

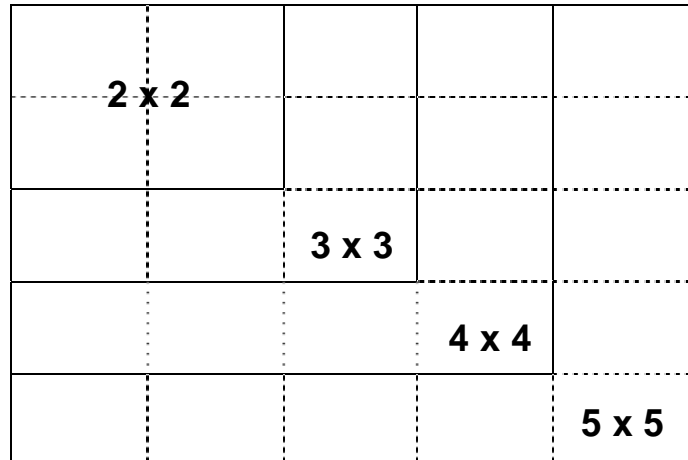
PDP- 425CMX – How To Build a Video Wall Using Multiple Plasma Panels

BACKGROUND:

In some locations such as large commercial or retail installations, a single image needs to be expanded beyond the display area of a single plasma panel. The PDP-425CMX has built-in technology to answer this need. Because of this professional panel's design, a single image source can be distributed across multiple cable-linked panels. Up to twenty-five (25) PDP-425CMX plasma displays can display a single image across the combined panels without needing external signal processing equipment (known as *video wall processors* or *video wall splitters*). These processors or splitters provide a large variety of video wall size and configuration options.

The PDP-425CMX panel supports video walls in the following configurations:

- 2 x 2 (four panels)
two columns with two panels each
- 3 x 3 (nine panels)
three columns with three panels each
- 4 x 4 (sixteen panels)
four columns with four panels each
- 5 x 5 (twenty-five panels)
five columns with five panels each



This document steps through the process of building a 3 x 3 (9 panels) video wall using the Pioneer PDP-425CMX plasma display panel.

TECHNICAL DETAILS:

This section provides a list of required equipment, installation notes, a wiring diagram, and programming instructions for a 3 x 3 video wall with the source signal being component video.

Note: The PDP-425CMX Technical Manual covers numerous aspects, from PDP orientation, integrator video wall configuration, ABL link (Automatic Brightness Level), and RS232 communication, etc. Please read the manual before attempting to install and operate a video wall.

Required Equipment:

A 3 x 3 video wall requires the following equipment:

- Pioneer PDP-425CMX plasma display panel (x 9)

Pioneer PDA-5003 or PDA-5004 video cards (x 9)

Video cards are only required when the input signal is video. For PC signal input, no video cards are required.

Combination Cables (x 8)

Combination cables are only required if using RS232 for communication. The ABL link feature is only available with four and nine panel video walls. Please refer the PDP-425CMX Technical Manual page 169 for further information.

Video source / device (x 1)

High bandwidth Definition Distribution Amplifier with HD15 connection, 1 In and 4 Out (x 1)

HD15 Male to HD15 male, 3 feet minimum SVGA cable (x 9)

AC Power Cord (x 9)

Installation Notes:

A key concern when installing multiple panels as a video wall is temperature. When the video wall is mounted so that two or more walls encroach on the combined plasma displays, the panels need to remain a set distance, or greater, from the walls. Please refer to the table below for measurements.

Distance from Wall	Ambient Temperature
50 mm to 300 mm or less	32° to 95° F (0° to 35° C)
300 mm or more	32° to 104° F (0° to 40° C)

Install each panel according to the installation guidelines in the [PDP-425CMX Technical Manual](#), section 3.4.10. This manual is available on the Pioneer Electronics websites: www.pioneerelectronics.com and www.pioneerindustrialav.com

Wiring Diagram:

Please refer to the attached wiring diagram. This diagram shows the back of the video wall panels with panel ID =1 in the upper right side. From the output of the High Definition Distribution Amplifier, connect a SVGA HD15 cable to one output and connect the opposite end to a top row PDP RGB input connector. Repeat wiring a SVGA HD15 cable from the remaining distribution amplifier outputs to the other top row PDP RGB inputs. After wiring HD distribution amplifier to each top row panel, connect a SVGA HD15 cable to top row RGB Out and connect the opposite end to the panel below, RGB Input. Repeat for rows two and three, ending connecting row four RGB input.

Next wire the combination cables, if used, as shown in the attached diagram. Start at panel ID=1, upper right (back side view) going from Combination Out to Combination In Panel ID=2.

Programming Instructions:

After wiring each individual panel, including power connection, make sure the main power switch is set to the On position. The main power switch is located next to the AC input connector.

Using the remote control, power an individual panel On and enter Integrator Mode, refer to section 5.4.1 of the PDP-425CMX Technical Manual. After entering Integrator Mode refer to Section 11

Video Wall Setting and assign individual ID numbers to each panel. After setting an ID, set the Screen Divider to the appropriate number of panels being used, refer Setting the Screen Divider in Section 11. Next set the position of each panel as describer in Section 11, Setting the Position. Continue to the next step and set the display mode for either Normal or Adjusted. Additional information on Display Mode can be found in Section 11. Last there are four choices for setting Power On Delay, set Power On Delay to On.

Last set each panel for Input 1 and check each panels Signal Format for "Auto", refer to page 139 in the PDP-425CMX Technical Manual for setting Signal Format.

Viewing the Image:

If each individual panel is wired and configured correctly, you should see a large image on the video wall. If not troubleshooting will be required to locate and solve the problem.

When the " Auto Setup " function on each PDP-425CMX panel is turned ON, there is very little chance that the image across the individual panels will be misaligned. Therefore, it is unnecessary to adjust the panels' Vertical and Horizontal positions. However, if the Auto Setup function is turned OFF then there is a high probability that the image on each panel will not be aligned with the surrounding panels.

If any panel is misalignment from the surrounding plasma displays, please refer to Section 5.3.4 in the PDP-425CMX Technical Manual for information about adjusting the screen position.

ADDITIONAL INFORMATION:

Additional information about the PDP-425CMX plasma display panel is available under the [Business Products > Support](#) area of the Pioneer website:

http://www.pioneerelectronics.com/pna/v3/pg/support/details/0,,2076_310070205_297789596,00.html

For additional assistance please contact your Pioneer representative or refer to the website: www.pioneerelectronics.com

For service issues please contact Pioneer Service at (800) 421-1613.