



PID Command & Ctrl User Guide

Version 1.3

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INTRODUCTION

AG Neovo PID Command & Ctrl is a software application tool that allows users to control, configure and test public information displays via LAN or RS-232 connections in a simple and intuitive way. It also can be used to assist system integrators with external control systems by generating and displaying the commands exchanged between the software and displays.

Features and Benefits

PID Command & Ctrl provides a simple and easy-to-use interface to perform the following functions:

- Easy remote access to many common controls.
- Access to advanced tiling controls.
- Assists with diagnosing connection and configuration problems.
- Displays all commands exchanged.
- Provides control to one or all displays via display grouping.

Usage Scenarios

- Finding command codes for programming into an external control system.
- Remote controlling one or all of your installed displays.
- Easily and quickly configure a video wall using the tiling settings.
- Instantly switching video sources of multiple displays.
- Making adjustments to displays when not physically possible or convenient to use an IR remote control.

Supported Displays

AG Neovo PID Command & Ctrl supports the following AG Neovo display models:

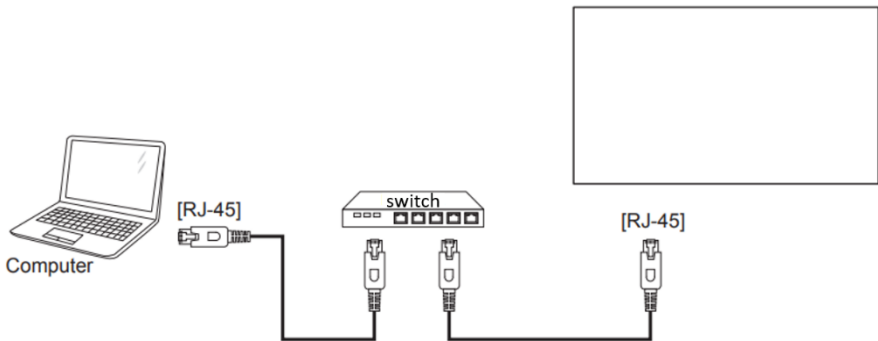
- VW-Series
- PN-Series
- PD-Series
- PM-Series
- QM-Series
- QX-Series
- QD-Series
- NSD-Series
- IFP-Series
- RX-Series
- SX-Series
- HX-Series (HX-32E, HX-24G)
- DR-Series (DR-17G, DR-22G)

MAKING CONNECTION

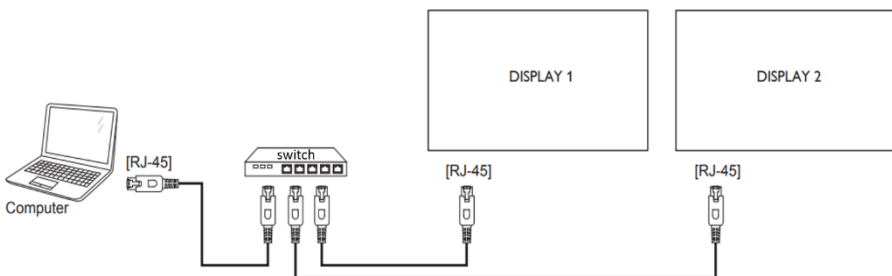
You can interconnect multiple display to create a daisy-chain configuration a video wall via LAN or RS-232.

Connecting via LAN

Single display setup:



Multiple display setup:

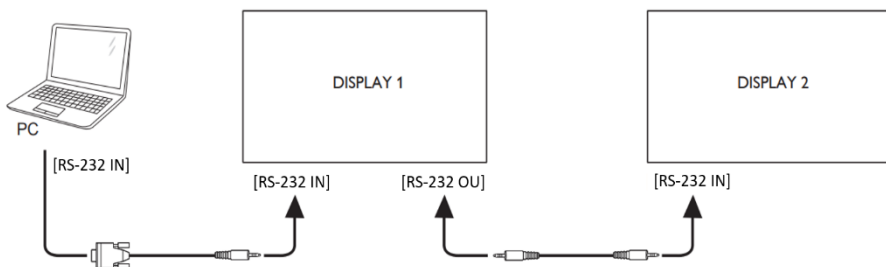


MAKING CONNECTION

Connecting via RS-232

Connect the RS-232 cable to the corresponding serial port in your computer and display respectively.

Connect the RS-232 OUT connector of DISPLAY 1 to the RS-232 IN connector of DISPLAY 2 to create a daisy-chain configuration.



Note: A USB to RS-232 adapter is necessary for computers which do not have a physical serial port.

What's new in this version

This version of *PID Command & Ctrl* has the following new features and functionality since version 1.0:

- **IP Scan:** automatically scan and add supported AG Neovo displays located in the same LAN.
- **Support new display models:** added support for QM-Series and CMS/Custom sources. Added support for IFP-Series and NSD-Series.

CONTROLS AND FUNCTIONS

Main window - Control Tab

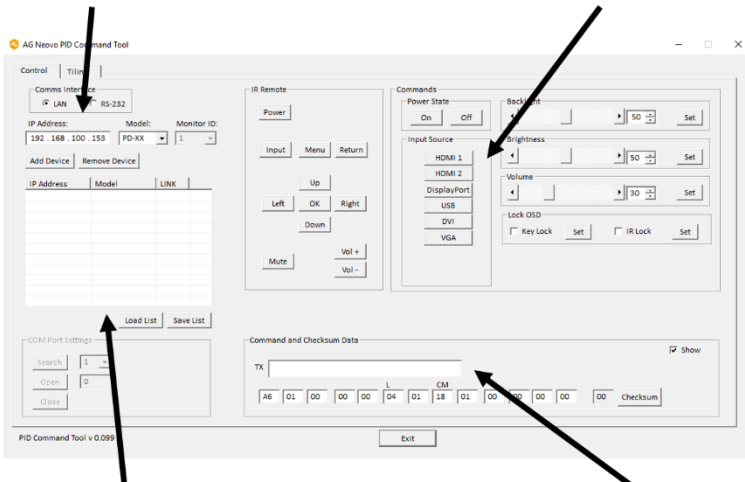
The *PID Command & Ctrl* main window (control tab) has a device list and communications interface settings which specify how to connect to a display on the left side. The right side shows the panel with multiple controls. At the bottom of the window each command is displayed for external control system integration.

Communications Interface

Configures the connection to the display(s) via LAN or RS-232

Control Panel

Panel with control for multiple functions



Device List

Easy access to communications interface settings for multiple displays

Command Data

Executed commands are displayed for convenient command integration

CONTROLS AND FUNCTIONS

UniWall Tab

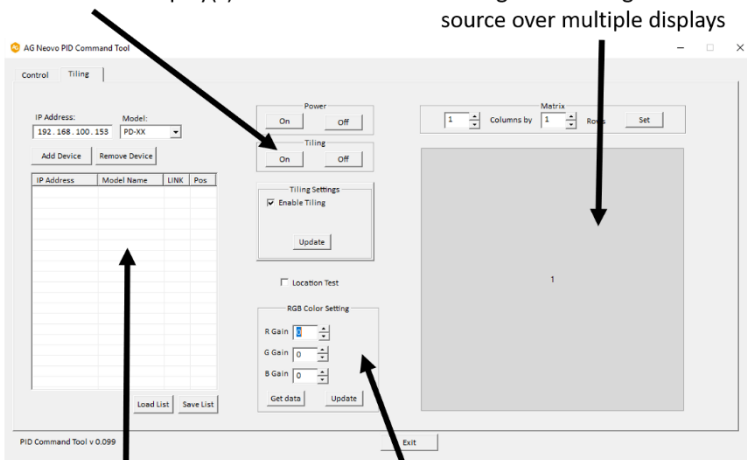
The *PID Command & Ctrl UniWall* tab has a display list and communications interface settings which specify how to connect to a display on the left side. The right side shows the panel with multiple controls. At the bottom of the window each command is displayed for external control system integration.

Tiling Control

Is used to enable the tiling matrix feature of the display(s)

Matrix Panel

Configures the tiling matrix settings for dividing a video source over multiple displays



Device List

Easy access for tiling control of multiple displays

RGB Color Settings

Adjust RGB Gain values of a selected display

OPERATION

Creating device lists

Create device lists in **Control** and/or **UniWall** Sections in order to control devices.

Creating a device list in the “Control” tab

Device lists can be created for LAN or RS232 interface control, or previously saved lists can also be loaded.

Adding displays with LAN interface

- Step 1. Select “**LAN**” as the Comms Interface.
- Step 2. Enter the IP address of the AG Neovo display or click “**IP Scan.**”
- Step 3. Select the Model of the display.
- Step 4. Click “**Add Device**” then the device will be added to the list.
- Step 5. Repeat Step 1 to 4 until all devices are added.
- ***Save the list** after creating list, every time the command tool is opened, the tool will automatically load the device list file.
- ****Remove device:** a device can be removed from the list when you select the device from the list and click “**Remove Device.**”

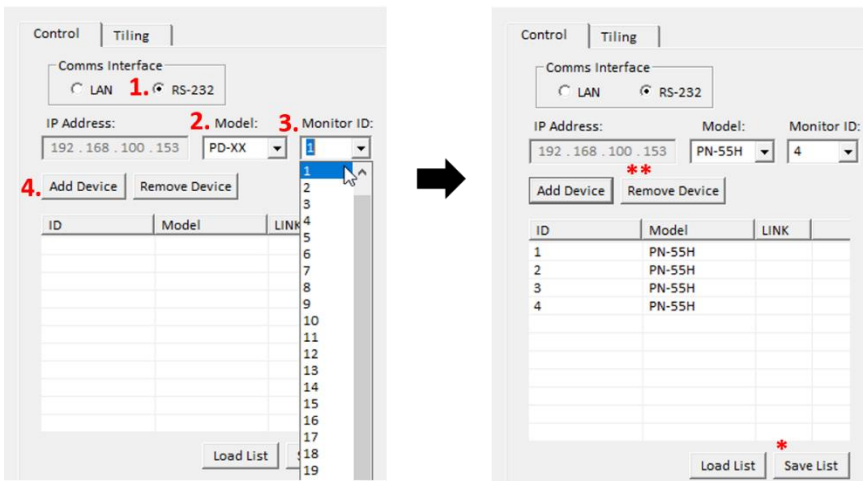
The image shows two screenshots of a software interface. The left screenshot shows the 'Comms Interface' settings. The 'Comms Interface' is set to 'LAN'. The IP Address is '192.168.100.173'. The Model is 'PD-42'. The Monitor ID is '1'. The 'Add Device' button is highlighted with a red asterisk. The 'Save List' button is also highlighted with a red asterisk. The right screenshot shows the 'Control' tab. The 'Comms Interface' is set to 'LAN'. The IP Address is '192.168.100.102'. The Model is 'PM-43'. The Monitor ID is '1'. The 'Add Device' and 'Remove Device' buttons are visible. Below the buttons is a table with the following data:

IP Address	Model	LINK	
192.168.100.1	PN-55H		
192.168.100.2	PN-55H		
192.168.100.3	PN-55H		
192.168.100.4	PN-55H		
192.168.100.101	PM-43		
192.168.100.102	PM-43		

OPERATION

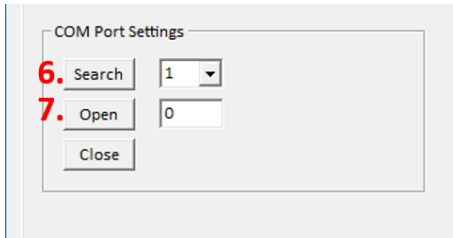
Adding displays with RS-232 interface

- Step 1. Select “RS-232” as the Comms Interface.
- Step 2. Select the Model of the display.
- Step 3. Select the Monitor ID of device.
- Step 4. Click “Add Device” then the device will be added to the list.
- Step 5. Repeat Step 1 to 4 until all devices are added.
- ***Save the list** after creating list, every time the command tool is opened, the tool will automatically load the device list file.
- ****Remove device:** a device can be removed from the list when you select the device from the list and click “Remove Device.”



- Step 6. Click “Search” and select the COM port on the host PC.
- Step 7. Click “Open.”

OPERATION



Load from saved list in the “Control” tab

Click “Load List”, then *PID Command & Ctrl* would load the device list file that has saved on the same folder with *PID Command & Ctrl*.

Please note that the device list file will be updated when every time a list is saved.

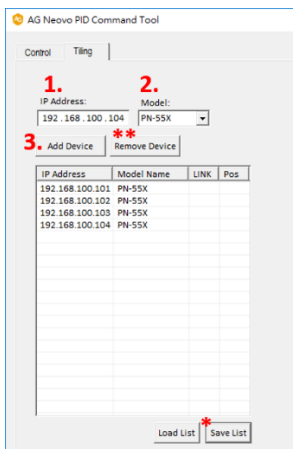
Creating a device list in the “UniWall” tab

A device list can be created manually with LAN interface control only or it can be loaded from saved list, the device list in the tiling tab can be different from the control tab device list.

Adding displays with LAN interface

- Step 1. Enter the IP address of the AG Neovo display or click “**IP Scan.**”
- Step 2. Select the Model of the display (models that support tiling).
- Step 3. Click “**Add Device**” then the device will be added to the list.
- Step 4. Repeat Step 1 to 3 until all devices are added.
- ***Save the list** after creating list, every time the command tool is opened, the tool will automatically load the device list file.
- ****Remove device:** a device can be removed from the list when you select the device from the list and click “**Remove Device.**”

OPERATION



Loading from a saved list in the “Control” tab

Click “Load List”, then the command tool will load the device list file located on the same folder where the Command Tool is running from. The device list from the control tab will be loaded if there is no previously saved device list from the tiling tab.

Please note that the device list file will be updated when every time save a list.

How to control added displays

- Step 1. Select the display from the device list which you wish to control individually.
All the displays in the device list will respond to commands if nothing is selected.

OPERATION

Control | Tiling |

Comms Interface
 LAN RS-232

IP Address: 192.168.100.102 Model: PM-43 Monitor ID: 1

Add Device Remove Device

IP Address	Model	LINK	
192.168.100.1	PN-55H		
192.168.100.2	PN-55H		
192.168.100.3	PN-55H		
192.168.100.4	PN-55H		
192.168.100.101	PM-43		
192.168.100.102	PM-43		

Load List Save List

Control all displays

Control | Tiling |

Comms Interface
 LAN RS-232

IP Address: 192.168.100.102 Model: PM-43 Monitor ID: 1

Add Device Remove Device

IP Address	Model	LINK	
192.168.100.1	PN-55H		
192.168.100.2	PN-55H		
192.168.100.3	PN-55H		
192.168.100.4	PN-55H		
192.168.100.101	PM-43		
192.168.100.102	PM-43		

Load List Save List

Control an specific display

- Step 2. Click on any function button to control the display(s).

IR Remote

Power

Input Menu Return

Up

Left OK Right

Down

Mute Vol + Vol -

Commands

Power State
On Off

Input Source
HDMI 1
HDMI 2
DisplayPort
USB
DVI
VGA

Backlight
50 Set

Brightness
50 Set

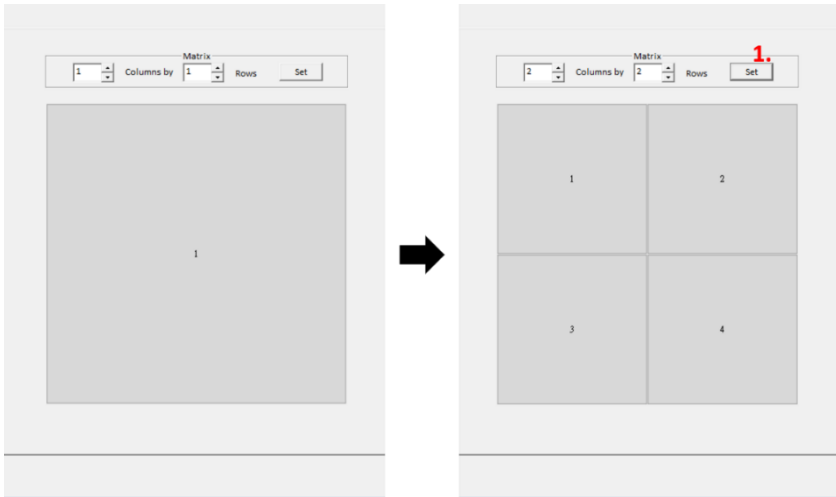
Volume
30 Set

Lock OSD
 Key Lock Set IR Lock Set

OPERATION

How to control the UniWall function

- Step 1. Set the matrix size in columns and rows, then click “Set”
- Step 2. Assign a display to a position in the tiling matrix by clicking on a display and then clicking the desired position.



- Step 3. Click “update”
- Step 4. Click “on” and “off” to control tiling function.



OPERATION

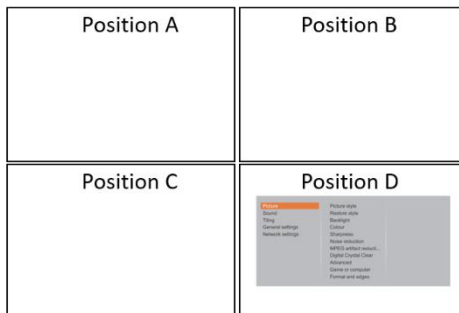
- Step 5. If you want to locate each display in the tiling matrix, check “Location Test” function, and click on the display then click on its currently assigned position in the matrix. The OSD menu will pop up to show you the actual location of the display. You can click the same position again to hide the OSD menu.

(In the example below, a display with IP address 192.168.100.102 is located on position D but incorrectly assigned to display the image of position A. With the location test function, the user can see the assigned position is incorrect and adjust it to position D with the *PID Command & Ctrl.*)

The screenshot shows the OSD interface with the following components:

- IP Address:** 192.168.100.153
- Model:** PD-XX
- Buttons:** Add Device, Remove Device
- Table:**

IP Address	Model Name	LINK	Pos
192.168.0.101	PN-55H	0	4
192.168.0.102	PN-55H	0	1
192.168.0.103	PN-55H	0	2
192.168.0.104	PN-55H	0	3
- Power:** On / Off
- Tiling:** On / Off
- Tiling Settings:** Enable Tiling, Update
- 5.1 Location Test:** Location Test
- RGB Color Setting:** R Gain 128, G Gain 128, B Gain 128, Get data, Update
- Matrix:** Columns by 2, Rows 2, Set
- Matrix Display:** A 2x2 grid showing IP addresses: 192.168.0.102 (top-left), 192.168.0.103 (top-right), 192.168.0.104 (bottom-left), 192.168.0.101 (bottom-right). The number 5.3 is displayed in red in the top-left cell.
- Buttons:** Load List, Save List



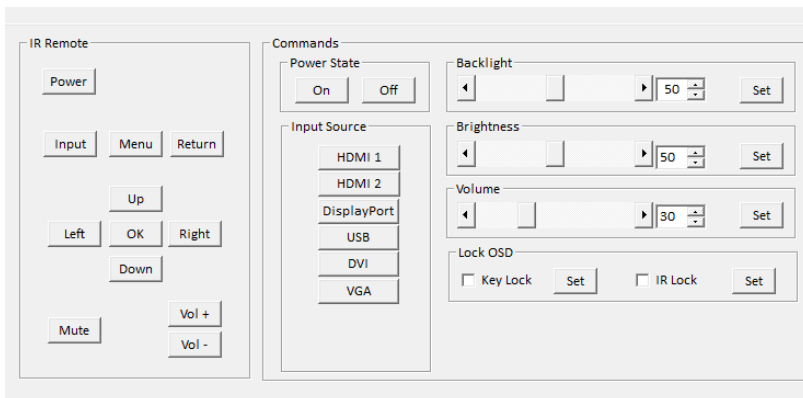
OPERATION

Command and Checksum Data

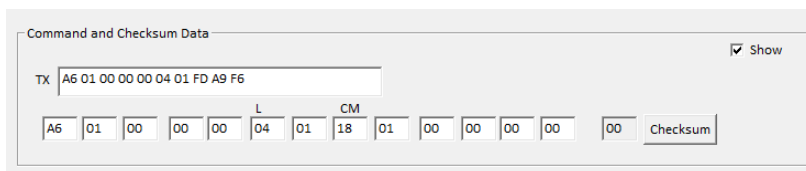
This section shows all commands exchanged via LAN or RS-232. These command codes can be used for programming AG Neovo displays into an external controller.

Copying command codes

- Step 1. Click a control button (IR Remote, power states, input source, etc.)



- Step 2. The corresponding command code will be shown on the “**Command and Checksum**” section right after pressing any control button.
- Step 3. The command code can be copied into an external controller.



Get the Checksum

- Step 1. Enter each command codes into the individual column.
- Step 2. Click “Checksum”, then the tool will calculate and generate the checksum value.
- Step 3. The command code can be copied into an external controller.

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PID_Command & Ctrl_UG_V013