture parts inside the display.

- Prior to installation, make sure you know where all of the mounting points are located.
- Follow all safety precautions outlined in the VESA Installation manual.
- Verify the parts received with the list shown in the VESA Installation manual.

Cleaning the Display

If dust has collected on the power plug, remove the plug from the outlet and clean off the dust. Dust build-up may cause a fire.

Remove the power plug before cleaning. Failure to do so may result in electrical shock or damage.

Keep the following points in mind when cleaning the surface of the display:

- When the surface of the display becomes dirty, wipe the surface lightly with a soft clean cloth.
- If the surface requires additional cleaning, use LCD screen cleaner or LCD wipes, which are available at most electronics stores.
- Do not let cleaner seep into the display, as it may cause electrical shock or damage.
## Package Contents

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Number Included</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCD display</td>
<td>One per box.</td>
<td>1</td>
<td><img src="image" alt="LCD display" /></td>
</tr>
<tr>
<td>AC power cord</td>
<td>Power cord.</td>
<td>1</td>
<td><img src="image" alt="AC power cord" /></td>
</tr>
<tr>
<td>IR sensor</td>
<td>Used to receive signals from the remote control.</td>
<td>1</td>
<td><img src="image" alt="IR sensor" /></td>
</tr>
<tr>
<td>USB drive</td>
<td>Contains the User Manual, touch drivers and USB-to-serial driver.</td>
<td>1</td>
<td><img src="image" alt="USB drive" /></td>
</tr>
<tr>
<td>USB cable</td>
<td>Connects to a PC for touch functionality (touch models only) and serial commands (all models).</td>
<td>1</td>
<td><img src="image" alt="USB cable" /></td>
</tr>
</tbody>
</table>
# Package Contents

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Number Included</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote control</td>
<td>Used to control the display. 2 AA batteries are included but not installed.</td>
<td>1</td>
<td><img src="remote_control.png" alt="Remote Control" /></td>
</tr>
<tr>
<td>Planar® TouchMark™ Single License Key Card</td>
<td>Annotation and whiteboarding software (touch models only)</td>
<td>1</td>
<td><img src="license_key_card.png" alt="License Key Card" /></td>
</tr>
</tbody>
</table>
Standard Inputs

Planar QE Series Displays

Note: Only one HDCP 2.2 source can be displayed at a time. If HDMI 1 and HDMI 2 are both being shown on the display at the same time, only HDMI 1 will support HDCP 2.2 content.
Embedded Planar ContentSmart Media Player
Installing the Displays

This section explains how to install your display. We suggest that you read the entire section before you attempt to install the unit.

Before You Begin

Make sure to have all the items in these lists before beginning to unpack and install your display(s).

Tools/Equipment List

Depending on your installation, you may need one or more of the following items:

- String/string level
- Digital/laser level
- Ladders/lift
- Back brace
- Stud finder (if hanging display on a wall)

Other Things You May Need

- LCD screen cleaner or LCD wipes - available at most electronics stores
- At least two very strong people to help lift units into place

Plan Your Installation

You should have a detailed plan of how the units are to be configured. The plan should include calculations for the following:

- Power (maximum of five units per 20A circuit for 115V operation)
- Cable runs
- Ventilation and cooling requirements
- If hanging display on a wall, location of studs in the wall

Prepare Your Installation Location

You should have prepared the area where you will install the unit. If custom enclosures are part of the installation, they must be fully designed to accommodate the installation of the displays, as well as the installed unit and ventilation and cooling requirements.

If your installation included a lot of construction or dust, it is highly recommended that you clean all of the screens after the wall installation and configuration are complete.
Cable Length Recommendations

Cable length performance may vary between different cables and sources. The recommended maximum DisplayPort length is 3m for DisplayPort 1.2 and 5m for DisplayPort 1.1. HDMI cable length is recommended as follows:

- 4K @ 50/60Hz: 5m maximum
- 4K @ 24/25/30Hz: 15m maximum
- 1080p @ 60Hz and lower resolutions: 30m maximum

Supported Graphics Cards

Planar QE Series displays support a variety of graphics cards from leading manufacturers, such as NVIDIA and AMD. In general, you should be looking for graphics cards that have the following features:

- Can output 3840 x 2160 at 24 Hz, 30 Hz or 60 Hz over a single DisplayPort or HDMI connection.
- Four-output graphics cards that can output synchronized (genlocked) 1920 x 1080 outputs at up to 60 Hz.
- Cards that support Planar’s support timings, as listed in the following section “Signal Compatibility” on page 87.

Caution: Before you purchase a graphics card for your source, contact your Sales Representative to get the most current information on Planar’s compatibility with leading graphics cards.
Operating the Display

OSD Keypad

The OSD keypad is located on the rear of the display.

OSD Keypad Buttons

<table>
<thead>
<tr>
<th>Key</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>Power on/Power off</td>
</tr>
<tr>
<td>▲</td>
<td>Menu Left/Decrease value</td>
</tr>
<tr>
<td>▶</td>
<td>Menu Right/Increase value</td>
</tr>
<tr>
<td>▲</td>
<td>Menu Up/Increase volume</td>
</tr>
<tr>
<td>▼</td>
<td>Menu Down/Decrease volume</td>
</tr>
<tr>
<td>Menu</td>
<td>Menu/Exit</td>
</tr>
<tr>
<td>SRC</td>
<td>Source selection (toggle)</td>
</tr>
</tbody>
</table>
Remote Control Receiver

The remote control receiver is located near the keypad on the rear of the display. Use the IR extender cable for operating the remote from the front of the display.
LED Indicators

The LED indicator light is located on the rear of the display near the keypad. The following table explains what the different colors and blink patterns mean.

### LED On

<table>
<thead>
<tr>
<th>Power Status</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Standby mode</td>
</tr>
<tr>
<td>Amber</td>
<td>Full power mode</td>
</tr>
<tr>
<td>Green Flashing (1 Hz)</td>
<td>AC power on</td>
</tr>
<tr>
<td>Green Flashing (0.5 Hz)</td>
<td>Powering on from standby</td>
</tr>
<tr>
<td>Green Flashing (5 Hz)</td>
<td>Firmware updating</td>
</tr>
<tr>
<td>Amber Flashing (5 Hz)</td>
<td>Power supply failure</td>
</tr>
<tr>
<td>Green and Amber</td>
<td>Firmware update failure</td>
</tr>
</tbody>
</table>

### Using the Display in Portrait Mode

When using the display in the portrait position and looking at the rear of the display, it should be rotated according to the arrow stickers on the back of the display. This will allow for proper ventilation. Then select the OSD rotation of landscape or portrait on the OSD menu (MAIN MENU > ADVANCED SETTINGS > MENUS AND MESSAGES > OSD ROTATION).

**Caution:** Improper ventilation may shorten the life of the display.

### Using the Display in Flat or Tilted Orientation

The display is not recommended for use in flat orientation for tabletop, floor, or ceiling installations. LCD panels of this size are at risk of panel deflection, which can cause cosmetic sagging, brightness uniformity issues, a shortened life span, and malfunction of optional touch sensors. Installations where the display is tilted downward or upward at an angle may also be prone to these issues and are not recommended.
Using the Remote Control

Below is a picture of the remote control. See the following page for button descriptions and Hex codes.
IR Command Protocol

The Planar QE Series displays accept commands in the form of IR signals that conform to the NEC protocol. Each Planar QE Series remote control has an NEC control code associated with it. You can use these codes to program a third-party “universal” remote control to work with the Planar QE Series displays. These third-party products usually come with a computer software application for this purpose. For more information, consult the documentation provided with the remote control.

The IR control codes have the following characteristics:

- Each code consists of the following:
  - A leader pulse (a modulated pulse of 9 ms followed by a non-modulated pulse of 4.5 ms)
  - 16 address bits. The default address is 1785 (0x06F9, binary 00000110 11111001)
  - 16 data bits: eight (8) bits for the command followed by the logical inverse of the command
  - An end pulse (a modulated pulse of 0.56 ms, similar to the modulated pulse in the ‘0’ and ‘1’ bits). The end of the modulated pulse constitutes the end of the data transmission.
- The carrier frequency is 38 kHz, with the modulated pulses having a 33% duty cycle.
- Commands are sent at a maximum rate of 9 Hz.

For example, below is the NEC control code for the ON button of the Planar QE Series remote control (assuming the default address is used).

<table>
<thead>
<tr>
<th>Hex</th>
<th>06</th>
<th>F9</th>
<th>01</th>
<th>FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binary</td>
<td>00000110</td>
<td>11111001</td>
<td>00000001</td>
<td>11111110</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function</th>
<th>Address Byte 1</th>
<th>Address Byte 2</th>
<th>Command</th>
<th>Command (Logical Inverse)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>00 0000000</td>
<td>1 1 1 1 1 0 0 1</td>
<td>0 0 0 0 0 0 1</td>
<td>1 1 1 1 1 1 1 0</td>
</tr>
</tbody>
</table>

The following example shows the pulse train for this command.
<table>
<thead>
<tr>
<th>Remote Control Button Name</th>
<th>Address</th>
<th>Data</th>
<th>NEC Data From Remote (Hex Code)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>1785</td>
<td>1</td>
<td>0x06F901FE</td>
<td>Power on</td>
</tr>
<tr>
<td>OFF</td>
<td>1785</td>
<td>9</td>
<td>0x06F909F6</td>
<td>Power off</td>
</tr>
<tr>
<td></td>
<td>1785</td>
<td>2</td>
<td>0x06F902FD</td>
<td>Not used</td>
</tr>
<tr>
<td></td>
<td>1785</td>
<td>3</td>
<td>0x06F903FC</td>
<td>Not used</td>
</tr>
<tr>
<td>**</td>
<td>1785</td>
<td>6</td>
<td>0x06F906F9</td>
<td>Not used</td>
</tr>
<tr>
<td>PRESETS</td>
<td>1785</td>
<td>4</td>
<td>0x06F904FB</td>
<td>Not used</td>
</tr>
<tr>
<td>PRESET 1</td>
<td>1785</td>
<td>5</td>
<td>0x06F905FA</td>
<td>Not used</td>
</tr>
<tr>
<td>PRESET 2</td>
<td>1785</td>
<td>7</td>
<td>0x06F907F8</td>
<td>Not used</td>
</tr>
<tr>
<td>PRESET 3</td>
<td>1785</td>
<td>8</td>
<td>0x06F908F7</td>
<td>Not used</td>
</tr>
<tr>
<td>PRESET 4</td>
<td>1785</td>
<td>10</td>
<td>0x06F90AF5</td>
<td>Not used</td>
</tr>
<tr>
<td>1</td>
<td>1785</td>
<td>12</td>
<td>0x06F90CF3</td>
<td>Number button 1</td>
</tr>
<tr>
<td>2</td>
<td>1785</td>
<td>13</td>
<td>0x06F90DF2</td>
<td>Number button 2</td>
</tr>
<tr>
<td>3</td>
<td>1785</td>
<td>14</td>
<td>0x06F90EF1</td>
<td>Number button 3</td>
</tr>
<tr>
<td>4</td>
<td>1785</td>
<td>15</td>
<td>0x06F90FF0</td>
<td>Number button 4</td>
</tr>
<tr>
<td>5</td>
<td>1785</td>
<td>16</td>
<td>0x06F910EF</td>
<td>Number button 5</td>
</tr>
<tr>
<td>6</td>
<td>1785</td>
<td>17</td>
<td>0x06F911EE</td>
<td>Number button 6</td>
</tr>
<tr>
<td>7</td>
<td>1785</td>
<td>20</td>
<td>0x06F914EB</td>
<td>Number button 7</td>
</tr>
<tr>
<td>8</td>
<td>1785</td>
<td>25</td>
<td>0x06F919E6</td>
<td>Number button 8</td>
</tr>
<tr>
<td>9</td>
<td>1785</td>
<td>27</td>
<td>0x06F91BE4</td>
<td>Number button 9</td>
</tr>
<tr>
<td>0</td>
<td>1785</td>
<td>18</td>
<td>0x06F912ED</td>
<td>Number button 0</td>
</tr>
<tr>
<td>VOL +</td>
<td>1785</td>
<td>28</td>
<td>0x06F91CE3</td>
<td>Volume increase</td>
</tr>
<tr>
<td>VOL -</td>
<td>1785</td>
<td>33</td>
<td>0x06F921DE</td>
<td>Volume decrease</td>
</tr>
<tr>
<td>MUTE</td>
<td>1785</td>
<td>32</td>
<td>0x06F920DF</td>
<td>Audio mute</td>
</tr>
<tr>
<td>COLOR</td>
<td>1785</td>
<td>19</td>
<td>0x06F913EC</td>
<td>Not used</td>
</tr>
<tr>
<td>VIDEO WALL</td>
<td>1785</td>
<td>34</td>
<td>0x06F922DD</td>
<td>Not used</td>
</tr>
<tr>
<td>MISC</td>
<td>1785</td>
<td>11</td>
<td>0x06F90BF4</td>
<td>Opens the Image Information menu</td>
</tr>
<tr>
<td>MENU</td>
<td>1785</td>
<td>21</td>
<td>0x06F915EA</td>
<td>Opens the menu</td>
</tr>
<tr>
<td>PREV</td>
<td>1785</td>
<td>22</td>
<td>0x06F916E9</td>
<td>Returns to the previous menu</td>
</tr>
<tr>
<td>ENTER</td>
<td>1785</td>
<td>23</td>
<td>0x06F917E8</td>
<td>Selects the current menu item</td>
</tr>
<tr>
<td>UP</td>
<td>1785</td>
<td>26</td>
<td>0x06F91AE5</td>
<td>Navigate up</td>
</tr>
<tr>
<td>DOWN</td>
<td>1785</td>
<td>29</td>
<td>0x06F91DE2</td>
<td>Navigate left</td>
</tr>
<tr>
<td>LEFT</td>
<td>1785</td>
<td>31</td>
<td>0x06F91FE0</td>
<td>Navigate right</td>
</tr>
<tr>
<td>RIGHT</td>
<td>1785</td>
<td>24</td>
<td>0x06F918E7</td>
<td>Navigate down</td>
</tr>
</tbody>
</table>
Locking the Keypad and IR Remote

You can lock the keypad and IR remote functionality on the display. To lock the keypad, go to Main Menu -> Advanced Settings -> System Settings and select Keypad Lock. To lock the IR remote, go to Main Menu -> Advanced Settings -> System Settings and select IR Remote Lock.

Unlocking the Keypad and IR Remote

To unlock the keypad, press the following keys on the keypad in the order listed: UP, UP, RIGHT, LEFT, DOWN. If the IR remote is unlocked, you can also unlock the keypad by using the IR remote to go to Main Menu -> Advanced Settings -> System Settings and uncheck Keypad Lock.

To unlock the IR remote, press the following keys on the IR remote in the order listed: UP, UP, RIGHT, LEFT, DOWN. If the keypad is unlocked, you can also unlock the IR remote by using the keypad to go to Main Menu -> Advanced Settings -> System Settings and uncheck IR Remote Lock.
Changing the IR Remote Code Set

The IR remote code set transmitted by the remote and accepted by the display can be configured. This is useful if there are multiple Planar displays and you would like each remote to work only with one of the displays. It can also be used if IR interference with another device, such as a DVD player, is occurring.

To change the IR code on the remote, use the following procedure:

1. Press and hold the CODE button on the remote control until the LED on the remote lights solid red (approximately five seconds).

2. Enter a new five-digit code between 00000 and 65535. Include leading zeros for codes with four or fewer digits; for example, enter 255 as 00255.

3. The LED turns off to confirm the code change. If you enter an invalid code, the LED flashes for three or four seconds. Try again, entering a valid code.

   **Note:** The code must match the IR Remote ID Code setting. See page 43.

Turning the Display On

1. Insert the power cord into the display and into the power outlet.

2. Ensure the AC switch is set to “—“.

3. Press the ON button on the remote or the power button on the keypad.

Turning the Display Off

With the power on, press the OFF button on the remote or the power button on the keypad to put the LCD panel in a standby mode. To turn off power completely, turn the AC switch to “O” or disconnect the AC power cord from the power outlet.

   **Note:** The display may automatically turn off the backlight or enter standby mode if no signal is present for a certain period of time. See the description of the Power Saving Mode setting on page 31 for more information.
Adjusting the Volume

1. Using the remote, press the VOL + or VOL - to increase or decrease the volume. You can also use the Up and Right keys to increase the volume, and the Down and Left keys to decrease the volume.

2. Press the MUTE button to temporarily turn off all sound. To restore the sound, press the MUTE button again.

Note: The analog audio out is variable. S/PDIF is fixed.

Selecting Layouts and Input Sources

With Planar QE Series, you can show one source at a time or multiple sources simultaneously. Multiple layout options are available and can be selected from the Inputs and Views Menu (see page 23). Once a layout has been designated, you can assign sources to each of the zones in the layout. The selection of sources must be made one at a time by assigning a current zone. To select the current zone, you can navigate through the on-screen menu (see page 23). Alternatively, you can use the remote or keypad as described next.

Remote

Press the Zone 1, Zone 2, Zone 3, or Zone 4 buttons on the remote. After selecting the desired zone, you can press the source button (DP, HDMI 1, HDMI 2, HDMI 3, HDMI 4, or OPS). This action will also select the active audio source.

For example, to change Zone 3 to HDMI 3, press the Zone 3 button and then press the HDMI 3 button.

Note: The OPS source button will select the ContentSmart source.

Keypad

Press the SRC button. The input source will be toggled in the following order: HDMI 1, HDMI 2, HDMI 3, HDMI 4, DP, ContentSmart.

Note: Sources will toggle through the current zone, or last zone to be modified. Current zones can only be re-assigned in the on-screen menu.
Navigating Through the Menus

1. With the power on, press MENU. The MAIN menu appears.

2. Within the menu, use ▲, ▼, ◀, ▶ and ENTER to navigate through the menus and adjust options.

3. Press PREV on the remote control, or MENU on the keypad, to return to the previous menu. To exit the menu system, press MENU on the remote control, or continue to press MENU on the keypad until the main menu is reached.
Inputs and Views Menu

This menu shows how the sources will be laid out on the screen based on the current Multi-Source View and Advanced Layouts selections.

**Multi-Source View**

Select the Multi-Source View mode

**Options**: Single, Quad; **Default**: Single

**Note**: You can only use 4K/60Hz in Single mode.

**Zone 1**

Select the source displayed in Zone 1

**Options**: HDMI 1, HDMI 2, HDMI 3, HDMI 4, DP, ContentSmart; **Default**: HDMI 1

**Note**: If HDMI1 was selected as another source, ContentSmart cannot be selected. If ContentSmart was selected as another source, HDMI1 cannot be selected.

**Zone 2**

Select the source displayed in Zone 2

**Options**: HDMI 1, HDMI 2, HDMI 3, HDMI 4, DP, ContentSmart; **Default**: HDMI 2

**Note**: If HDMI1 was selected as another source, ContentSmart cannot be selected. If ContentSmart was selected as another source, HDMI1 cannot be selected.
**Inputs and Views Menu**

**Zone 3**

Select the source displayed in Zone 3

**Options:** HDMI 1, HDMI 2, HDMI 3, HDMI 4, DP, ContentSmart; **Default:** HDMI 3

**Note:** If HDMI1 was selected as another source, ContentSmart cannot be selected. If ContentSmart was selected as another source, HDMI1 cannot be selected.

**Zone 4**

Select the source displayed in Zone 4

**Options:** HDMI 1, HDMI 2, HDMI 3, HDMI 4, DP, ContentSmart; **Default:** HDMI 4

**Note:** If HDMI1 was selected as another source, ContentSmart cannot be selected. If ContentSmart was selected as another source, HDMI1 cannot be selected.

**Auto Scan Sources**

Select whether the display will automatically scan for a valid source on any zone that currently does not have a source

**Options:** On, Off; **Default:** Off
Image Adjust Menu

This menu is used for making common image adjustments for the current zone.

![Image Adjust Menu Image](image.png)

### Current Zone

The zone that is currently being adjusted. All of the settings in this menu are saved per input. The zone’s corresponding input source is shown in the title bar, and the graphic beneath that shows which zone is being adjusted in the current Multi-Source View mode and Advanced Layout setting (if applicable).

The current zone can be changed via the menu or by using the ZONE 1-4 keys on the remote control.

**Note:** Changing the Current Zone setting via the ZONE 1-4 keys also changes the Audio Select setting.
### Brightness
Adjust the brightness value of the image
**Range:** 0–100; **Default:** 50

### Contrast
Adjust the contrast of the image
**Range:** 0–100; **Default:** 50

### Color
Adjust the saturation of the image
**Range:** 0–100; **Default:** 50

### Tint
Adjust the hue of the image
**Range:** 0–100; **Default:** 50

### Sharpness
Adjust the sharpness of the image. Higher numbers are sharper
**Range:** 0–10; **Default:** 5

### Noise Reduction
Turn on noise reduction processing
**Options:** Off, Low, Medium, High; **Default:** Off

### Diagnostic Color
Set the image to monochrome. This setting is for use in adjustments to a test pattern and is not stored.
**Options:** Off, Red, Green, Blue; **Default:** Off

### Color Space
Set the color space of the image
**Options:** REC601, REC709, RGB, RGB Video, Auto; **Default:** Auto

### Color Temperature
Set the color temperature of the image
**Options:** 3200K, 5500K, 6500K, 7500K, 9300K, Native; **Default:** Native

### Red Gain
Adjust the red gain of the image
**Range:** 0–200; **Default:** 100

### Green Gain
Adjust the green gain of the image
**Range:** 0–200; **Default:** 100
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Gain</td>
<td>Adjust the blue gain of the image</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0–200; <strong>Default:</strong> 100</td>
</tr>
<tr>
<td>Red Offset</td>
<td>Adjust the red offset of the image</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0–100; <strong>Default:</strong> 50</td>
</tr>
<tr>
<td>Green Offset</td>
<td>Adjust the green offset of the image</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0–100; <strong>Default:</strong> 50</td>
</tr>
<tr>
<td>Blue Offset</td>
<td>Adjust the blue offset of the image</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0–100; <strong>Default:</strong> 50</td>
</tr>
<tr>
<td>Gamma</td>
<td>Set the gamma of the image</td>
</tr>
<tr>
<td></td>
<td><strong>Options:</strong> 1.5, 1.55, 1.6, 1.65, 1.7, 1.75, 1.8, 1.85, 1.9, 1.95, 2.0, 2.05, 2.1, 2.15, 2.2, 2.25, 2.3, 2.35, 2.4, 2.45, 2.5, 2.55, 2.6, 2.65, 2.7, 2.75, 2.8</td>
</tr>
<tr>
<td></td>
<td><strong>Default:</strong> 2.2</td>
</tr>
<tr>
<td>Content Rotation</td>
<td>Rotate the image on the display</td>
</tr>
<tr>
<td></td>
<td><strong>Options:</strong> None, 90, 180, 270; <strong>Default:</strong> None</td>
</tr>
<tr>
<td>Aspect Ratio</td>
<td>Set how the source is treated when the aspect ratio of the input is different than the aspect ratio of the zone it is in. If the image does not fill the zone completely, the extra margins are black.</td>
</tr>
<tr>
<td></td>
<td><strong>Options:</strong> Auto, 16:9, 4:3, Fill Screen, Native, Letterbox; <strong>Default:</strong> Auto</td>
</tr>
<tr>
<td>Overscan</td>
<td>Set the percentage of the image to remove from each edge</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0–20; <strong>Default:</strong> 0</td>
</tr>
<tr>
<td>Image Position</td>
<td>Move the image horizontally or vertically. The amount to move is measured in input pixels.</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> -1000–1000; <strong>Default:</strong> 0</td>
</tr>
<tr>
<td>Revert to Defaults</td>
<td>Reset all settings in the Image Adjust menu to their factory defaults for the current zone only</td>
</tr>
</tbody>
</table>
**Audio Menu**

This menu enables you to make audio adjustments to the selected zone.

*Note:* Volume, Bass, Treble and Balance do not apply to the S/PDIF output.

**Audio Select**

The zone that is currently being adjusted and whose audio is being played. The zone’s corresponding input source is shown in the title bar.

**Options:** Zone 1, Zone 2, Zone 3, Zone 4; **Default:** Zone 1

*Note:* Changing the Audio Select setting via the ZONE 1-4 keys also changes the Current Zone setting.

**Volume**

Set the volume of the audio  
**Range:** 0~100; **Default:** 50

**Bass**

Set the bass level  
**Range:** 0~100; **Default:** 50

*Note:* This setting applies only to the internal speakers, and cannot be adjusted for the Line Out connector.

**Treble**

Set the treble level  
**Range:** 0~100; **Default:** 50

*Note:* This setting applies only to the internal speakers, and cannot be adjusted for the Line Out connector.
### Balance

Set the audio balance

**Range:** 0~100; **Default:** 50

### Enable Internal Speakers

Disable or enable the built-in speakers

**Options:** On, Off; **Default:** On

### Mute

Mute or unmute the audio

**Options:** On or Off; **Default:** Off
Advanced Settings Menu

Panel Brightness Submenu

Intensity

Set the intensity of the LCD backlight
**Range:** 0~100; **Default:** 75

Local Dimming

Turn on or off the local dimming function, if supported by the display
**Options:** On, Off; **Default:** On
Power Submenu

Auto Power On

Set whether the system will automatically leave standby mode after AC power is applied

Options: On, Off; Default: Off

Power Saving Mode

Set the action to take if there is no signal detected after the period of time selected by the Power Saving Delay setting:

- **Disabled**: The display will remain on even if no signal is present.
- **Low Power**: The display will enter standby mode if no signal is detected after the specified period of time.
- **Wake on Signal**: The display will enter a reduced power mode if no signal is detected after the specified period of time. When in this state, the display will turn on when a signal is detected or when any key is pressed on the keypad or IR remote.

Default: Low Power

Power Saving Delay

Set the number of minutes to delay before initiating the power saving mode action (if any)

Options: 1 Minute, 5 Minutes, 15 Minutes, 30 Minutes, 60 Minutes; Default: 5 minutes

Power On Delay

Select the amount of time to delay before turning on the display. Depending on the electrical capabilities at the installation site, it can be necessary to adjust the power on sequence of the displays if there are multiple displays in the installation. Use this control to ensure that each display will power on at a different time, avoiding such problems.

Options: 0-10 seconds, in 0.1 second increments; Default: 0 seconds
Network Submenu

The default static IP values are:

- IP Address: 192.168.12.12
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.12.1

The static IP settings that you program will be used if a DHCP server cannot be found.

<table>
<thead>
<tr>
<th>MAC Address</th>
<th>The MAC address of the system</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Address</td>
<td>The current network address. You can use the number keys on the remote to enter this information.</td>
</tr>
<tr>
<td>Subnet Mask</td>
<td>The current subnet mask. You can use the number keys on the remote to enter this information.</td>
</tr>
<tr>
<td>Default Gateway</td>
<td>The current default gateway. You can use the number keys on the remote to enter this information.</td>
</tr>
<tr>
<td>DNS Server</td>
<td>The current DNS server. You can use the number keys on the remote to enter this information.</td>
</tr>
<tr>
<td>DHCP</td>
<td>Turn DHCP on or off. Options: On, Off; Default: On</td>
</tr>
</tbody>
</table>

Note: The specified DNS server is used when Use Network Time is checked for the Set Date and Time setting.
Menus and Messages Submenu

Menu Position

Move the OSD menu to a different location on the screen.

Options: Center, Upper Left, Upper Right, Lower Left, Lower Right; Default: Center

OSD Transparency

Set the transparency of the OSD so that the image behind it can be seen. Higher values mean greater transparency.

Range: 0~5; Default: 0

OSD Timeout

Set the amount of time in seconds since the last keypress before the OSD menu automatically closes. If set to Off, the menu never automatically closes.

Options: Off, 10 Seconds, 30 Seconds, 60 Seconds, 120 Seconds, 240 Seconds; Default: 60 Seconds

Allow Pop Up Messages

Suppress messages that pop up automatically. When set to No, the source status message and the volume slider bar will not be displayed.

Options: Yes or No; Default: Yes

Allow Splash Screen

Enable or disable the splash screen during startup.

Options: Enable or Disable; Default: Enable

OSD Rotation

Rotate the OSD menu so that it is readable if the display is mounted in portrait orientation.

Options: Landscape or Portrait; Default: Landscape
Blank Screen Color

Select the color to display when there is no signal in a zone

**Options:** Black, White, Gray, Red, Green, Blue, Cyan, Magenta, Yellow

**Default:** Black

Schedule Submenu
**Set Date and Time**

Set the internal system clock. If **Use Network Time** is unchecked, you can set the following settings individually: Time Zone, Year, Month, Day, Date, Hour, and Minute.

**Note:** If Use Network Time is checked and DHCP is unchecked, the display will be unable to obtain the network time unless a DNS server is programmed. This is done via the DNS Server setting in the Network menu or the serial command interface.

**Set Event 1~Event 20**

**Event Enabled:** Turns on the event. If disabled, the settings are saved so that the event can be re-enabled.

**Frequency:** The frequency of the event. Options are Daily, Weekly, Weekdays, Weekends.

**Action:** The action to take for the event. Options are Turn On, Turn Off, Panel Brightness.

**Data:** The backlight setting when the Action is set to Panel Brightness.
EDID Submenu

This menu specifies the EDID format and preferred timing for the selected connector.

**Selected Connector**
Set which connector is used

**Options:** HDMI 1, HDMI 2, HDMI 3, HDMI 4, DP, ContentSmart, All

**Program EDID**
Program the EDID information for the selected connector based on the selections in the EDID submenu

**EDID Type**
Set the EDID type to determine the base EDID used for the current connector:
- 4K60 selects an EDID format compliant with HDMI 2.0 and DP 1.2
- 4K30 selects an EDID format compliant with HDMI 1.4b and DP 1.1
- 1080P selects an EDID format compliant with HDMI 1.3 and DP 1.1

**Options:** 4K60, 4K30, 1080P

**Horizontal Active**
The number of active pixels in a line

**Range:** 0~4095
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vertical Active</strong></td>
<td>The number of active lines in a field</td>
<td>0~4095</td>
</tr>
<tr>
<td><strong>Vertical Refresh Rate</strong></td>
<td>The number of fields per second rounded to the nearest Hz</td>
<td>0~120</td>
</tr>
<tr>
<td><strong>Fully Specified</strong></td>
<td>Determine how the final detailed timing is calculated. If disabled, it is calculated based on Horizontal Active, Vertical Active, and Vertical Refresh Rate values. If enabled, it is calculated based on all of the EDID values except for Vertical Refresh Rate. Options: Disabled, Enabled</td>
<td></td>
</tr>
<tr>
<td><strong>Pixel Clock</strong></td>
<td>The value of the pixel clock, in megahertz</td>
<td>0~600.00, in 0.01 increments</td>
</tr>
<tr>
<td><strong>Horizontal Blanking</strong></td>
<td>The number of non-active pixel clocks in a line</td>
<td>0~1023</td>
</tr>
<tr>
<td><strong>Horizontal Front Porch</strong></td>
<td>The number of pixel clocks in the horizontal front porch</td>
<td>0~1023</td>
</tr>
<tr>
<td><strong>Horizontal Sync Width</strong></td>
<td>The number of pixel clocks in the horizontal sync pulse</td>
<td>0~255</td>
</tr>
<tr>
<td><strong>Vertical Blanking</strong></td>
<td>The number of non-active lines in a field</td>
<td>0~255</td>
</tr>
<tr>
<td><strong>Vertical Front Porch</strong></td>
<td>The number of line times in the vertical front porch</td>
<td>0~255</td>
</tr>
<tr>
<td><strong>Vertical Sync Width</strong></td>
<td>The number of line times in the vertical sync</td>
<td>0~255</td>
</tr>
</tbody>
</table>
Advanced Color Submenu

This menu adjusts the color coordinates of the current zone. These controls are used by advanced installers to achieve exact color point targets on the display. In some cases, the target color coordinates may not be achievable. In this case, an asterisk (*) will appear next to the color coordinate value.

**Note:** The white color point should be adjusted before adjusting the other color points.
## Current Zone

The zone that is currently being adjusted. All of the settings in this menu are saved per zone, and all color coordinate values are also saved per Color Gamut setting. The zone’s corresponding input source is shown in the title bar, and the graphic beneath that shows which zone is being adjusted in the current Multi-Source View mode and Advanced Layout setting (if applicable).

The current zone can be changed via the menu or by using the ZONE 1-4 keys on the remote control.

**Note:** Changing the Current Zone setting via the ZONE 1-4 keys also changes the Audio Select setting.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>White x</strong></td>
<td>Adjust the x coordinate of the white color point</td>
<td>0.000-0.800</td>
</tr>
<tr>
<td><strong>White y</strong></td>
<td>Adjust the y coordinate of the white color point</td>
<td>0.000-0.800</td>
</tr>
<tr>
<td><strong>Red x</strong></td>
<td>Adjust the x coordinate of the red color point</td>
<td>0.000-0.800</td>
</tr>
<tr>
<td><strong>Red y</strong></td>
<td>Adjust the y coordinate of the red color point</td>
<td>0.000-0.800</td>
</tr>
<tr>
<td><strong>Green x</strong></td>
<td>Adjust the x coordinate of the green color point</td>
<td>0.000-0.800</td>
</tr>
<tr>
<td><strong>Green y</strong></td>
<td>Adjust the y coordinate of the green color point</td>
<td>0.000-0.800</td>
</tr>
<tr>
<td><strong>Blue x</strong></td>
<td>Adjust the x coordinate of the blue color point</td>
<td>0.000-0.800</td>
</tr>
<tr>
<td><strong>Blue y</strong></td>
<td>Adjust the y coordinate of the blue color point</td>
<td>0.000-0.800</td>
</tr>
</tbody>
</table>
### Advanced Settings Menu

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cyan x</strong></td>
<td>Adjust the x coordinate of the cyan color point</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0.000-0.800</td>
</tr>
<tr>
<td><strong>Cyan y</strong></td>
<td>Adjust the y coordinate of the cyan color point</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0.000-0.800</td>
</tr>
<tr>
<td><strong>Magenta x</strong></td>
<td>Adjust the x coordinate of the magenta color point</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0.000-0.800</td>
</tr>
<tr>
<td><strong>Magenta y</strong></td>
<td>Adjust the y coordinate of the magenta color point</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0.000-0.800</td>
</tr>
<tr>
<td><strong>Yellow x</strong></td>
<td>Adjust the x coordinate of the yellow color point</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0.000-0.800</td>
</tr>
<tr>
<td><strong>Yellow y</strong></td>
<td>Adjust the y coordinate of the yellow color point</td>
</tr>
<tr>
<td></td>
<td><strong>Range:</strong> 0.000-0.800</td>
</tr>
<tr>
<td><strong>Copy to All Zones</strong></td>
<td>Copy the color coordinate settings for the current zone and the current Color Gamut setting to all other zones</td>
</tr>
<tr>
<td><strong>Revert to Defaults</strong></td>
<td>Reset the color coordinate settings for the current zone and the current Color Gamut setting to their default values</td>
</tr>
</tbody>
</table>
Test Patterns Submenu

This menu selects a test pattern to show on the display for diagnostic purposes.

Test Patterns

Options: Black, Gray, White, Red, Green, Blue, Magenta, Yellow, Cyan, Gray Ramp, Red Ramp, Blue Ramp, Color Bar, Checkerboard
System Settings Submenu

**Enable Status LED**

When enabled, the status LEDs on the back of the display behave as indicated on page 15. When disabled, the status LEDs are always turned off.

**Options:** Disable, Enable; **Default:** Enable

**Pixel Orbit**

Create slight frame motion to help avoid image retention

**Options:** Enable, Disable; **Default:** Disable

**MEMC**

Enable motion estimation motion compensation (frame interpolation). This improves smoothness for fast motion video content.

**Options:** Off, Low, Medium, High; **Default:** Off

**DisplayPort Type**

Set the version of DisplayPort that is used by the system

**Options:** 1.1, 1.2; **Default:** 1.2

**Keypad Lock**

Lock or unlock the keypad. When it is enabled, all keypad presses will be ignored.

**Options:** Enable, Disable; **Default:** Disable

**IR Remote Lock**

Lock or unlock the remote control. When it is enabled, all remote control presses will be ignored.

**Options:** Enable, Disable; **Default:** Disable
### IR Remote ID Code

Selects the IR remote code set accepted by the display  
**Options:** 00000-65535; **Default:** 01785

### Save All Settings to USB

Save all settings in the display to a USB flash drive. The saved file will be named `Planar-settings.bin` and will be saved in the root folder of the USB flash drive.  
**Note:** A USB flash drive must be inserted into the USB-A connector prior to using this feature. The USB flash drive must be formatted as FAT32. This feature will not work with the NTFS file system.

### Restore All Settings from USB

Restores all settings in the display from a USB flash drive. The settings file must be named `Planar-settings.bin` and must be located in the root folder of the USB flash drive.  
**Note:** A USB flash drive must be inserted into the USB-A connector prior to using this feature. The USB flash drive must be formatted as FAT32. This feature will not work with the NTFS file system.

### Save Diagnostics to USB

Save a diagnostic report to a USB flash drive to help Planar Technical Support troubleshoot any issues. The saved file will be named `Planar-diagnostics.bin` and will be saved in the root folder of the USB flash drive.  
**Note:** A USB flash drive must be inserted into the USB-A connector prior to using this feature. The USB flash drive must be formatted as FAT32. This feature will not work with the NTFS file system.

### Factory Reset

Return the saved settings in a system to their factory defaults

### Firmware Update

Update the firmware for the display. Refer to the instructions on the firmware release package for more information.
System Information Submenu

This menu displays version information for all programmable parts in the system. It also contains the model and serial number.
Image Information Submenu

This menu displays image details for the current zone. If more than one zone is available, you can change zones by setting the **Current Zone** option.
Error Log Submenu

This menu displays a chronological list of system errors that have occurred. For a list of possible errors, see "Error Codes" on page 100.
Using the Touch Screen

You can use the touch screen to control your Windows, Mac or Linux operating system. The Planar QE Series is HID compliant, delivering up to 20 points of touch on both Windows and Linux without a driver. Single touch only is supported for Mac operating systems. To achieve more than single touch Mac support, drivers will need to be installed, which can be found on http://www.planar.com/support.

**Note:** Ensure that you have installed the USB cable on the display to a computer.
Embedded Planar ContentSmart

Feature Highlights

The Embedded Planar ContentSmart is a UHD (3840 x 2160) high definition digital signage media player featuring an industrial-grade mechanical design, versatile open-standard HTML5 and SMIL programmability.

- Hardware decoding of MPEG1/2/4, H.264, H.265, and VC-1 media formats
- 8GB on-board flash local storage with microSD expansion slot
- Integrated audio and video output via HDMI 2.0
- 2 USB ports
- Built-in wireless b/g/n network
- Support for HTML5 widgets for dynamic content (W3C Widgets standard)
- Industry leading W3C SMIL support for developers
- Supports full POPAI Screen Media Formats Standards profiles S1 to S12, and E1 to E8
- Multiple 3rd party software solution compatibility
- Support for touch screen functionality

Loading Content

There are three methods for loading content onto the player:

- Using the Planar ContentSmart Software to load content onto the player’s on-board flash memory or a microSD card. Instructions for creating the content can be found in the Planar ContentSmart Software User Manual.
- Creating your own HTML5 and SMIL content. See page 54 for information on how to set up the player to retrieve the content from a remote server.
- Enabling the player’s EasyPlay feature, allowing photos or videos to be played from a USB flash drive or microSD card. See page 59.
Configuring the Player

Basic Settings

A USB mouse must be attached to the player to configure settings.

Basic settings include:

- Network
- Time zone
- Content

Each time the Basic settings menu is entered, playback will automatically begin after 15 seconds if content services have been previously set. Auto playback can be canceled by clicking on the button before the countdown ends.

The user is able to enter Advanced Settings by clicking the Advanced button.

To enter the menu system at any time during playback, plug in a USB mouse and hold the left mouse key in the corner area as shown below for 10 seconds.

Note: The player will ask for a password if a password has been configured.
Connect the Player to Your Network

Wired Connection

To use the wired Ethernet connection, connect an Ethernet cable. Ethernet connection takes priority over wireless connection.

DHCP – Automatically assign network IP address

1. Turn on Ethernet by checking the Use Ethernet box. If using DHCP, no further action is required.

Static IP – Manually assign network IP address

1. Click Static IP Settings to configure a static IP address.
Proxy Settings

1. In Basic settings, click the **Advanced** button. The advanced configuration menu will be launched.

2. Click **Network**, and then click **Advanced**.

3. The Proxy setting menu will be launched. Input the proxy hostname and port, and then click **Done** to finish the configuration.
Show IP Settings

1. In Basic settings, click the **Advanced** button. The advanced configuration menu will be launched.

2. Click **Network**, and then click **Show IP**.

3. This feature controls whether the IP address is displayed in the Basic settings menu and is enabled by default. When disabled, the Basic settings will display “connected” instead of the assigned IP address.
Time Zone Settings

1. In Basic settings, click **Time zone**.

   ![Basic settings](image)

2. Choose the correct time zone from the available options.

   ![Date & time settings](image)
Content Settings

**Note:** The steps in this section are not necessary if a playlist has been loaded using the ContentSmart software. The proper URL has already been loaded by the ContentSmart software.

1. Click the **Set content** button.

2. Input the **SMIL/HTML5 content URL** and click **Set**. It will return to **Basic settings** automatically.
3. The player will check the availability of the **SMIL/HTML5 content URL**, with the **Play** button showing **Checking...**

The checking action can be canceled by clicking the **Checking...** button. It will change back to **Play**.

**Note:** It is highly recommended to let the player check the availability of the content URL. Clicking the **Play** button with a bad/invalid URL set will cause the player to reboot if the **FailSafe** function is not configured.

4. If the **SMIL/HTML5 content URL** is available, the **Play** button will change to a 15-second countdown and the playback will start after the countdown. The countdown can be canceled by clicking the button.

If it keeps showing **Checking...** for a long time, go back to **Set content** to check the correctness of the URL.
Player Information

Users can check the player’s basic information including the Health status, Firmware version and Player ID.

1. Click the **Advanced** button. The advanced configuration menu will be launched.

2. Click **Information**. The definitions of the Health Status are:
   - Green – Normal. The device is connected to the URL server.
   - Blue – Local. The device is playing content from the USB drive or SD card.
   - Gray – Disconnected. The device is disconnected.
Content Configuration – AppStart

Note: The steps in this section are not necessary if a playlist has been loaded using the ContentSmart software. The proper URL has already been loaded by the ContentSmart software.

Users can assign the URL and APP for execution right after the system starts up.

1. Click the Advanced button.

2. Click Content, and then click AppStart.

3. Enter the valid URL of HTML/SMIL in AppStart. If you already configured the SMIL/HTML5 content URL via the Set content button, the URL would be shown here.

4. The Advanced option is used for third-party App configuration only.
Content Configuration – FailSafe

Users can assign the URL and APP for execution while the system has failed to play the assigned content.

1. Click the **Advanced** button. The advanced configuration menu will be launched.
2. Click **Content**, and then click **FailSafe**.
3. Enter the URL of HTML/SMIL in FailSafe.
4. The Advanced option is used for third-party App configuration only.
Content Configuration – EasyPlay

The EasyPlay features allows the player to play media content from the USB flash drive (or microSD card) directly. Please note that media files are not copied to the player’s internal storage so the USB flash drive (or microSD card) must not be removed.

When EasyPlay is enabled, the player will play content only from the USB drive (or microSD card). If a user wants to play content from the URL server configured via the Set content button, EasyPlay must be disabled.

1. Insert the USB drive or microSD card containing the media content to play.
2. Click the Advanced button.
3. Click Content, and then click EasyPlay.
4. Click the Disabled/Enabled button to enable EasyPlay and choose from two available operation modes: Photo Mode and Movie Mode.
Configure Photo Mode

1. Click **Photo** for choosing photos and music. Click the buttons as marked in red below and select the directories for photos and music from the USB drive.

2. Click the **Set** button after selecting the directories.
Configure Movie Mode

1. Click **Movie**. Click the button as marked in red below and select the directory for movies from the USB drive.

2. Click the **Set** button after the folder is selected.

3. The files in the selected folders will be played after clicking the **Play** button in the Basic or Advanced settings menu.
EasyPlay Schedule Configuration

1. Click the **Advanced** button.

2. Click **Content**, and then click **Schedule**.

3. Click the buttons marked in red below to enable/disable the EasyPlay schedule for each time slots.

4. Type the scheduled time in the dialogue boxes marked in blue below by using the pop-up keyboard or the USB keyboard.
5  The “On” times assigned in the time slots A-E are inclusive. For example, a schedule assigned per the example below:

The exact playback time will be the time slots marked in blue as shown below. The dark blue parts are the overlap time of C/D and D/E.

**Note:** The display’s scheduling settings can be used instead of the player’s schedule settings. The display’s schedule settings take priority. Refer to the “Schedule Submenu” on page 34.

**Note:** The player’s schedule settings work only if the display is on. If the display has been powered down manually or as a result of Auto Power Off being set to Low Power, the display will not respond to the player’s schedule settings. Refer to the “Power Submenu” on page 31.
Display Settings

For best quality, the player is configured for the display’s native resolution of 3840x2160 @ 60Hz. While it is recommended that the resolution not be changed from this native setting, the following steps can be used to change the resolution of the player.

Resolution Settings

1  Click the **Advanced** button. The advanced configuration menu will be launched.

2  Click the **Display/sound** button, and then click **Display**. The Display Settings page will be launched.

3  Click **Resolution** and select a suitable resolution from the pop-up menu. The default configuration is Auto Detect – the player will auto detect and use the best optimized resolution that your display supports.
Screen Orientation

Screen orientation is to set the display to rotate 90/180/270 degrees.

1. Click the **Advanced** button. The advanced configuration menu will be launched.

2. Click the **Display/sound** button, and then click **Display**. The Display Settings page will be launched.

3. Click the Screen orientation marked in red below.
4 Select the preferred angle from the menu.

Sound Settings

To control the output sound volumes and touch sounds:

1 Click the **Advanced** button. The advanced configuration menu will be launched.

2 Click the **Display/sound** button, and then click **Sound**. The Sound Settings page will be launched.
3 Click **Volumes**. The Volumes settings page will be launched. Drag the blue sliders to adjust the volumes for the selected options, and then click **OK** to save the new settings.
Access Settings – Player Name

The player’s name can be specified so the player can be easily recognized in the management software (Management software support is required).

**Note:** You can also change the player name in the ContentSmart software.

1. Click the **Advanced** button. The advanced configuration menu will be launched.
2. Click **Access**, and then click **Player name**.
3. Input a name for the field and click **Set**.
Access Settings – Security

A password can be set to provide authentication for player access. If the password is set, a password prompt will appear if a user is trying to enter the Basic settings menu from playback.

1. Click the Advanced button. The advanced configuration menu will be launched.
2. Click Access, and then click Security.
3. Input a password in the field and click Set.
Scheduling – Time Server

The feature allows users to synchronize the player’s time with the web server where the appStart URL hosted (based on the HTTP response header’s time). It is disabled by default.

When disabled, the player synchronizes its time with the default time server (pool.ntp.org).

1. Click the Advanced button. The advanced configuration menu will be launched.

2. Click Scheduling, and then click Time server.

3. Click the Use AppStart URL as time server button as marked in red below to enable/disable the time server function.

4. Click Set to save the setting.
Scheduling – Scheduled Reboot

The Scheduled Reboot feature allows the player to reboot on the assigned time automatically every day.

**Note:** The Scheduled Reboot feature affects only the player, not the entire display. To reboot the entire display, use the Scheduling feature in the main OSD. Refer to "Schedule Submenu" on page 34.

1. Click the **Advanced** button. The advanced configuration menu will be launched.

2. Click **System**, and then click **Scheduled Reboot**.

3. Click the **Enable daily reboot** button as marked in red below to enable/disable the daily reboot function. Click the dialogue box to set the time. The value can be entered with the pop-up keyboard or USB keyboard.

4. Click **Set** to save the setting.
System Configuration – Firmware Update

Firmware updates can be performed by using a USB flash drive. Please read the release notes regarding the changes that will be made to your player before applying the upgrade.

**IMPORTANT: DO NOT** unplug the USB drive or power down the player while the system is performing the firmware update.

1. Download the latest firmware from [http://www.planar.com/contentsmart](http://www.planar.com/contentsmart) and copy it to the root directory of a USB drive.

2. Plug in the power cord into the device.

3. After the bootup completes, click the **Advanced** button on the Basic settings menu.

4. Click **System**, and then click **Firmware** update.

5. Click **OK** to begin the firmware update.
6 Plug in the USB drive while the screen shows “Scanning USB drives for firmware package.” Make sure to use one of the player’s USB inputs, not the main USB-A input.
System Configuration – Expansion Storage

Manual Expansion

1. Power off the device.
2. Insert the microSD card, and then plug in the power cord to power on.
3. In the Basic settings menu, click the Advanced button. The advanced configuration menu will be launched.
4. Click System, click Expansion storage and click Initialize. The player will format the microSD card and then reboot automatically.

5. After bootup, check the player information. The new capacity will be displayed.
Auto Expansion

1. In the Basic settings menu, click the **Advanced** button. The advanced configuration menu will be launched.

2. Click **System**, click **Expansion storage** and enable **auto-format**.

3. Power off the device.

4. Insert the microSD card, and then plug in the power cord to power on.

5. After bootup, check the player information. The new capacity will be displayed.
System Configuration – Factory Reset

If you forget the system password you have set, you must reset the system to regain access to the player.

Using the Reset Button

1. Press and hold the reset button with a pin.
2. Reconnect the power cord.
3. Wait until the status LED flashes.
4. Release the reset button and wait for the system to initialize.

Using a USB Mouse

A system reset will re-initialize the system, clear passwords and return settings to their default values. Perform the following:

1. Connect a USB mouse or use the touch screen for input.
2. Click the Advanced button. The advanced configuration menu will be launched.
3. Click System, and then click Factory default.
4. Click the OK button to perform the system reset.
System Configuration – Power Save

The Power Save feature allows the player to power off automatically while staying at the Basic settings menu without any action taken for 10 minutes.

1. Click the Advanced button. The advanced configuration menu will be launched.
2. Click System, and then click Power save.
3. Click the Enable Power Save mode button as marked in red below to enable/disable the power save function.
4. Click Set to save the setting.

System Configuration – Auto Recovery

Auto recovery defines what should happen if there is an issue with the loaded content. Should an error occur while playing content which could include things such as custom widgets and HTML5 content, the user may specify whether or not they would like the player to attempt to re-start the content (setting is on) or cancel to the main menu (setting is off). The default setting for this feature is on.

1. Click the Advanced button. The advanced configuration menu will be launched.
2. Click System, and then click Auto Recovery.
3. Enable or disable the auto recovery function.
Content Management

Please refer to the Planar ContentSmart Software User Manual for instructions.

Authoring in HTML5

A major advancement in the player is the ability to playback HTML5 content which can contain dynamic information.

To find out more about using HTML5 for digital signage, visit http://www.digisignage.com/

Working with SMIL

The player uses open communications protocols for content presentation and playback control.

SMIL-compliance means predictable results across multiple devices. SMIL’s non-proprietary nature means that your investments are never obsolete.

Introduction

Using SMIL (pronounced “smile”), the language created by W3C for multimedia communications, the media player understands the language “spoken” by professional tools from companies such as Adobe, Apple, Microsoft, and Real Networks. What this means is quicker, easier, and better integration of your players into your digital signage networks, opening up avenues of software controls and realizing the full potential of your player hardware down the road.

www.a-smil.org for Developers

The media player operating system utilizes W3C SMIL as the underlying scripting language, which lends well to customization to your project management needs. For resources, downloads and community support, visit www.a-smil.org.
Planar QE Series Remote Monitoring Software

Planar QE Series Remote Monitoring is a software tool that displays information about the display via a web browser. It is used primarily to access the settings in the OSD as well as provides some additional features.

Remote Monitoring Home

Launch a web browser. Enter the IP address shown in the Network menu (see page 32). If successful, you should see the Remote Monitoring System Information page.

Remote Monitoring System Information

This page displays version information for all programmable parts in the system. It also contains the model and serial number.

For the OSD equivalent, refer to "System Settings Submenu" on page 42.
Remote Monitoring Inputs and Views

This page shows how the sources will be laid out on the screen based on the current Multi-Source View and Advanced Layouts selections.

For the OSD equivalent, refer to "Inputs and Views Menu" on page 23.
Remote Monitoring Audio

This page enables you to make audio adjustments to the selected zone.

**Note:** Volume, Bass, Treble and Balance do not apply to the S/PDIF output.

For the OSD equivalent, refer to "Audio Menu" on page 28.
Remote Monitoring Panel Brightness and Power

This page enables you to make adjustments to the brightness and power settings.

For the OSD equivalents, refer to "Panel Brightness Submenu" on page 30 and "Power Submenu" on page 31.
Remote Monitoring Notifications

This page enables you to send email notifications on certain events.

<table>
<thead>
<tr>
<th>Event</th>
<th>Recipient(s)</th>
<th>Additional Note</th>
<th>Enabled</th>
</tr>
</thead>
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<td><a href="mailto:marc.p.grander@planar.com">marc.p.grander@planar.com</a></td>
<td>Testing 12345678</td>
<td></td>
</tr>
<tr>
<td>System Error</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Obtain this information from your ISP or network administrator.

The options under **Email Account Settings** are:

- **SMTP Server:** The name of the outgoing SMTP server. Obtain this information from your ISP.
- **Connection Encryption:** Selects the appropriate encryption method required by the SMTP server.
- **Port:** Selects the port that the SMTP server uses.
- **Authentication:** Use Auto unless directed by your ISP or network administrator.
- **User Name:** Login username for the SMTP server.
- **Password:** Login password for the SMTP server.
- **Email From Address:** The email address that will be shown in the “From:” field of the notification emails.
Remote Monitoring System Settings

The options under **Notification Events** are:

- **Power On/Off**: Occurs when standby mode is entered and when the display is powered on.
- **System Error**: Occurs when the display has detected an error within the system.
- **Source Detect**: Occurs when the display detects and displays a new input signal.
- **Source Lost**: Occurs when the current input signal is no longer detected.
- **Source Selected**: Occurs when a different input source is selected for any of the zones.

**Note**: Each event can be sent to one or more recipients. To add multiple email addresses, separate them by a space.

- **Test Email**: Sends a test of the selected email notification. This is useful for verifying that your email account settings are setup correctly. If the test email fails, you can use the **View Last 10 Log Messages** button to get more detailed information about the failure.

Remote Monitoring System Settings

This page enables you to make adjustments to a variety of system settings.

For the OSD equivalent, refer to "System Settings Submenu" on page 42.
Remote Monitoring Access Control

This page enables you to limit the ability to access certain features in the web server by password protecting them.

All functions other than the following require Admin level access:

- Power On/Off
- System Information
- Inputs and Views
  - Multi-Source View
  - Zone inputs
- Audio
  - Volume
  - Mute
- Panel Brightness and Power
- Panel Brightness

With the exception of System Information, all functions listed above require User level access.

If no password is set for either access level, all functions can be accessed. By default, there are no passwords for either access level.
External Control

In addition to using the Planar QE Series remote control and display, there are other methods of controlling the Planar QE Series display externally:

- Using a serial link to send ASCII commands and to receive responses to those commands. The same set of commands can be sent over RS-232, USB, TCP or UDP. See the Planar QE Series RS232 User Manual for more information.
- Using discrete infrared (IR) codes to program a third-party remote control. See "IR Command Protocol" on page 17.
- Using the Planar QE Series Remote Monitoring software to access the settings in the OSD as well as some additional features via a web browser. See "Planar QE Series Remote Monitoring Software" on page 79.
# Signal Compatibility

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<td>Standard: 0.61&quot; (15.6 mm) left/right; 0.62&quot; (15.7 mm) top/bottom</td>
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<td>Standard: 0.63&quot; (16.0 mm) left/right; 0.62&quot; (15.7 mm) top/bottom</td>
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<td>Touch: 1.2&quot; (31.0mm) left/right, top/bottom</td>
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<td>Touch: 1.22&quot; (30.9 mm) left/right; 1.23&quot; (31.2 mm) top/bottom</td>
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<td>QE8650 QE8650T</td>
<td>QE9850 QE9850T</td>
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<tr>
<td>Display Weight</td>
<td>Standard: 115 lbs (52 kg)</td>
<td>Standard: 126 lbs (57 kg)</td>
<td>Standard: 187 lbs (85 kg)</td>
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<td>Touch: 138 lbs (63 kg)</td>
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<td>Touch: 243 lbs (110 kg)</td>
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<td>Usage</td>
<td>Recommended Usage: 24x7</td>
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<td>E-LED</td>
<td>D-LED</td>
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<td>Backlight Life</td>
<td>30,000 hours min</td>
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<td>Power Consumption (Typ.)</td>
<td>195W</td>
<td>165W</td>
<td>410W</td>
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<tr>
<td>BTU/hr (Typ.)</td>
<td>195W x 3.42 BTU = 667 BTU/hr</td>
<td>165W x 3.42 BTU = 564 BTU/hr</td>
<td>410W x 3.42 BTU = 1402 BTU/hr</td>
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<td>Standby Power Consumption</td>
<td>&lt;1W</td>
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<td>Input Voltage / Frequency</td>
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<td>Environment</td>
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<td></td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>Min -4°F ~ Max 140°F (-20°C ~ 60°C)</td>
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<tr>
<td>Operating Temperature</td>
<td>Min 32°F ~ Max 95°F (0-35°C) at up to 1500 m</td>
<td>Min 32°F ~ Max 86°F (0-30°C) at up to 3000 m</td>
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<td>Humidity</td>
<td>20-85% RH</td>
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<td>MPEG-4 up to 1080p @60fps (1920x1080)</td>
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<td>MPEG-2 up to 1080p @24fps (1920x1080)</td>
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<td>VC-1 up to 1080p @30fps (1920x1080)</td>
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<tr>
<td></td>
<td>H.265/HEVC: 4k @60fps (4096x2160) up to 50Mbps bit rate</td>
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<td>Image format support</td>
<td>JPEG</td>
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<td>Audio codec support</td>
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<td>W3C HTML5 (HTML, CSS, JavaScript)</td>
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<td>USB 2.0 x 2</td>
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<td></td>
<td>RJ45 Ethernet port (Giga LAN)</td>
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<td></td>
<td>microSD card slot</td>
</tr>
<tr>
<td></td>
<td>LED: Power/Status</td>
</tr>
<tr>
<td>Local storage</td>
<td>8 GB eMMC</td>
</tr>
<tr>
<td></td>
<td>microSD card expansion slot</td>
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Dimensions

QE7550

Planar QE Series User Manual
Troubleshooting During Installation

This section includes troubleshooting information about different issues you may encounter during the installation process or after your display has been running for some time. If you are not able to solve your issue in this section, please contact Planar’s Technical Support team for assistance.

Error Codes

To see the last 50 errors that have occurred, select the Error Log tab in the OSD (MAIN MENU > INFORMATION > ERROR LOG), as shown below.
Symptoms, Possible Causes and Solutions

Below are different symptoms that you might encounter as you install your Planar QE Series display. First look at the different symptoms to see if you can find your issue. And then look at the possible cause and try the suggested solution(s). If you still are not able to resolve your issue, please contact Planar’s Technical Support Department.

Symptom: Can’t Get PC to Output 4K @ 24/30/60 Hz

Solution
Make sure that your graphics card can support a 4K output. See "Supported Graphics Cards" on page 12 for a list of the current graphics cards that Planar supports for the Planar QE Series displays.

Solution
Confirm that you are using a DisplayPort output. You can’t use a DisplayPort-to-HDMI adapter to output 4K content.

Solution
Make sure you are using a high-speed HDMI cable. Standard HDMI cables might work but are not guaranteed.

Solution
Verify that the selected EDID Type setting in the OSD is 4K60 or 4K30. If you change the EDID setting, you may need to disconnect and reconnect the cable.

Solution
If you are trying to use 4K @ 60 Hz on HDMI, the display must be connected to HDMI 1 or HDMI 2.

Solution
If you are trying to display 4K @ 60 Hz on HDMI 1 or HDMI 2, the Multi-Source View setting must be Single.
Symptom: Can’t Get PC to Output 4K @ 24/30/60 Hz

Possible Cause
The connector overmold is too large, which can cause the pins not to contact properly on some cards.

Solution
If using DisplayPort, make sure the connector overmold isn’t too large.

Symptom: Can’t Select ContentSmart or HDMI 1

Solution
The ContentSmart and HDMI sources cannot be viewed at the same time. If your Multi-Source View setting is not Single, and you select ContentSmart in a zone, any zones that are showing HDMI 1 will automatically change to ContentSmart. Conversely, if you select HDMI 1 in a zone, any zones that are currently showing ContentSmart will automatically change to HDMI 1.
Symptom: IR Isn’t Working Properly

Possible Cause
The wired IR module may not be fully connected.

Solution
Make sure the IR is fully connected by pressing hard to ensure it is inserted as far as possible.

Possible Cause
The wired IR module cable is not being used.

Solution
Make sure that the wired IR module cable is being used.

Embedded Planar ContentSmart FAQ

What video format can I play?

Video files encoded in MPEG-4 AVC up to 1920x1080 resolution at 10 Mbps bitrates or HEVC H.265 up to 20 Mbps bitrates should play fine. If a certain video does not play as scheduled, or if it plays poorly, contact Planar Support.

What should I do if I forgot my password?

Perform a factory reset.

Use the SW reset button located next to the USB connectors to restore factory settings. This will also clear the player’s password.
How do I manage the playback of contents?
The media player is designed to be interoperable with leading third-party management software solutions or via SMIL open standard commands.

Can the player display Flash or Microsoft PowerPoint presentations?
The player features limited Microsoft PowerPoint support, but not Flash support.
While PCs can play many formats with varying degrees of success, RISC-based media players are designed to reliably play specific video formats (see spec for details). While Microsoft PowerPoint native files cannot play directly on a RISC-based player, the file can be converted into an image format to be played as an image slideshow.

Why won’t some media files play properly?
The video data bit-rate used may have exceeded the recommended bit rate.
The video data bit-rate is the amount of video or audio data used per second to store or play the contents, usually expressed in Mbps (mega-bits per second). Video encoded with excessive bit-rates will not playback smoothly in the media player, likely due to storage I/O bottleneck.

Some JPEG images cannot be played in the media player.
The media player works best with 4K UHD (3840 x 2160) images. Playback of native images directly from the camera may result in an image being displayed incorrectly or not at all.

Does the media player support video streaming?
No. Media players play files from local storage and do not support real-time video streaming over the network. This delivers an optimum viewing experience free of playback quality issues such as stuttering, blocking or blue-screens.

The player is not playing. What should I do?
Play list errors and scheduling issues are two major causes of playback problems. To determine if the problem is caused by a bad playlist, delete the playlist and restart the player. The player should loop through all media files, indicating a fault with the playlist.
If the playback is scheduled to play at specific time, check to see if the device is set to the right time zone on the world clock. If nothing appears wrong, the time zone setting is often the reason the program is not played.

The video is playing but I can’t hear any sound, what should I do?
Check volume (mute) settings on monitor.
Accessing Planar’s Technical Support Website

Visit [http://www.planar.com/support](http://www.planar.com/support) for the following support documents and resources:

- User Manual
- RS232 User Manual
- Touch screen drivers
- Standard warranties
- Planar support hotline number and email
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