

HDMI MATRIX SWITCHER  
**B-520-MTRX-230-**  
4x4, 6x4+2, 8x8 & 16x16

**BINARY**

CONFIGURATION  
UTILITY MANUAL

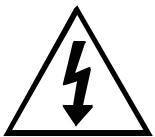


## IMPORTANT SAFETY INSTRUCTIONS

To reduce the risk of fire or electric shock, read and follow all instructions and warnings in this manual. Keep this manual for future reference.

1. Do not expose this apparatus to rain or moisture. Do not expose this equipment to dripping or splashing, and ensure that no objects filled with liquids, such as vases, are placed on the equipment. Do not use this apparatus near water.
2. Do not remove cover. No user serviceable parts inside.
3. Clean only with a dry cloth.
4. Do not block any ventilation openings. Install according to manufacturer's instructions.
5. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
6. Do not override the safety purpose of the polarized or grounding plug. A polarized plug has two blades, one of which is wider than the other. A grounding plug has two matching blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
7. Protect the power cord from being walked on or pinched, particularly at the plug end and where the power cord is attached to the apparatus.
8. Only use attachments and accessories specified by the manufacturer.
9. Refer all servicing to qualified service personnel. The apparatus requires service when it is damaged in any way (for example: when the power supply cord or plug is damaged, when liquids have been spilled onto or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.)
10. To completely disconnect this equipment from power, disconnect the power supply cord from the power outlet.

## LEGAL NOTICE



This symbol, a lightning flash with arrowhead, drawn within an equilateral triangle, is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**CAUTION**

**CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK.**

**DONOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE.**

**REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

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## 1. OVERVIEW

This manual outlines the operation and use of the B-520-MTRX-230 PC-based Configuration Utility software. Please read through the entire document before attempting to configure a B-520-MTRX-230. Should you have any questions after reading this document, please contact SnapAV Technical Support.

## 2. MODELS

The following models are covered in this manual. The functionality of the Configuration Utility is very similar for all models. Any significant differences are covered by model.

- B-520-MTRX-230-4x4
- B-520-MTRX-230-6x4+2
- B-520-MTRX-230-8x8
- B-520-MTRX-230-16x16

## 3. PACKAGE CONTENTS

Before you begin, make sure the following items are available and ready for use:

- B-520-MTRX-230
- B-520-MTRX-230 Installation Manual
- PC running Windows XP or newer Windows OS
- Serial Cable to connect the B-520-MTRX-230 to the PC
- DB9 to USB adapter (if the PC does not have a serial port built-in)
- List of the sources (Inputs) and displays (Outputs) used in the system (consult system chart in the B-520-MTRX-230 manual)
- Knowledge of this document and the devices being used in the system

## 4. DOWNLOADING THE UTILITY

The software utility is included on the CD provided with the B-520-MTRX-230 and can also be downloaded from the product page at [www.SnapAV.com](http://www.SnapAV.com). Check the site for periodic updates to ensure that the latest version of the utility is being used.

## 5. UTILITY FILE LOCATION

The B-520-MTRX-230 software utility is a standalone program that does not require installation. After downloading the utility, unzip the downloaded file to a location that is easy to remember and locate when needed, like the example below:

- C:\My Documents\Binary\B-520-MTRX-230\ConfigurationUtility

### 5.1. B-520-MTRX-230-16x16 Files

There are 2 additional “.DLL” type files included with the utility “EXE” that must be placed in the same folder as the utility.

## 6. COMMUNICATING WITH THE B-520-MTRX-230

### 6.1. Serial Connection

The B-520-MTRX-230 and PC communicate over DB9 straight-through serial cable. Before connecting, verify that the pin configuration of the cable matches the diagram below.

Should the PC not have a built in DB9 connection, a USB to RS-232 adapter may be used, however it is strongly recommended that firmware updates are not performed using an adapter.

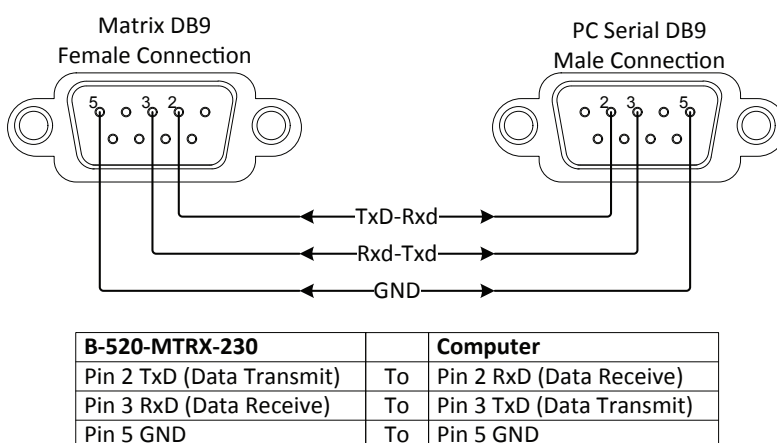


FIGURE 1

## 7. INSTALLATION & SETUP

### 7.1. Basic Installation Diagram

Complete the basic installation section to set up the matrix switcher for media distribution before completing any other setup. Use this diagram for reference during basic installation of the matrix switcher, sources, displays and wiring.

### 7.2. COM Port Settings

The COM port on the PC should be set to 9600 Baud, 1 Stop Bit, No Parity.



Select the COM port on the computer that is connected to the B-520-MTRX-230 from the list of available COM ports.

If the connected COM port does not appear in the list, refer to the PC's "Device Manager" to verify that COM ports have been installed and have the right communication settings. Find the Device Manager by searching from the Start menu search bar, or go to Control Panel > Devices and Printers > right-mouse-click and select "Device Manager."

### 7.3. Initializing Communication



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Select the "Connect" button to initiate communication between the B-520-MTRX-230 and the computer.

Once connected:

- Button name will change to "Disconnect"
- Status box will change to "Connected" and turn green.

If this does not occur after a few moments, perform these steps:

1. Verify that the correct COM port is selected;
2. Verify communication settings on the PC's COM port;
3. Verify that the cable has the correct PIN configuration and that it is functioning correctly.

If communication cannot be established after performing these steps, please contact SnapAV tech support.

### 7.4. Stopping Communication



Click the "Disconnect" button to stop communication between the B-520-MTRX-230 and the computer.

## 8. EDID CONFIGURATION

The purpose of EDID Configuration is to set the EDID for each input appropriately. This EDID will be passed to the connected source input. Unless the source has a fixed audio or video format, it will transmit content at the best audio and video formats that do not exceed the capabilities specified in the EDID. Note that all outputs on the B-520-MTRX-230 receive the same audio and video format.

For example, assume you have two displays (Outputs) that will view the source connected to Input 1. One of the displays is capable of 7.1 multi-channel audio but the other is only capable of stereo audio. In this case, you will store an EDID in Input 1 that restricts the audio to stereo so that both display outputs will produce audio.

### CONFIGURE EDIDs

Select “Configure EDID’s” to access EDID configurations.

**NOTE:** If the PC is not communicating with the B-520-MTRX-230, a “NOT CONNECTED” window will appear.

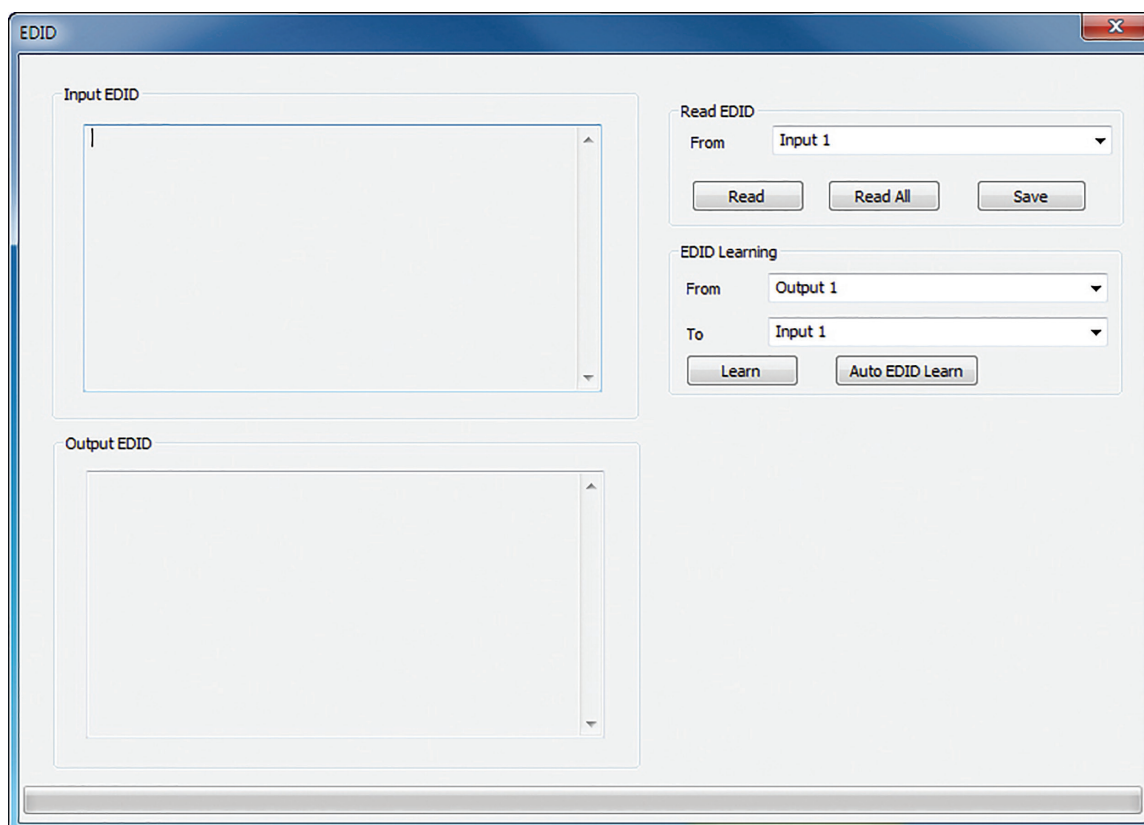
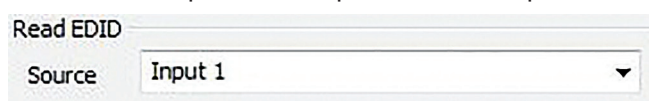


FIGURE 2

### 8.1. Display EDID for Particular Input/Output

Read EDID allows you to read the currently stored EDID for each Input and to read the EDID from display (if any) connected to each HDMI and HDBaseT output. Note that EDIDs for the Inputs are displayed in the upper left box while EDIDs for the outputs are displayed in the lower left box.

1. Select an input or an output from the dropdown list:



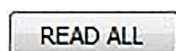
2. Select READ to display the information.



3. The EDID values for the selected Input or Output will be displayed on the left side of the screen.

## 8.2. Display EDID for All Inputs / Outputs

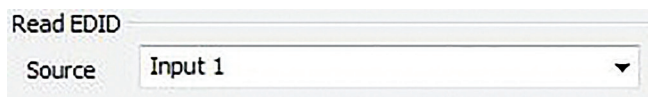
1. READ ALL will read and display the currently assigned EDID for each Input and the EDID from each connected display.



2. The EDID values for all Inputs and Outputs will be displayed on the left side of the screen.

## 8.3. Save Configuration for Inputs / Outputs

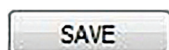
This function allows you to save an EDID to disk for future use. A common use of this function is storing the EDIDs for commonly used TVs on disk. These can be recalled from disk (see EDID Learning below) and stored in the EDID Input locations even if the display is not currently connected.



1. Click "READ" to display the information.



2. Click "SAVE" to save the file.



3. Browse to the location of your choice to save the configuration file.

Suggested Folder Location:

C:\My Documents\Binary\B-520-MTRX-230\EDIDConfigurations

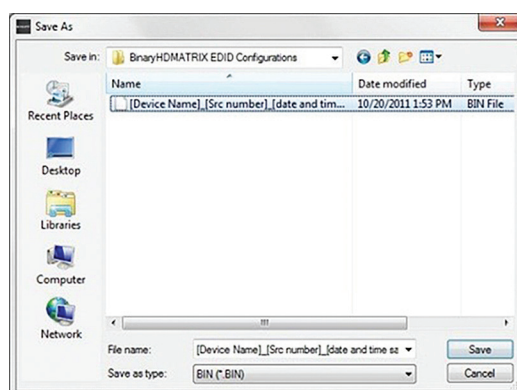


FIGURE 3

4. Create a name for the file that clearly describes the contents.



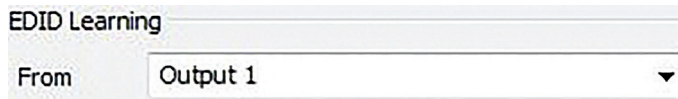
## 8.4. Learn EDID to Input

The following examples are for the B-520-MTRX-230-8x8, but apply to all models.

EDIDs are learned into the B-520-MTRX-230 via the HDMI and HDBaseT output connections.

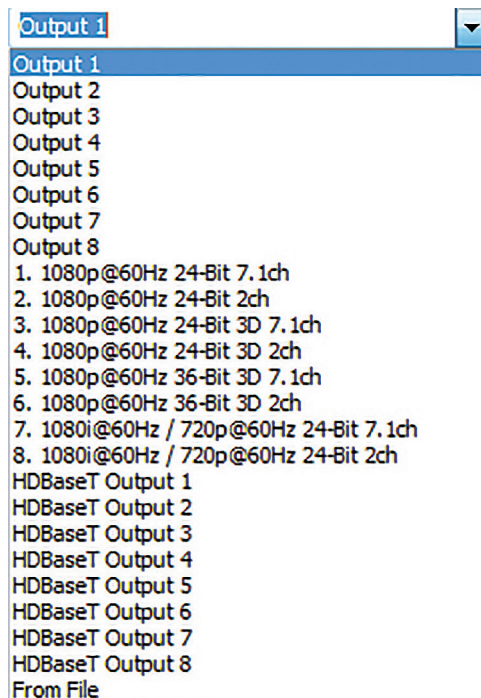
If you are learning from a connected display, the steps below can be followed to learn EDIDs from a display into the B-520-MTRX-230:

1. Select the location of the device whose EDID you will learn from in the EDID Learning “From” dropdown list:



The screenshot shows a window titled "EDID Learning". Inside, there is a label "From" followed by a dropdown menu. The dropdown menu is currently set to "Output 1".

### Available Choices



The screenshot shows a dropdown menu with the following options: Output 1, Output 2, Output 3, Output 4, Output 5, Output 6, Output 7, Output 8, 1. 1080p@60Hz 24-Bit 7.1ch, 2. 1080p@60Hz 24-Bit 2ch, 3. 1080p@60Hz 24-Bit 3D 7.1ch, 4. 1080p@60Hz 24-Bit 3D 2ch, 5. 1080p@60Hz 36-Bit 3D 7.1ch, 6. 1080p@60Hz 36-Bit 3D 2ch, 7. 1080i@60Hz / 720p@60Hz 24-Bit 7.1ch, 8. 1080i@60Hz / 720p@60Hz 24-Bit 2ch, HDBaseT Output 1, HDBaseT Output 2, HDBaseT Output 3, HDBaseT Output 4, HDBaseT Output 5, HDBaseT Output 6, HDBaseT Output 7, HDBaseT Output 8, and From File.

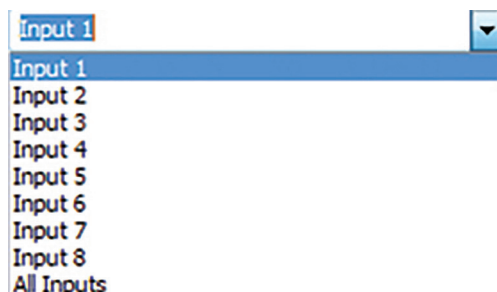
**NOTE:** When “From File” is selected, a window will open when you learn (Step 3 on next page) that allows you to navigate to the location where an EDID configuration file was saved. Select the desired file and select “Open”.

1. Select an Input to learn to in the “EDID Learning TO” dropdown list:



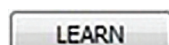
The screenshot shows a window with a label "To" followed by a dropdown menu. The dropdown menu is currently set to "Input 1".

### Available Choices



The screenshot shows a dropdown menu with the following options: Input 1, Input 2, Input 3, Input 4, Input 5, Input 6, Input 7, Input 8, and All Inputs.

2. Select the LEARN button



The screenshot shows a button labeled "LEARN".

The selected EDID is stored in the selected Input locations.

## 8.5. Auto EDID Learn

The B-520-MTRX-230 includes an automatic function that will determine the EDID with the best quality video that will work with all connected displays.

If all sources (Inputs) are to be viewable on all Displays (HDMI and HDBaseT Outputs), this function provides an easy mechanism for determining the EDIDs to store in all Inputs.

If some sources (such as a Blu-Ray player) are only viewed on some displays (Outputs), this method may provide a more restrictive EDID than desired for some displays (Outputs).

AUTO EDID LEARN

To see the results of Auto Learn, Read EDID from Input 1. This EDID is stored in all Input EDID locations.

**NOTE:** Auto EDID sets audio to 2ch for all inputs regardless of the capability of the connected displays. If multi-channel audio is desired, embedded EDIDs or Learned EDIDs will need to be used.

## 9. ADVANCED SETUP USING THE CONFIGURATION UTILITY

### 9.1 Output Control

View Outputs

Selecting “View Outputs” opens a window that allows outputs to be turned on or off. This can be used for troubleshooting the B-520-MTRX-230 and connections.

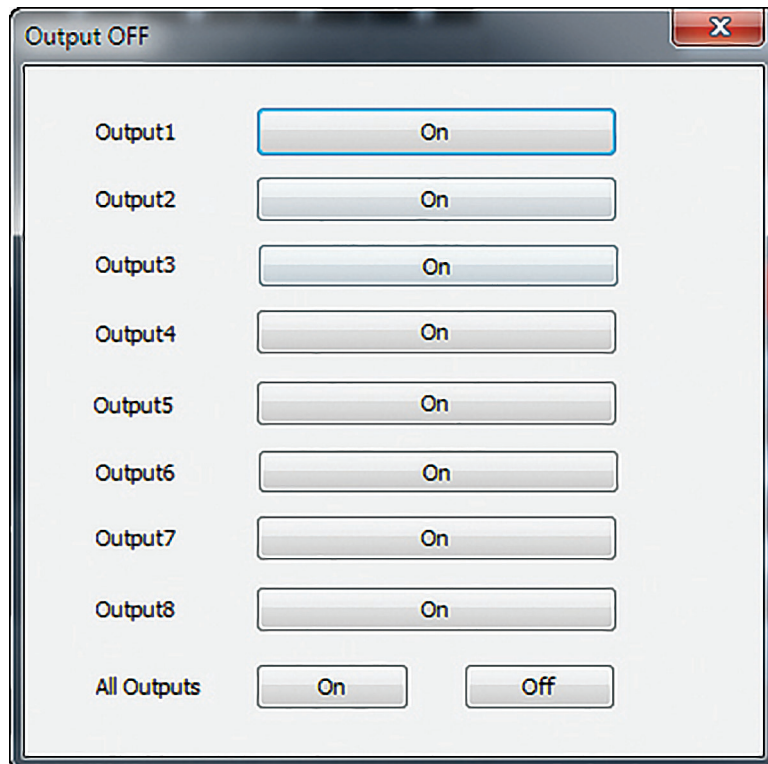


FIGURE 4

## 10. FIRMWARE UPDATE

### FIRMWARE Update

The process to update firmware varies slightly between the 4 models; however the types of files loaded are the same as listed below:

1. Main- Firmware for the main processor in the matrix.
2. DB Board- Firmware for processors that manage Inputs and Outputs.
3. HDBaseT- Firmware for the HDBaseT Output Processors.

Instructions for updating Firmware on a matrix are detailed on the Firmware Update Page for that product.

Before beginning the Firmware Update process download and unzip the latest firmware update from the B-520-MTRX-230 product page for the matrix to be updated and store in a location you will remember on your PC. Be sure the firmware file from the downloaded folder is not compressed or in a compressed folder before updating.

**IMPORTANT:** A hardware RS-232 serial port on a laptop or desktop PC may be more reliable for updating firmware than a USB to RS-232 Adapter. If you have trouble updating using an adapter, please use a PC with a built-in RS-232 port.

## 11. NETWORK CONFIGURATION

Displays and sets the Network IP address for all B-520-MTRX-230-Matrix switchers.

**NOTE:** Only Static IP address mode is available – DHCP is not supported.

**NOTE:** The default IP Address for the matrix is 192.168.0.99. The IP Address and Subnet Mask are not reset during **FIRMWARE UPDATE** or **RESET FACTORY DEFAULTS** operations.

When **NETWORK CONFIGURATION** is selected, the following window is shown. If you want to know what the current IP address and Subnet Mask are, press the **READ FROM DEVICE** button. If you have not reset, the IP Address in the matrix will be 192.168.0.99 as shown below.

To change the values, enter the desired IP Address and Subnet Mask, and then press **WRITE TO DEVICE**. After changing the values, confirm the update worked correctly by clicking **READ FROM DEVICE** again.

After changing the network configuration, the matrix should be turned off and on again in order to use the new settings.

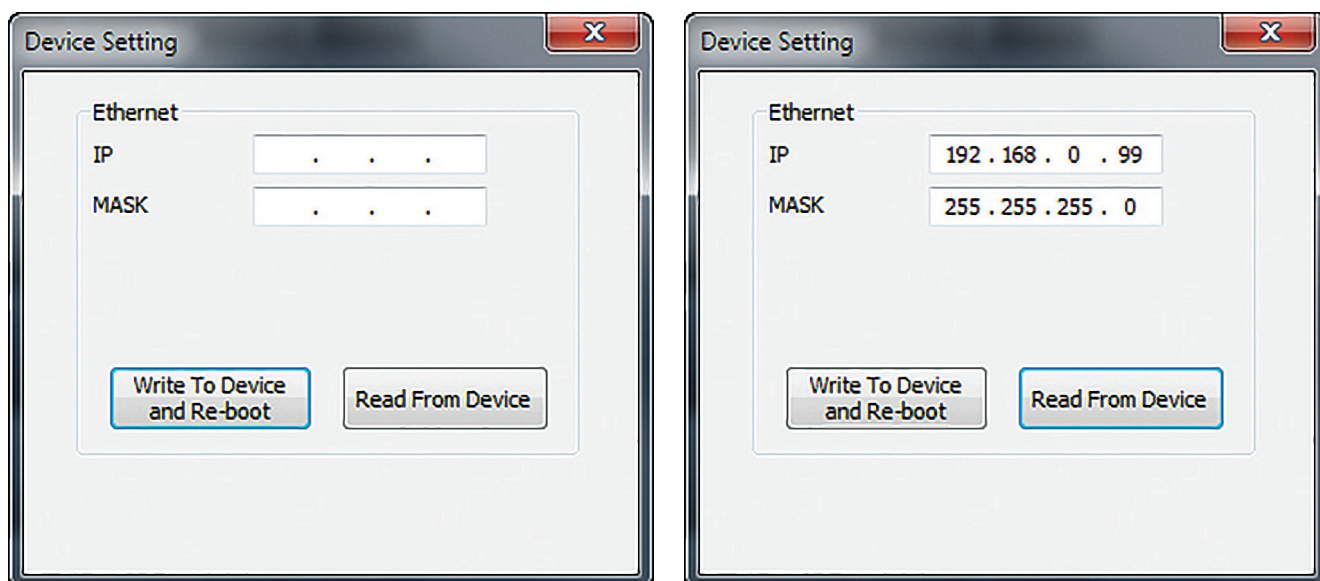


FIGURE 5

## 12. RESET FACTORY DEFAULTS

### RESET FACTORY DEFAULTS

Select to restore factory default settings for Inputs/Outputs Factory Values:

EDIDs for all Inputs: 1080P60, 2 Channel Audio

I/O: All Outputs set to Input 1

## 13. OTHER SETTINGS

### Other Settings

During the installation of a matrix, there are settings that provide Advanced Configuration not available via the remote control. These allow for fine tuning the matrix when used under certain conditions and the settings listed below are not available from the remote.

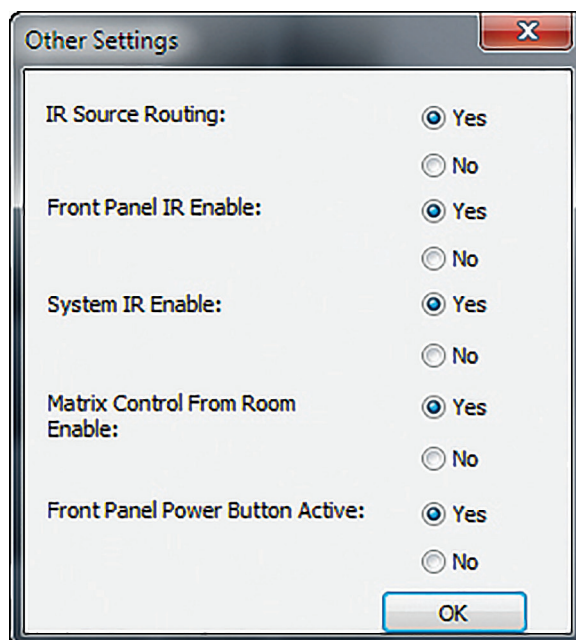


FIGURE 6

### 13.1. IR Source Routing:

The 3.5mm IR Output to Source jacks on the back of the matrix may be used in two ways. In the default setting, IR coming from the room is routed to the IR Output corresponding to the selected Source (Input). Set IR Source Routing to Yes for this functionality (default). If set to No, the IR coming from a room is routed to the IR output corresponding to the Room (Output) number.

### 13.2. Front Panel IR Enable

Use this setting to Enable (default) and Disable the front panel IR receiver. This is useful if the matrix is placed in a location that causes IR flooding from sunlight or other source. This setting only affects the Front Panel IR Receivers.

### 13.3. System IR Enable

Use this setting to disable the System IR Input on the back of the matrix.

### 13.4. Matrix Control from Room Enable

When Set to Yes (default), IR coming from a Room can be used to control the matrix. When set to No, matrix commands sent from a room will not control the matrix. This setting may be needed if IR flooding from sunlight or other source is sometimes present in one or more rooms.

### 13.5. Front Panel Power Button Active

Use this feature to Disable/Enable the front panel power button of the matrix when using an Automation System. This will prevent the matrix from being powered OFF which may disrupt matrix control from an automation system.

## 14. INPUT/OUTPUT OPERATION

The operating status is displayed and control of inputs and outputs is performed with the grid on the left side of the screen. It is provided so that the functionality of the system can be tested and controlled.

Here you can perform the following:

- View which inputs have sources connected and turned on
- View which outputs are un-muted
- View which input is assigned to an output
- Assign inputs to outputs

### 14.1. Connection Status

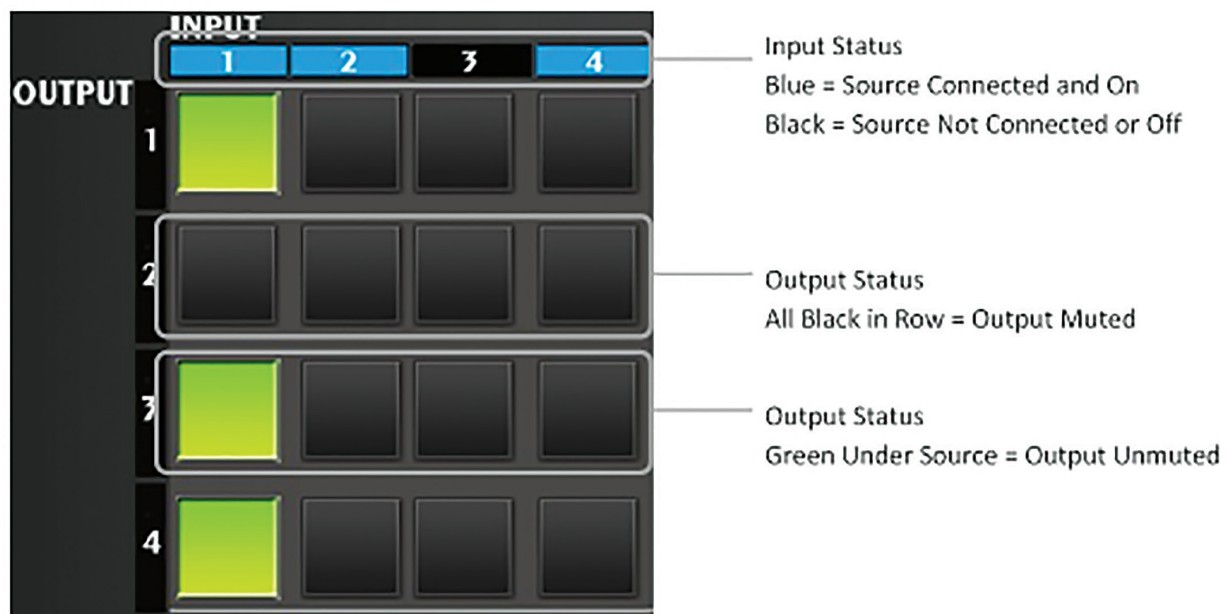


FIGURE 7

Note that a green box does not indicate if a display is connected or **OFF**. Should no image be visible on the display, verify that it is connected and **ON**.

## 14.2. Input / Output Control

1. Assign a single Input to an Output
2. Select a gray box under the input and next to the output. The box selected will turn green.
3. Assign any Input to all Outputs
4. Select the Input number in the top row. All boxes under that input will turn green.

## 15. APPENDIX: CONFIGURATION UTILITY HOME SCREENS

The home screen for each version of the utility is provided in this section for reference.

### 15.1. B-520-MTRX-230-4x4

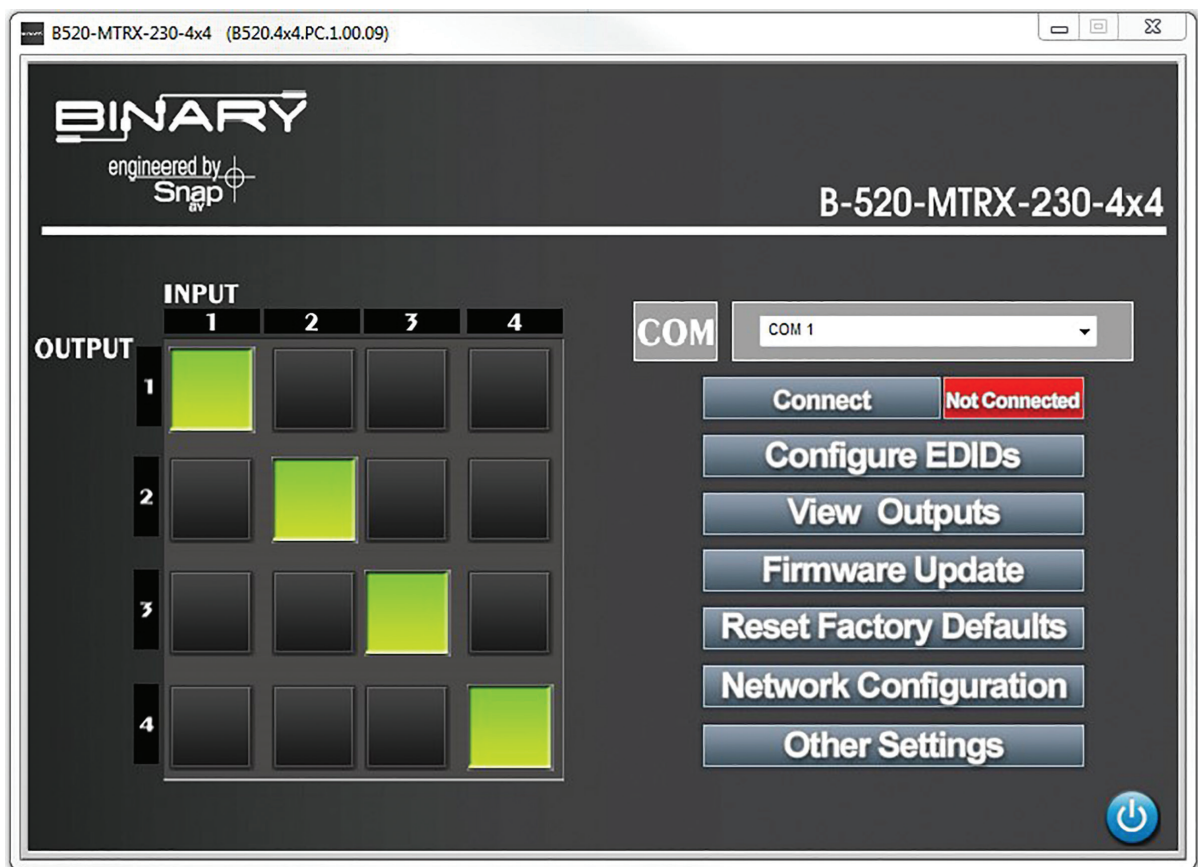


FIGURE 8



15.2. B-520-MTRX-230-8x8/6x4+2

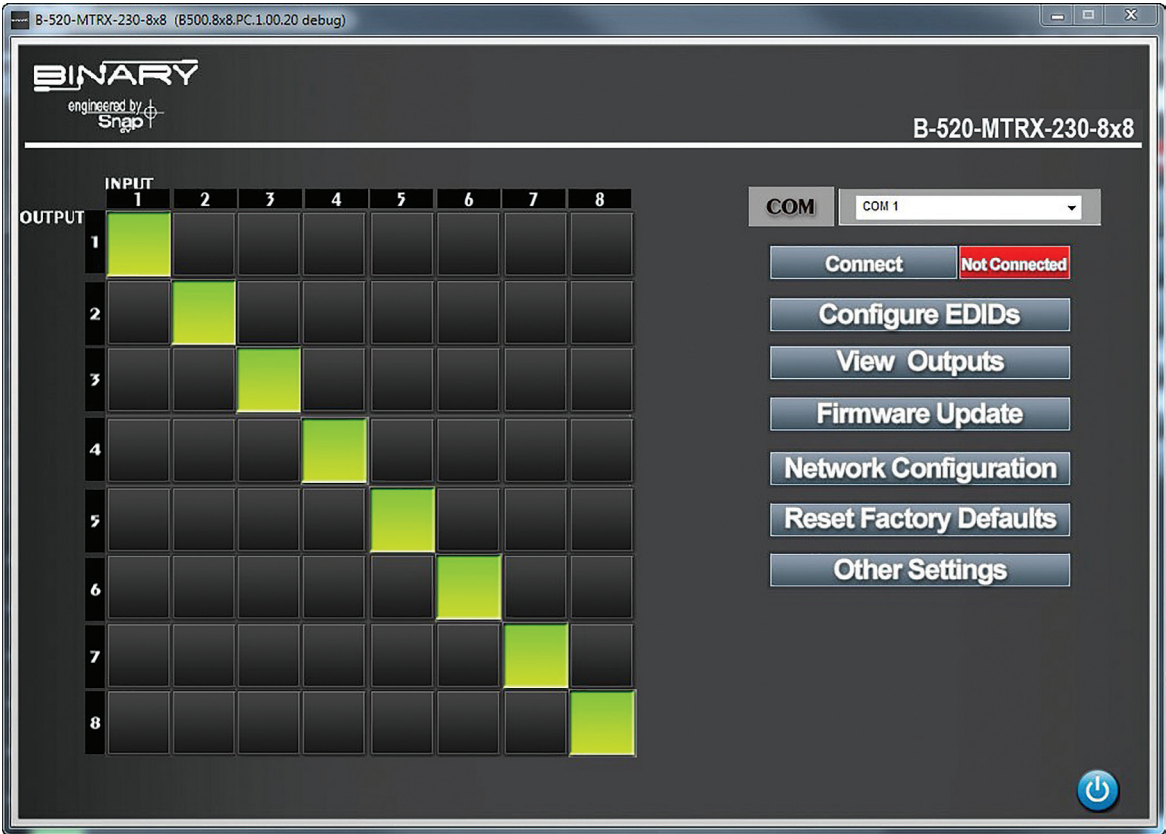


FIGURE 9

15.3. B-520-MTRX-230-16x16

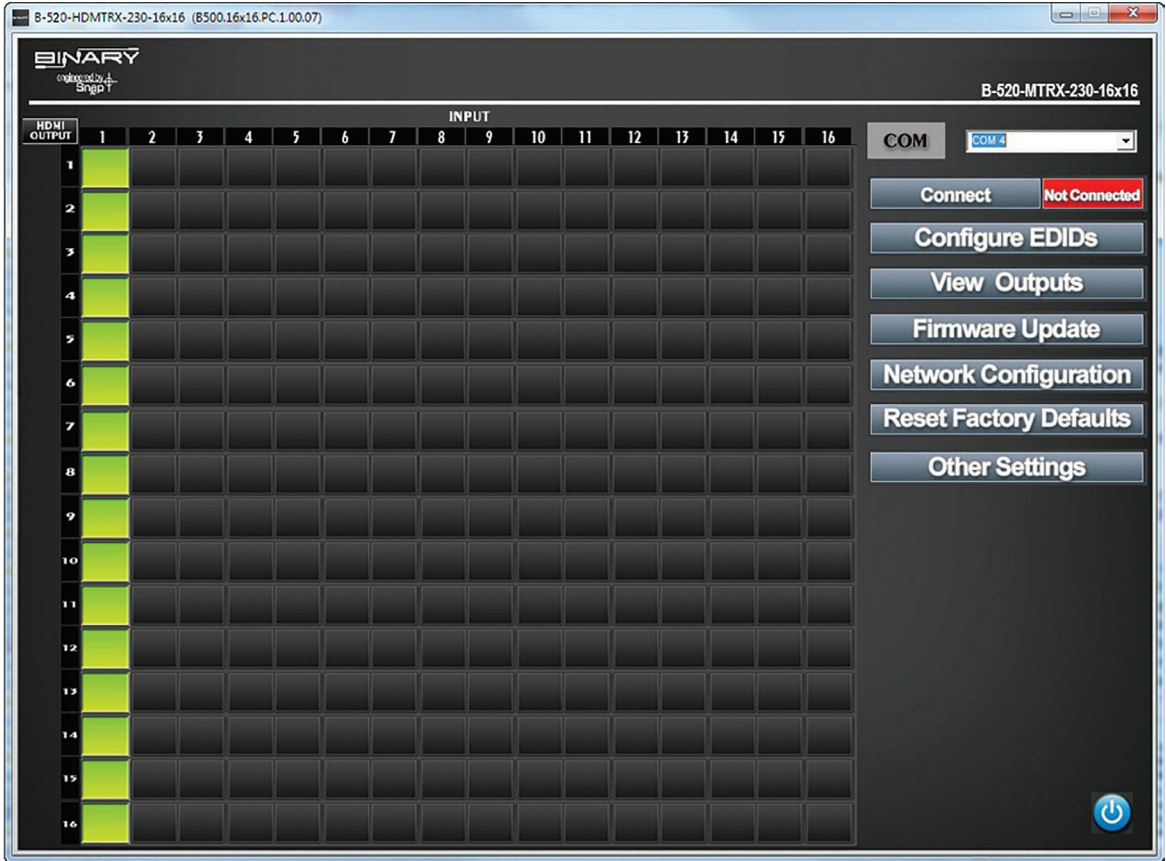


FIGURE 10

## 16. CONTACTING TECH SUPPORT

If you need further clarification, please call tech support at **800.838.5052**, or email **support@snapav.com**. For other information, instructional videos, support documentation, or ideas, visit our website and view your item's product page at **www.snapav.com**.

Phone: (866) 838-5052

Email: Techsupport@SnapAV.com

## 17. WARRANTY

### 2 Year Limited Warranty

This Binary product has a 2-Year limited warranty. This warranty includes parts and labor repairs on all components found to be defective in material or workmanship under normal conditions of use. This warranty shall not apply to products that have been abused, modified or disassembled. Products to be repaired under this warranty must be returned to SnapAV or a designated service center with prior notification and an assigned return authorization number (RA)..

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