

---

# **Dual Side By Side Display Controller Operation Manual**

---

Model

**PXD520**



P.O. Box 331  
Boyertown, PA 19512  
610-754-6800  
Fax 610-754-9766  
info@mivs.com

www.mivs.com

Description .....	Page 3
Unpacking .....	Page 3
Initial Setup .....	Page 3
Signal Standard Selection .....	Page 4
Connections .....	Page 4
Power .....	Page 4
Inputs .....	Page 4
Outputs .....	Page 4
Operation .....	Page 5
Power .....	Page 5
A .....	Page 5
B .....	Page 5
C .....	Page 5
D .....	Page 5
SIDE A-B .....	Page 5
SIDE C-D .....	Page 5
EXCH .....	Page 5
BORDER .....	Page 5
BARS .....	Page 6
RS232 Remote Control .....	Page 6
In case of difficulty .....	Page 6
Specifications .....	Page 7
Warranty .....	Page 8
Returns .....	Page 8

Manual revision February 12, 2008

## Description

The PXD520 is designed to display two images side by side on one screen. The two input signals can be exchanged on the display with a press of a single button. Any of the four inputs can be displayed full screen as well. An optional border can be selected in the side-by-side modes.

The PXD520 will work with a variety of cameras or other video sources, either Black & White or Color. The PXD520 accepts composite video input signals and will operate with NTSC or PAL video systems (switch selectable).

Board Level and OEM versions of this products are also available. Please contact your dealer or MicroImage Video Systems for additional information.

## Unpacking

The Dual Display Controller package includes the following items:

- PXD520 Dual Controller unit
- +5 VDC Regulated Universal Power Module
- This operation manual

Please inspect all items carefully and report damaged or missing items to your dealer or MicroImage Video Systems immediately.

## Initial Setup

Before the unit can be used, it must be set up for the proper video standard. This function is set with a DIP switch located on the rear of the unit. Each switch is numbered and OFF is in the UP position while ON is in the DOWN position. The following sections describe how to set these switches properly.

## Signal Standard Selection

The PXD520 controller **MUST** be set to the proper video standard to work correctly. The choices are NTSC (RS170/60Hz) or PAL (CCIR/50Hz). NTSC is the common video standard for North America while PAL is common in Europe and other parts of the world. The factory default setting is NTSC (DIP switch number 1 off).

To set the unit for PAL operation, place the DIP switch in the LOWER (ON) position. The RAISED (OFF) position is for NTSC standard.

The unit must be set to the same standard as the video sources (cameras, VCRs, etc) and the monitor.

Switches 2 through 4 are presently unused and are reserved for future options.

## Connections

### Power

Plug the small connector on the end of the power module cord into the power input connector on the PXD520 controller. Plug the power module into an appropriate power receptacle.

### Inputs

Connect the video output from video source A to the Input A connection on the PXD520 controller with a BNC cable.

Connect the B, C and D inputs with BNC cables as well.

### Outputs

Connect a video cable from the PXD520 controller to the video monitor or other display or recording devices using either the composite video output BNC connector, the S-Video output mini-DIN connector, or both.

## Operation

Once connected properly, the PXD520 is easy to use. Following is a description of each switch and control.

- Power** Pressing the power switch will turn the power on or off. The green indicator next to the power switch will light to indicate power is on. The power switch will remember its state if power is removed.
- A** Pressing the A switch will change the display to show the input A image full screen. A Red indicator to the right of the switch will indicate this mode is selected.
- B** Pressing the B switch will change the display to show the input B image full screen. A Red indicator to the right of the switch will indicate this mode is selected.
- C** Pressing the C switch will change the display to show the input C image full screen. A Red indicator to the right of the switch will indicate this mode is selected.
- D** Pressing the D switch will change the display to show the input D image full screen. A Red indicator to the right of the switch will indicate this mode is selected.
- SIDE A-B** Pressing this key will display the A image on the left side of the screen and the B image on the right side of the screen. The images are scaled and not cropped. The top and bottom of the screen will have a black area due to the proportional scaling of the images.
- SIDE C-D** Pressing this key will display the C image on the left side of the screen and the D image on the right side of the screen. The images are scaled and not cropped. The top and bottom of the screen will have a black area due to the proportional scaling of the images.
- EXCH** Pressing this key will exchange the A & B or C & D images when the unit is in Side-By-Side mode. Thus the B or D image will be on the left while the A or C image is on the right side.
- BORDER** This switch will cycle through one of five border settings.

The selections are Off, Black, Dark Gray, Light Gray and White. Light gray is the default.

## BARS

Pressing this key will enable the internal color bar generator for monitor and system tests. Selecting another display mode will cancel this setting.

## RS232 Remote Control

The PXD520 can be controlled or queried by a computer or process controller via the wired RS232 interface. The PXD520 uses a simple protocol to communicate with the host system. An interface manual is available on the MicroImage Video Systems website in the PXD520 section at [www.mivs.com](http://www.mivs.com)

## In case of difficulty

If you are experiencing problems with your MicroImage product, you can contact us in one of the following ways:

- Mail** MicroImage Video Systems  
a division of World Video Sales Company, Inc.  
P.O. Box 331  
Boyertown, PA 19512
- Phone** 610-754-6800
- Fax** 610-754-9766
- Email** [support@mivs.com](mailto:support@mivs.com)
- Web** [www.mivs.com](http://www.mivs.com)

## Specifications

<b>Input levels</b>	
Composite/B&W	1Vpp composite 75 Ω
<b>Output levels</b>	
Composite Video	1Vpp into 75 Ω
S-Video (Y, C)	1Vpp Y, 286mV C (burst) into 75 Ω
<b>Connectors</b>	
Composite	BNC female (5)
S-Video	4 pin mini-DIN female (1)
Keyboard	6 pin mini-DIN (1) [presently not used]
Power	1.3mm female coaxial power jack
RS232 Remote	3.5mm female 3 pin mini phone jack
<b>RS232 Interface</b>	9600 baud, 8 data bits, no parity, 1 stop bit.
<b>Scaling</b>	50% in side-by-side modes
<b>Memory</b>	64 megabits total
<b>Timebase Correction</b>	Digital memory, frame aligned, one for each channel
<b>Decoding</b>	10 bit multi-standard digital decoding
<b>Processing</b>	Digital
<b>Encoding</b>	Digital Modulation
<b>Oversampling</b>	2x (27MHz) output over-sampling
<b>Output DACs</b>	10 bit digital to analog converters
<b>Input Filters</b>	Analog anti-aliasing filters
<b>Output Filters</b>	Digital plus 4 <sup>th</sup> order analog anti-aliasing filters
<b>Horizontal Freq.</b>	
RS-170/NTSC	15.734KHz typical
CCIR/PAL	15.625KHz typical
<b>Vertical Frequency</b>	
RS-170/NTSC	59.94Hz typical
CCIR/PAL	50Hz typical
<b>Bandwidth</b>	6Mhz typical
<b>Crosstalk</b>	Greater than 48dB
<b>Temperature</b>	
Operating	0° ~ 40° C (32° ~ 104° F)
Storage	-40° ~ 60° C (-40° ~ 140° F)
<b>Humidity</b>	
Operating	10% ~ 90% (non-condensing)
Storage	5% ~ 95% (non-condensing)
<b>Power</b>	
Voltage	+5VDC +/- 5%, regulated, neg ground
Consumption	450mA typical (3W)
Protection	Automatic electronic fuse, internal, self resetting
<b>Size</b>	7.25" W x 5.00" D x 1.60" H (193 x 127 x 40 mm)
<b>Weight</b>	19.5 oz. (550g)
<b>Power Module</b>	
Type	Switching power supply, UL, CUL/CSA, CE, TUV approved
Output	5 VDC, 1000 to 2000mA, Regulated (no minimum load)
Voltage In	120VAC (USA) or 120 ~ 230 VAC, 50 - 60 Hz, 0.5A Max (RoHS)
Input Cable	None, small wall mount
Output Cable	4ft. 2 wire, 1.3mm female coaxial barrel connector
Size	3.2" x 1.8" x 1.2" (82mm x 46mm x 31mm)
Weight	2.6 oz (74g)

The PXD520 series is manufactured in the USA by MicroImage Video Systems.

## Warranty

MicroImage Video Systems warrants that each PXD520 is free from defects due to faulty materials or improper workmanship for a period of one (1) year.

MicroImage Video Systems further warrants that any part which proves defective in materials or workmanship within one (1) year, will be replaced or repaired at no cost to the user. Labor to replace defective parts will be done without charge, provided the equipment is returned to MicroImage Video Systems prepaid, insured and properly packaged. Prior return authorization must be obtained from MicroImage Video Systems.

### NOTE

This warranty covers the MicroImage PXD520 only.

### CONDITIONS

This warranty is void if the warranted part has been altered or subjected to abuse or misuse. Defective parts must be returned to MicroImage Video Systems

### SOLE WARRANTY

This Warranty is in lieu of all other warranties expressed or implied including, without limitation, any implied warranty or any implied warranty of fitness for a particular purpose. MicroImage Video Systems shall have the final right to determination as to the existence and cause of any defect and its appropriate adjustment in accordance with the terms of this warranty. In no event shall MicroImage Video Systems be liable for any consequential or collateral damages.

## Returns

All returns MUST have an RMA number. Please call, fax or email for an RMA form. The RMA form will have the proper shipping address for returns.

Phone	610-754-6800
Fax	610-754-9766
Email	service@mivs.com