KRAMER ELECTRONICS LTD.

USER GUIDE

K-Router Plus Online User Guide

Version 2.0.28

P/N: 2900-300247 Rev 2

Contents

Figures

1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront video, audio, presentation, and broadcasting professionals on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 11 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters and GROUP 11: Sierra Products.

Kramer Electronics presents the **K-Router Plus** software application for remotely controlling Kramer matrix switchers over an Ethernet, RS-232 or USB connection. The graphic user interface makes it easy to visualize and switch devices connected to the router. The powerful suite of utilities makes it easy to view and change EDID, communication, device and display settings.

Note: **K-Router Plus** supports a wide range of Kramer routers. This manual describes all the features available in **K-Router Plus**. Not all of the features are implemented for every device. Each **K-Router Plus** is customized to the connected device and implements a subset of these features. Active features appear in black and inactive features appear in gray.

2 Downloading and Installing K-Router Plus

Go to http://www.kramerelectronics.com/support/product_downloads.asp to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

To download **K-Router Plus Online User Guide**:

1. Go to the Kramer Web site: http://www.kramerelectronics.co.il/.

2. Do a Product Search for your router.

3. Select the **Downloads** tab.

4. Under Product Software click **K-Router Plus**.

5. On the **K-Router Plus** page click **Download Now**.

6. Save the downloaded folder to your desktop.

To install **K-Router Plus**:

1. Double-click the downloaded folder to open.

2. Double-click the application file to launch.

3. Follow the Wizard instructions and when asked, select **K-Router Plus** from the list of available software products.
   An icon for launching **K-Router Plus Online User Guide** appears on your desktop and under
   Start > All Programs > Kramer Electronics > K-Router Plus.

To launch **K-Router Plus Online User Guide**, click on the icon. The **K-Router Plus Online User Guide** screen opens (see Figure 1).

3   Defining K-Router Plus

Note: The examples shown below may not exactly match what you see on your version of **K-Router Plus**. This is due to the specific customization of **K-Router Plus** to each router.

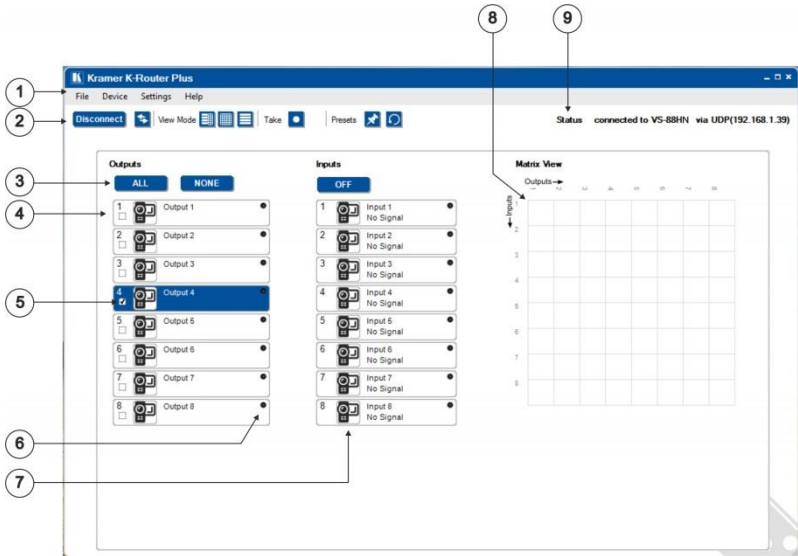Figure 1 defines the elements of the main screen of **K-Router Plus**.

Figure 1: K-Router Plus Main Screen

#	Feature	Function
1	Menu Bar	Shows File, Device, Settings and Help submenus (see <u>Section 3.1)</u>
2	Tool Button Bar	**Connect** Connects and disconnects a router
		⬆⬇ Refreshes all router information to the program
		View Mode ▦ displays the I/O list and matrix views together
		View Mode ▦ displays a matrix view only
		View Mode ▤ displays the I/O list only
		Take ● Sets up the switch, ◼ actuates the change, **X** cancels the take.
		Note: K-Router Plus displays the change on screen but the device does not switch until the actuate button is pushed
		Preset 📌 saves the present state to a preset memory location (in this example 1–16, the number varies according to the machine)
		Preset ↻ loads a saved state from a preset memory location
3	I/O Button Bar	**ALL** Selects all outputs. Together with OFF disconnects all inputs and outputs
		NONE Deselects all outputs
		OFF Turns off the selected input
4	*OUTPUT* Buttons	Select the target output(s) (1 – n)
		The number of output buttons match the configuration of your router
5	Output Check Box	Allows choosing multiple outputs
6	Active Status Indicator	On input and output buttons, lights red if inactive, green if active
7	*INPUT* Buttons	Select the target input (1 – n)
		The number of input buttons match the configuration of your router
8	*MATRIX VIEW*	Displays all active crosspoint connections; click at an intersection to make a new connection
9	STATUS	Indicates the type of router, its connection method and if the device is connected or not

3.1   Defining the Menu Bar Items

The following table explains the functions available on the menu bar.

Note: Active functions appear in black. Inactive functions appear in grey.

Menu	Item	Function
File	Connect/Disconnect	Connects and disconnects a router
	Exit	Closes the K-Router Plus application
Device	Device Details	Displays and allows changing the router information and communication parameters
	Firmware Update	Updates the router firmware from a saved file
	EDID Manager	Allows loading, viewing and saving an EDID
	Restart Device	Restarts the connected router
	Edit Custom Resolutions	Allows the choice and specification of non-standard resolutions
	K-Link Data	Routes K-Link data connections
Settings	System Colors	Allows the selection and customization of system colors
Help	About	Displays the K-Router Plus software version and Kramer contact information

For detailed explanations see .

3.2   Defining the View Mode

The view mode allows you to view the connections as an I/O list, a matrix or a combined list and matrix view.

To see the dual mode view:

- Click the icon. The I/O list and a matrix display all the connections ().
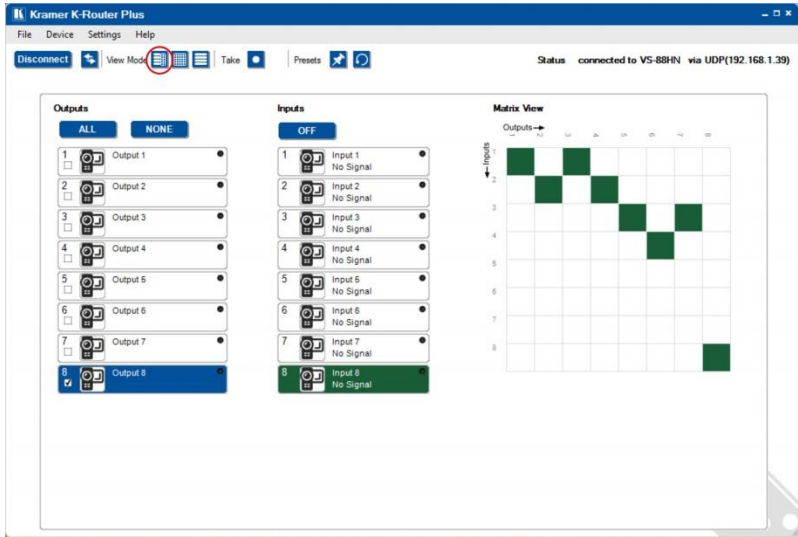
Figure 2: Dual Mode View

- Each input has a separate checkbox for audio "A" and for video "V" (Figure 3). For the device, you can control the audio and the video separately, or together, by enabling/disabling the "A" and/or "V" checkboxes, as required.
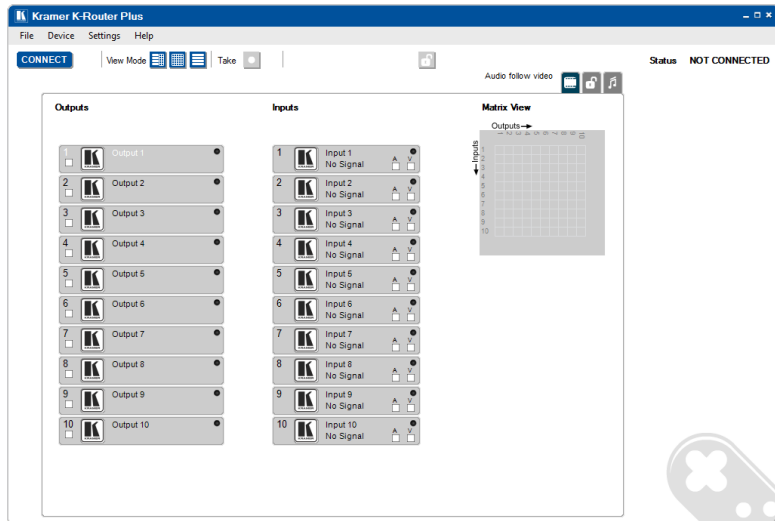

Figure 3: Separate Checkboxes For Audio And Video

To see the matrix view:

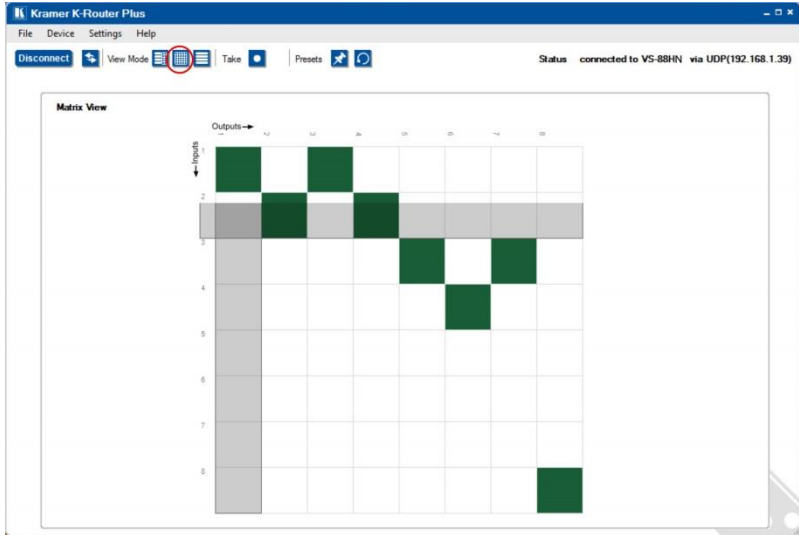- Click the ⊞ icon. A large matrix displays all of the connections (Figure 4).

Figure 4: Matrix Mode View

To see the Input/Output list view:

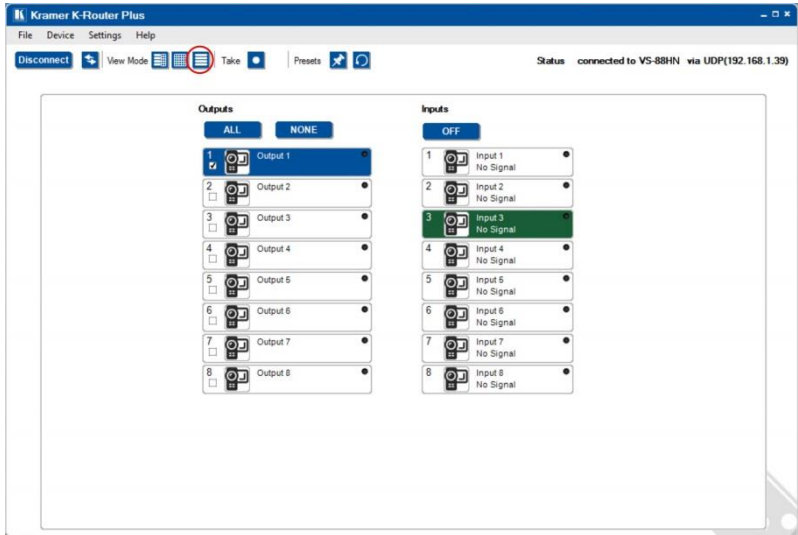- Click the 🗐 icon. Inputs and outputs are displayed as a list (Figure 5).

Figure 5: I/O List Mode View

4   Using K-Router Plus

This section explains how to operate the main functions of **K-Router Plus**.

4.1   Connecting a Router

To connect a router:

1. Physically connect a router via RS-232, USB or a network to a PC running **K-Router Plus.**

2. Click the menu item File > Connect or click the **Connect** button.
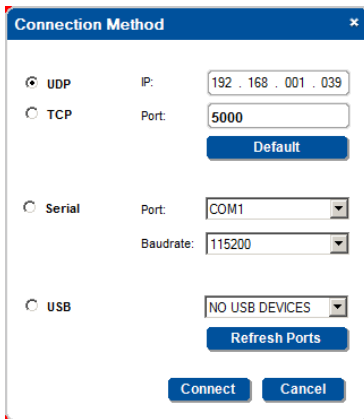   The Connection Method screen opens:

Figure 6: Connection Method Window

3. Choose the appropriate connection method, set the parameters as required and click **Connect**.

## 4.2   Switching Inputs to Outputs

To switch inputs to outputs:

- In the list view, click the desired output button then the desired input button

- In the matrix view, click the intersection of the desired input and output

4.2.1 Switching Using the I/O Buttons

The following examples show how to perform switching functions.

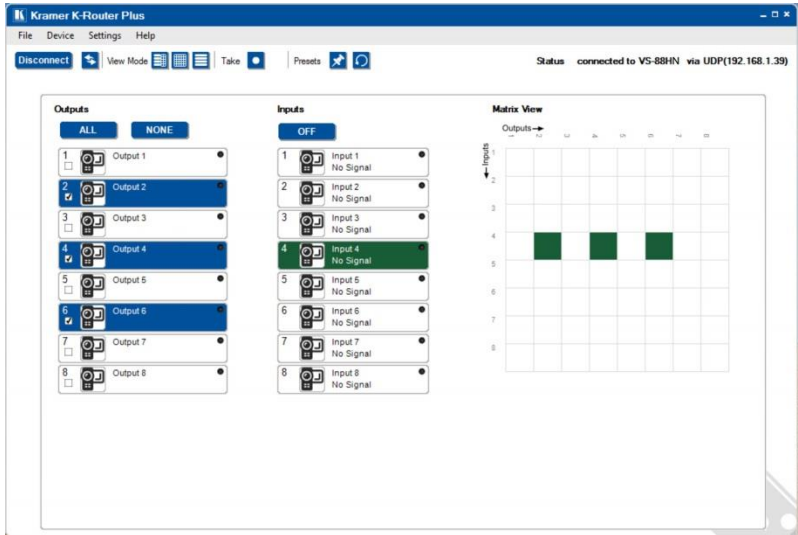**To switch one input to one output** (in this example Input 4 to Output 4):

- Click the desired output (4), then the desired input (4)
  The connection appears on the Matrix View
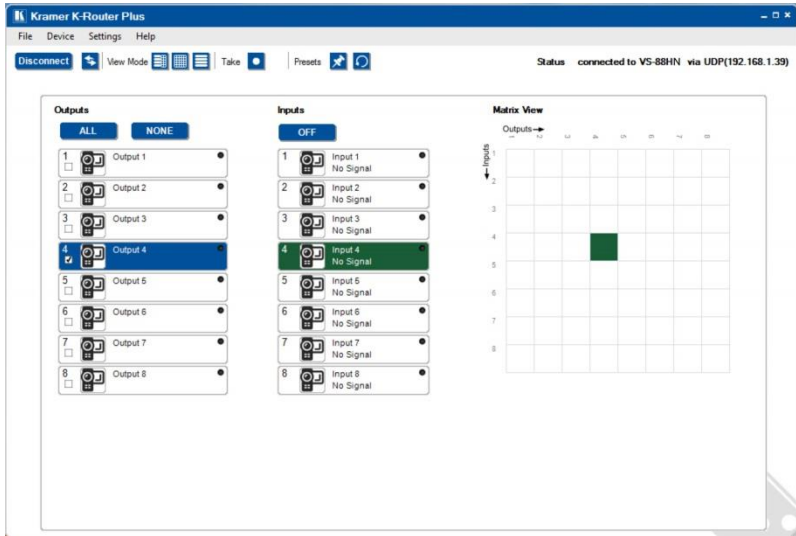
**To switch one input to several outputs** (in this example Input 4 to Outputs 2, 4 and 6):

- Click the check boxes on the desired outputs (2, 4, 6), then the desired input (4)
  The connections appear on the Matrix View

To switch one input to all outputs (in this example Input 4 to all Outputs):

- Click the ALL button (all outputs highlight), then the desired input (4)
  The connections appear on the Matrix View
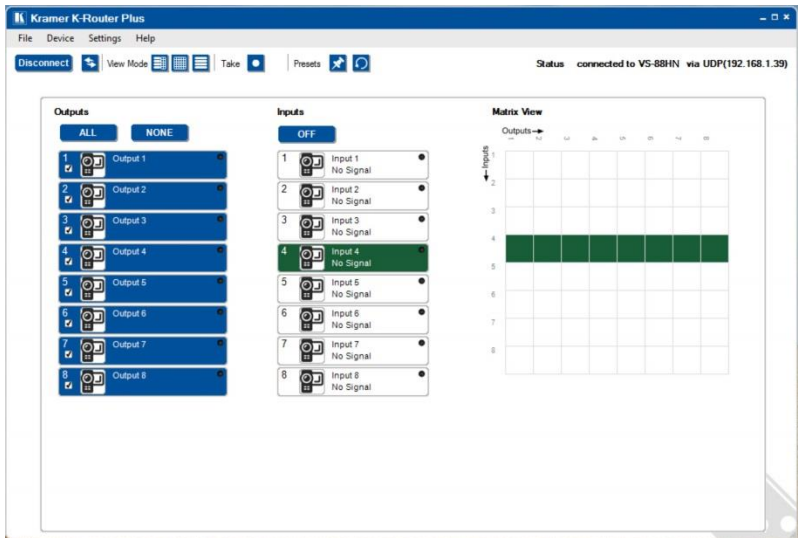
To disconnect one connection:

- Click on the desired connection and click OFF
  The connection is broken and disappears from the matrix
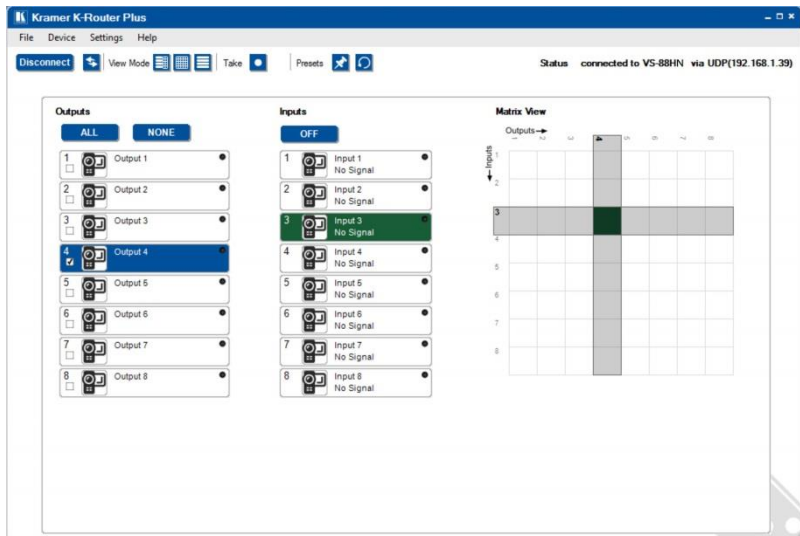
To disconnect all connections:

- Click on the ALL button and click OFF
  All connections are broken and disappear from the matrix

4.2.2   Switching Using the Matrix

The matrix is useful for making individual connections quickly (either in the matrix or dual views).

To switch one input to one output (in this example Input 3 to Output 4):

- Navigate to the intersection of Input 3 and Output 4 and click
  The new connection appears on the matrix in the matrix and dual views

To disconnect one connection:

- Click on the desired connection and click OFF
  The connection is broken and disappears from the matrix

4.3   Using the Take Button

Take allows you to setup a certain configuration "offline" and to make the complete switch all at once.

To perform a switch using Take:

1. Click .

    The button changes to ✖ . (To cancel the Take, press ✖ .)

2. Choose the output(s).

3. Choose the input.
    K-Router Plus displays the new configuration in the matrix view.
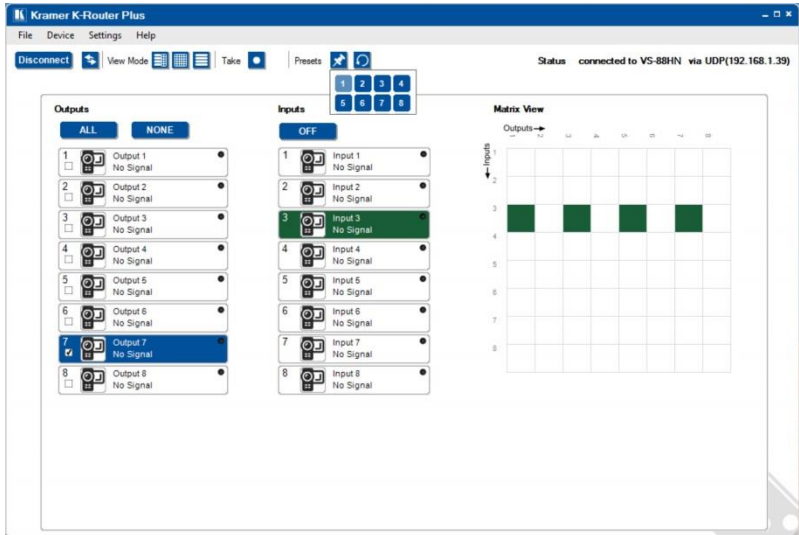
4. Press

    The device switches and displays the new configuration.
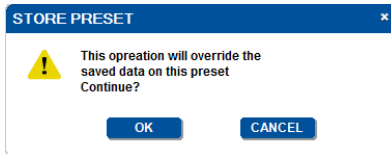
4.4   Using Presets

Use presets to store frequently used setups.

To save a preset (in this example, Input 3 connected to Outputs 1, 3, 5, 7 are saved to Preset 1):

•   From the given setup click the button
    The preset buttons drop down

- Click on Preset **1**

  The following warning appears:

- To continue, click **OK**

  The setup is saved in Preset 1

To restore a preset (in this example, Preset 1 containing Input 3 connected to Outputs 1, 3, 5, 7):

- Click the button

  The preset buttons drop down

- Click the desired Preset number (**1**)

  The existing setup (if any) disconnects and the saved configuration activates
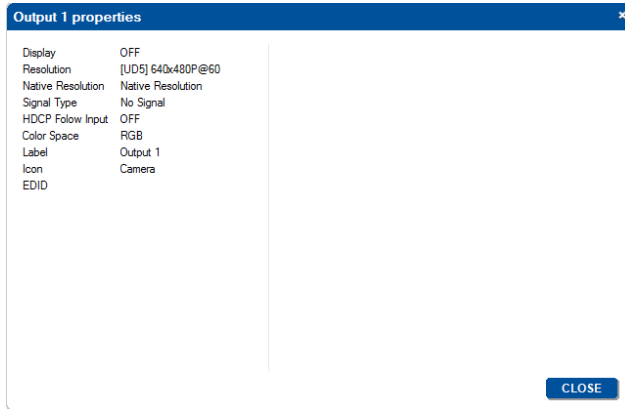
4.5   Using Input/Output Properties

Input/output properties display and control port settings.

**To display the port properties:**

- Right-click on an output port

  The Output properties widow appears:

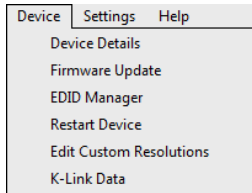| Property	Values
Display	Show the display status: ON, OFF
Resolution	Choose from a list of available resolutions plus user-defined
Native Resolution	Show sink native resolution
Signal Type	Output signal type (HDMI/DVI/…)
HDCP Follow Input	Show HDCP working mode
Color Space	RGB, YCbCr 4:2:2, YCbCr 4:4:4, Follow Output
Label	Text to identify the output
Icon	Choose from Kramer, camera, DVD, Laptop, Mobile, Music, PC, Tablet
EDID	Displays the EDID associated with the port

- Right-click on an input port

  The Input properties widow appears:
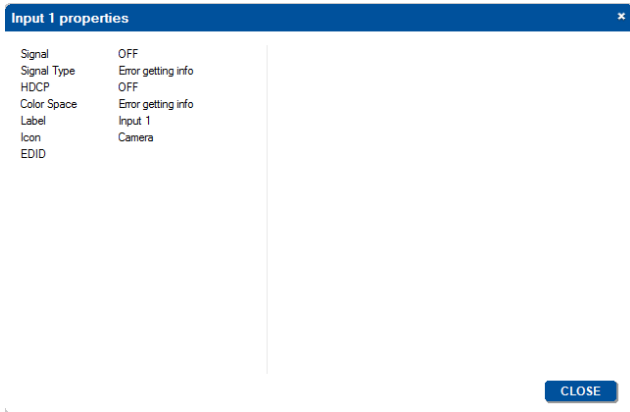
Property	Values
Signal	Show the signal status: ON, OFF
Signal Type	Input signal type (HDMI/DVI/…)
HDCP	Input signal encryption status (ON/OFF)
Color Space	RGB, YCbCr 4:2:2, YCbCr 4:4:4, Follow Output
Label	Text to identify the output
Icon	Choose from Kramer, camera, DVD, Laptop, Mobile, Music, PC, Tablet
EDID	Displays the EDID associated with the port

5 Using the Menu Utilities

Note: Utilities may vary from device to device. Available utilities show in black text. Unavailable utilities are greyed out.

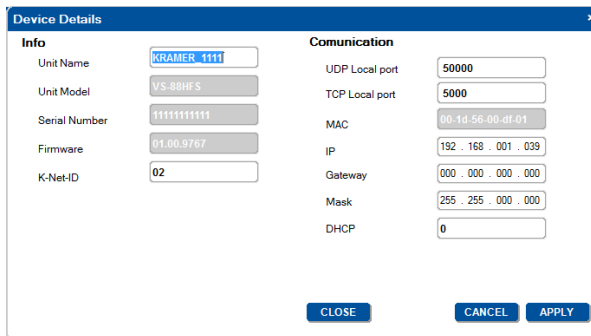| Device	Settings	Help
Device Details		
Firmware Update		
EDID Manager		
Restart Device		
Edit Custom Resolutions		
K-Link Data		

5.1 Using Device Details

Device Details enables you to change information on the unit name and the K-Net ID and set network communication parameters.

To change device details:

- Click Device > Device Details and modify any non-greyed field as needed

- When finished, click **APPLY** and **CLOSE**

Figure 7: Device Detail Window

5.2 Updating the Firmware

This utility allows you to install the latest version router firmware downloaded from Kramer Electronics.

To upgrade the router firmware:

1. Download the latest version of firmware from the Kramer Web site to a file on your computer.

2. Navigate to Device > Firmware Update and select.
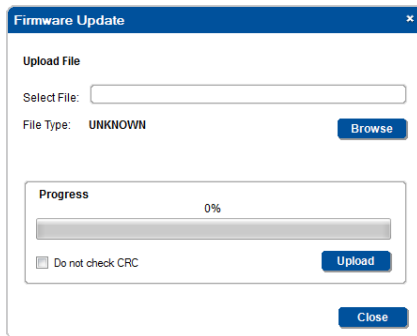   The Firmware Update window opens.

Figure 8: Firmware Upgrade Window

3. Enter the name of the downloaded firmware file in the Select File field or click **Browse** to navigate to the location of the file and select it.

4. **Do not check CRC** - If checked, the file is uploaded and burned to the device. If not checked, the device compares the uploaded CRC to the currently existing CRC and does not burn it if the same file is detected.

5. Click **Upload** to send the file to the router.

6. After completion, the router resets then reconnect it to **K-Router Plus**.

5.3   Using the EDID Manager

The EDID Manager allows you to load and view an EDID from any I/O source, file or default and then save it to an input or file.

To use the EDID Manager:

1. Navigate to Device > EDID Manager and select.
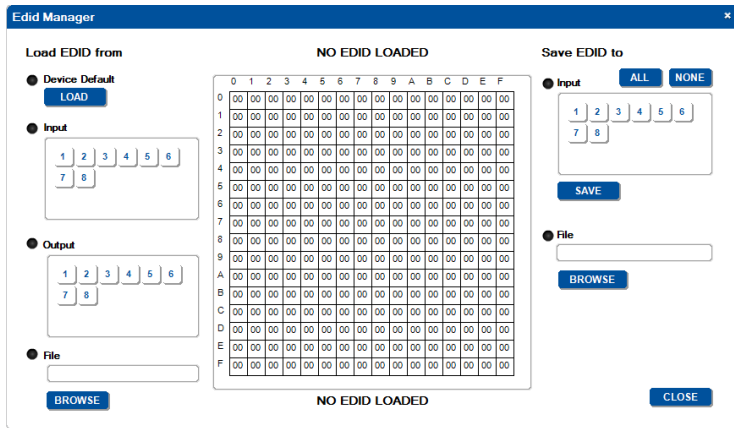   The EDID manager window opens.

Figure 9: EDID Manager Window

In this example, the EDID from Input 1 is saved to Input 2 (see).

2. Load the EDID source by clicking **Load EDID from Input 1**. Input lights green, the Input 1 button highlights and the EDID for Input 1 displays in the central matrix.

3. Click **Save EDID to Input 2**, then click **Save**.
    A successful save is indicated by a message "The EDID was copied". Click **OK** to close.
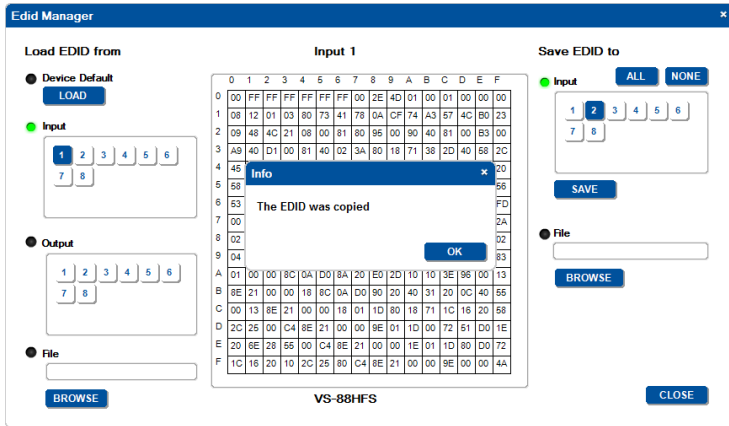
Figure 10: Saving an EDID

- To save the EDID to all inputs, click **Save EDID to ALL**

- To deselect all target inputs, click **NONE**

- EDIDs can be loaded or saved to files. Click **File Browse** and navigate to the desired file location.

5.4 Restarting the Device

To restart the router:

1. Navigate to Device > Restart Device and click.
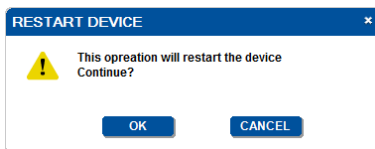   The Restart Device window opens.

Figure 11: Restart Device Window

2. Confirm the restart by clicking **OK**.
   The router restarts.

3. Reconnect by selecting File > Connect or clicking **Connect**.

K-Router Plus Online User Guide - Using the Menu Utilities

5.5 Editing Custom Resolutions

Device defined resolutions are read from/written to the device. Available resolutions are read from/written to the computer.

To edit a resolution:

1. Navigate to Device > Edit Custom Resolutions and select.
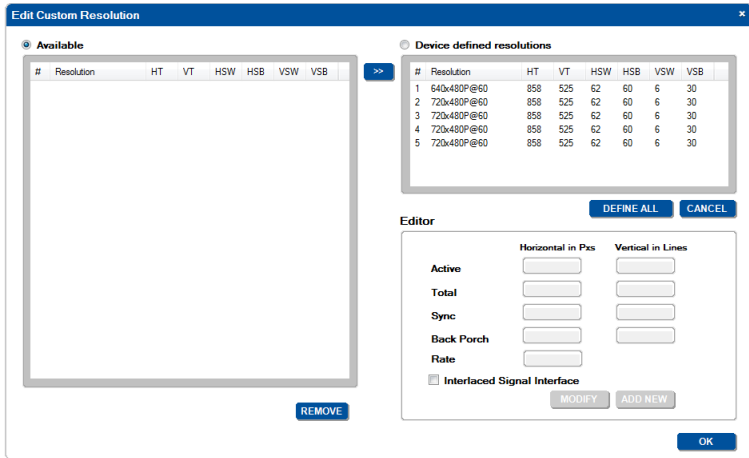   The Edit Custom Resolutions window opens:

Figure 12: Edit Custom Resolutions Window

2. Choose the resolution source (available or device defined) by clicking the radio button at the upper left of the panel.

.

5.6   Using K-Link Data

K-Link Data allows the user to route K-Link data connections in a manner similar to the video matrix view. Point and click the intersection square between elements (input, output, network, or device) to make the data connection.

To route a K-Link data connection:

- Click any non-grey intersecting square.
  The square turns green to indicate the connection is made.
  In this example:

  - In 4 is connected to Out 1

  - In 5 is connected to Out 2
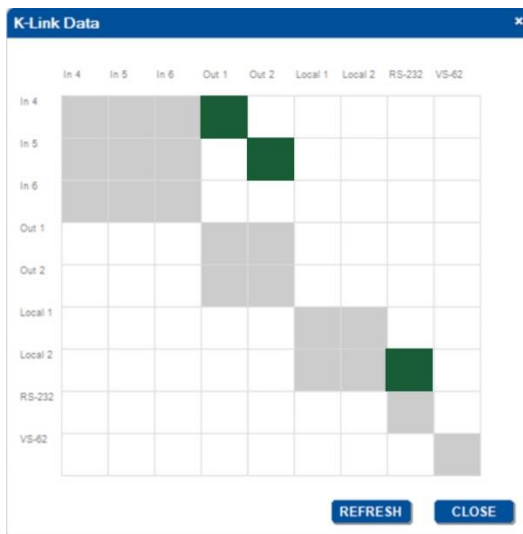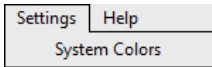
  - Local 2 is connected to RS-232

Figure 13: K-Link Data Window

Note: Grey squares are forbidden connections. Only one connection is allowed per device. Making a second connection to a device breaks the previous connection.

5.7   Using the Settings Menu

Settings | Help
System Colors

To change system colors:

1. Navigate to Settings > System Colors and select.
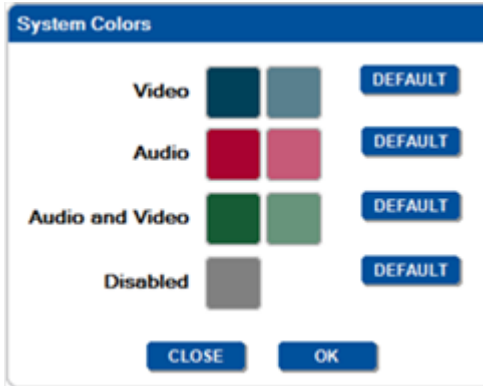   The System Colors window opens.

Figure 14: System Colors Window

2. To change a color, click on the desired left-hand color box.
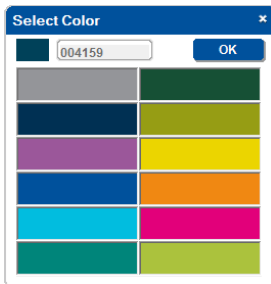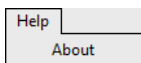   The Select Color window opens.

Figure 15: Select Color Window

3. Click on the desired color to select. The selected color and its number code
    appear in the upper-left corner.

5.8 Using the Help Menu

- To see the version of the **K-Router Plus** software and Kramer contact information, select Help > About.

Figure 16: About Window

K-Router Plus Online User Guide - Using the Menu Utilities