



Integrator's Guide
delano™
&
eureka™



HD Component Video Matrix Switch with Cat5 outputs
Digital Audio / Analog Audio Matrix Switch with Cat5 outputs

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Introduction

Congratulations on your selection of the Delano and/or Eureka video/audio matrix switches. The Delano is an 8x16 high definition video Cat5 matrix switch, and the Eureka is an 8x16 digital and analog audio Cat5 matrix switch.

Both products are very similar in function, so this single user manual will guide you through both products.

Delano Features:

- 8 inputs of component video (YPbPr)
- 16 outputs of component video
- High bandwidth video section (140 MHz) for 480i up to 1080p.
- Attractive enclosure featuring brushed aluminum and high gloss acrylic front, with silver top cover.
- Universal AC input power, 90-240VAC 50/60Hz with standard IEC320 receptacle.
- All gold plated RCA connectors ensure a long life without corroded connectors.

Eureka Features:

- 8 inputs of digital audio (SPDIF), and 8 inputs of L+R analog audio
- 16 outputs of digital audio (SPDIF), and 8 inputs of L+R analog audio
- Digital audio section is a wide band analog matrix that can easily handle composite video.
- Independent routing of digital and analog audio

- Attractive enclosure featuring brushed aluminum and high gloss acrylic front, with silver top cover.
- Universal AC input power, 90-240VAC 50/60Hz with standard IEC320 receptacle.
- All gold plated RCA connectors ensure a long life without corroded connectors.

Important Note Before Starting

The Delano/Eureka and the Hornet in-wall/surface-mount receiver module (sold separately) will only operate properly when all of the AC outlets for the system and the displays in each zone are properly wired and grounded.

Before installing anything, use an electrical outlet tester to verify proper hot, neutral and ground wiring.

In the event your display has a two prong AC plug, it may be necessary to connect the Hornet receiver's bracket to AC ground of the AC outlet. See the Hornet installation instructions for further information.

The Delano/Eureka Matrix Switch has vents on the sides of the chassis. Although the Delano/Eureka has no direct airflow requirements, do not block these vents. It is OK to place other equipment directly on top of or below the Delano/Eureka.

The Delano/Eureka is equipped with padded feet so it may be stacked on top of other equipment without causing damage. In either case, to avoid scratches, never slide equipment on top of one another. The feet may be removed with a Phillips screwdriver to make the chassis exactly 2RU in height.

Unpacking

The shipping carton for the Delano/Eureka matrix switch will include the following items:

- 1 – Matrix Switch
- 1 – AC Power cord
- 1 – 6' USB cable

1 – 6’ RS-232 cable

1 – User’s Guide

1 – CD-ROM disc with USB drivers

1 – Pair of rack mount ears with screws

If accessories were ordered, the carton may also contain:

1 – IR remote control (optional)

Front Panel Protective Film

There is a clear film over the front panel to protect it during manufacturing and shipping. Remove this film before using your Delano/Eureka matrix switch.

Inputs

Connecting source devices to the Delano/Eureka can be done in any order. All inputs have the same performance, so organize them as you see fit.

On the **Delano**, be sure to connect the green cable to the Y signal, as this is handled differently than the Pb and Pr (blue and red) signals.

The **Eureka**’s connectors labeled “D” are intended for either SPDIF digital audio, or alternatively composite standard definition video. They can also be used for both signal type simultaneously, as long as care is taken not to route a signal of one type to a output of a different type. The analog audio matrix is labeled “L” and “R”.

Outputs

An output zone is made up of one Cat5 cable from the Delano for video and one cable from the Eureka for audio. In some cases it

may be advantageous to send the HD video to one location such as a front projector in the back of a room, and send the digital and analog audio to the other side of the room. In this case, it is OK to purchase an additional Hornet receiver, and connect only one cable to each Hornet. Both Cat5 cables have embedded power and will operate in this way.

Output Cabling

In general, we have been referring to the cables as Cat5. The minimum requirement for successful operation of the Delano/Eureka system is Cat5, but Cat5e is preferred. Cat6 may be used as long as it is constructed with 24 AWG wires. Most Cat6 is 24 AWG, but a 22 AWG variety does exist, and should not be used for this system.

Terminating the ends of the Cat5 cable can be done with either TIA/EIA-568-B or A standard, so long as both ends are terminated using the same standard. Below is the color codes for 568-B. Although in some case of Ethernet where polarity of the pairs can be swapped, with the Delano/Eureka system each pair must be in the correct order and polarity. A good practice is to use a cable tester on each cable after termination to verify pin order before using the cable.

Pin	Color
1	White / Orange
2	Orange
3	White / Green
4	Blue
5	White / Blue
6	Green
7	White / Brown
8	Brown

Table 1: TIA/EIA-568-B wiring

RS-232 Serial

The serial port on the rear panel is labeled “RS-232”. It is wired as a “DCE” device, which means it should be connected to a normal PC’s RS-232 port with a straight through cable. Connection to most control systems should be with a straight through type serial cable, such as the cable provided with the Delano/Eureka.

For the command protocols, please refer to the manual entitled “Integrator’s Guide to Serial Protocols”.

USB

If you plan to use the USB communication feature of the Delano/Eureka, connect the USB cable to the PC’s USB port (flat end), and the other end (square end) to the Delano/Eureka matrix switch.

Optionally you may choose to connect this cable later when you are prepared to install the driver CD-ROM. Connecting the cable will activate MS Windows plug and play wizard. On disconnect and reboots, MS Windows will remember what COM port this device was assigned.

Rear Panel IR

The rear panel connector labeled “IR” is for direct connection to a control system. It is a 3.5mm 2 pin jack, and accepts unmodulated IR. It is polarity insensitive, however normally the ‘tip’ is the active signal, and the ‘sleeve’ is the ground.

Note: Some IR repeater systems are designed to work only with their own IR blasters. Many integrators will cut these blaster cables and add a 3.5mm plug on the end. In some cases this will work fine, however some low end IR repeater systems will have too much noise in their signal, and can prevent signals from being properly decoded. Your results may vary.

Power

Once all the input and output connectors are in place, connect the supplied power cable to the AC input. If you are not in North America, you may use your own standard IEC320 power cable with the Delano/Eureka matrix switch. The Delano/Eureka will detect whatever voltage is supplied (from 90V to 240V AC), and adjust accordingly.

Rack Mounting

The product ships with the rack mount ears detached from the unit. This is to prevent damage to the chassis during shipment. Use the supplied screws to attach the ears. The rack ears are universal, so they fit on either side.

The chassis is a 2 rack units high only when the bottom feet are removed. Removal requires a Philips screwdriver. Be careful when turning over the unit as to not scratch the top paint.

Operation

Overview

The Delano/Eureka is designed to be controlled from a third party control system, either via RS232 or IR. The buttons on the front panel allow the control of power and status feedback; however matrix control must be performed from external sources.

Using the front panel

The 8x16 matrix switch's front panel uses NeoTouch™ technology. This is different from many other front panels you have seen with 'membrane' or 'dome' type buttons. The NeoTouch™ panel senses a human finger touching the acrylic panel without any moving parts. For you, the user, this means that you need not press hard to activate a button, a light tap will do.

Powering the 8x16 matrix switch on and off is accomplished by pressing the power button. To prevent accidental power off's, two button presses are required to shut down the matrix.

In the normal powered on mode, the Delano and Eureka will display the last command received. This is helpful for troubleshooting your control sequences. If the last command attempted was not received properly or was not formatted correctly, it will not appear on the display.

You can also use the left/ right arrow keys and the select button to access the setup menu. The setup options will be discussed in the next section. Generally when you are presented with a choice on the display, pressing select will toggle through the choices.

Changes in the matrix switch performance or features take place right away, so changes do not need to be saved manually.

Controlling from an IR remote control

Controlling the matrix switch using IR follows the basic sequence of:

#, Out, # # – Standard sequence for switching. Note that the output number is always two digits, so output 1 is represented by “01”

Party Mode Shortcut:

To route a single input program to all outputs, also known as party mode, use the select key followed by the desired input:

Select, # Sends input # to all outputs

Last Command Feedback

The normal display shown on the front panel display can be changed to the command feedback screen. This screen will display the last received command, and is very helpful during control system programming and debugging.

To access this screen, use the **<** (left arrow) or **>** (right arrow) buttons either on the front panel or the IR remote until the Last Command screen is displayed.

Setup Menu

The user setup menu is only accessible with an IR remote, not from the front panel. The same settings can also be controlled from the serial ports. Refer to the Serial Protocols document for more information on the commands.

To start the setup menu, press “**Setup**” on the remote control.

Use the “**Left**” and “**Right**” buttons to navigate through the different options.

Use the “**Select**” button to change any of the optional settings.

The menus are as follows:

Setup:Panel LEDs

This option will turn off all the front panel LED lights. The matrix’s behavior is otherwise unchanged. The default is ON.

Setup:Disp Lamp

This option will set the display brightness to one of four levels. The default is 100%.

Setup:AC Pwr

This option control what the matrix will do when AC power is first applied, or after a power outage. Selecting “ON” (default) will force the unit to turn on, and the previous switch state will be restored. Selecting “Stby” will cause the unit to enter standby mode.

Setup:Touchpanel

This option will disable the front panel buttons. The default is ON.

Setup:TouchSense

Setup:TouchDelay

These two options work together to control the front panel touch button performance. The TouchSense setting controls the overall sensitivity, while the TouchDelay setting controls the detection delay, similar to a ‘debounce’ function.

If the buttons are falsely triggered by outside interference, setting the TouchSense to “LOW” and the TouchDelay to “HIGH” will likely remedy the situation.

If the buttons are difficult to press with smaller fingers, setting the TouchSense to “HIGH” will improve the sensitivity. Setting the TouchDelay to “LOW” will not change the sensitivity, but will make the button response seem faster.

Any of the above selections will be applied instantly. There is no need to save the changes. At any time the user may press exit to return to the home screen, or wait 10 seconds and the home screen will return on its own.

Care and Maintenance

The Delano/Eureka matrix switch does not require any regular maintenance besides keeping it clean.

Never use harsh cleaners or solvents on the Delano/Eureka front panel. There are several dusting products for electronics, and standard glass cleaner may be used. Spray any liquids onto a cotton towel first (never use paper towels as they are abrasive), then wipe the front of the Delano/Eureka with the moist towel.

Should the Delano/Eureka matrix switch fail to operate as expected, please contact NeoPro for service advice. **THERE ARE NO ADJUSTMENTS OR USER SERVICEABLE PARTS INSIDE THE CABINET.**

Specifications

Performance

Component Video

Input coupling	AC
Input impedance/termination	75 ohms
Output coupling (at the Hornet)	DC
Output impedance (at the Hornet)	75 ohms source terminated
Output video bandwidth (-3dB)	140 MHz
Crosstalk	Below -80dB
Video modes	480i, 480p, 540i, 540p, 576i, 576p, 720p, 1080i, 1080p
Video vertical rates	24, 25, 29.97, 30, 50, 59.97, 60

Power

Input voltage	90-240V AC 50-60Hz autosensing
Input power consumption	45W (with 8 Hornets attached)

Physical

Dimensions	17"W x 3.5"H x 10.75"D
Dim. with feet (removable)	17"W x 3.75"H x 10.75"D
Unit Weight	9 lbs (typical)
Shipping weight	13 lbs (typical)

2 Year Warranty

NeoPro warrants this product against defects in material and workmanship for a period of 2 years. This warranty applies to the original end-user purchaser and installation service provider. NeoPro will, solely at its option, repair or replace this product with a functionally equivalent new or factory-reconditioned product during the warranty period. The consumer should contact the installation service provider that resold the product who will in turn deliver the product to NeoPro. All transportation risks and costs in connection with this warranty service are the responsibility of the consumer.

In order to keep this warranty in effect, the product must have been handled and used as prescribed in the instructions accompanying this warranty. This warranty does not cover any damage due to accident, misuse, abuse, or negligence. Repair or replacement, as provided under this warranty, is your exclusive remedy. NeoPro shall not be liable for any incidental or consequential damages. Implied warranties of merchantability and fitness for a particular purpose on this product are limited to the duration of this warranty.

Some states/countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states/countries do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state and country to country.



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