Integrator's Guide

juneau™

HD Component Video Matrix Switch

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Introduction

Congratulations on your selection of the Juneau video matrix switch. The Juneau is an 12x16 high definition component video matrix switch.

Juneau Features:

- 12 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 black 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.

Installation

The Juneau does not require ventilation, so it can have other equipment such as amplifiers stacked on top of it. The unit is also 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.

Unpacking

The Juneau shipping carton includes the following items:

1 – Matrix Switch Unit

1 – AC Power cord

1 – 6’ USB cable

1 – 6’ RS-232 cable

1 – User’s Guide

1 – CD-ROM driver disc

1 – Pair of rack mount ears with screws

If accessories were ordered, the carton may also contain:

1 – IR remote control

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 matrix switch.

Inputs

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

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.

Outputs

Having a true matrix switch allows you to treat each output as a ‘zone’. For example, Output 1 can be the home theater zone, and output 2 can be the master bedroom zone. In this case you would run a set of component video cables to each zone. The maximum length of cable to each zone will vary on the quality of the cable.,

If high quality cable is used, the Juneau can support zones 300 feet away.

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 PCs 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 matrix switch.

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 matrix switch, connect the USB cable to the PC’s USB port (flat end), and the other end (square end) to the 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 infrared 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.

Power

Once all the input and output connectors are in place, connect the power cable to the AC input. If you are not in North America, you may use your own standard IEC320 power cable with the matrix switch. The power supply will detect whatever voltage is supplied (from 90V to 240V AC, 50-60Hz), and adjust accordingly.

Rack Mounting (optional)

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

Overview

The Juneau is designed to be controlled form 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 Juneau matrix switch 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. You need not press hard to activate a button--a light tap will do.

Powering the Juneau switch on and off is accomplished by pressing the power button once.

Two button presses are required to shut down the matrix.

In the normal powered on mode, the Juneau will display the last command received. This is helpful for troubleshooting 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

IR Control follows the basic sequence of:

#, Out, # # The Juneau has been optimized for a short command sequence using only 4 IR codes. The first button selects the input number. The NeoPro remote (Fig. 1, below) uses the bottom row of buttons for selecting inputs 10-12.

Output selection is a sequence of 2 numeric buttons, i.e.. “0 6” selects output 6.

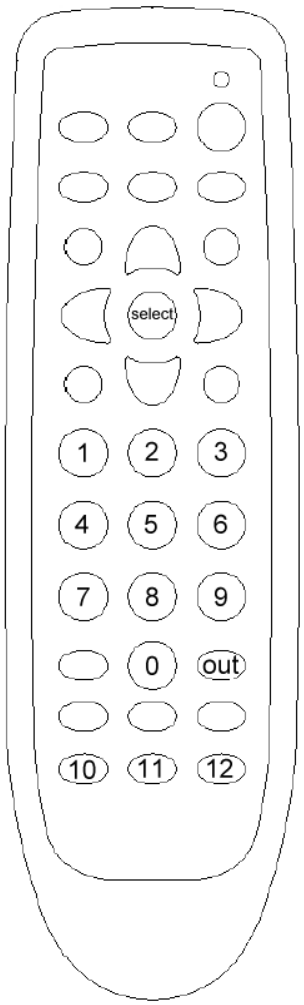

Figure 1 - IR Remote numeric button locations

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 arrow) and > (right arrow) 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 in 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 enable or disable the front panel buttons. The default in ON, which means enabled.

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 faster.

Any of the above selections will be applied and saved instantly. You may press exit at any time to return to the home screen, or wait 10 seconds and the home screen will return on its own.

Care and Maintenance

The Juneau matrix switch does not require any regular maintenance besides keeping it clean.

Never use harsh cleaners or solvents on the front panel. Do not spray cleaners directly on the front panel. There are several dusting products for electronics, and standard glass cleaner may be used. Spray the cleaner onto a clean soft cloth first, then wipe the front panel.

Should the Juneau matrix switch fail to operate as expected, please contact NeoPro Support for troubleshooting and repair services. THERE ARE NO ADJUSTMENTS OR USER SERVICEABLE PARTS INSIDE THE CABINET.

Performance

Component Video (YPbPr)	
Input coupling	AC
Input impedance/termination	75 ohms
Output coupling	DC
Output impedance	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	5W “On”, 2W “standby”

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	8.8 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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