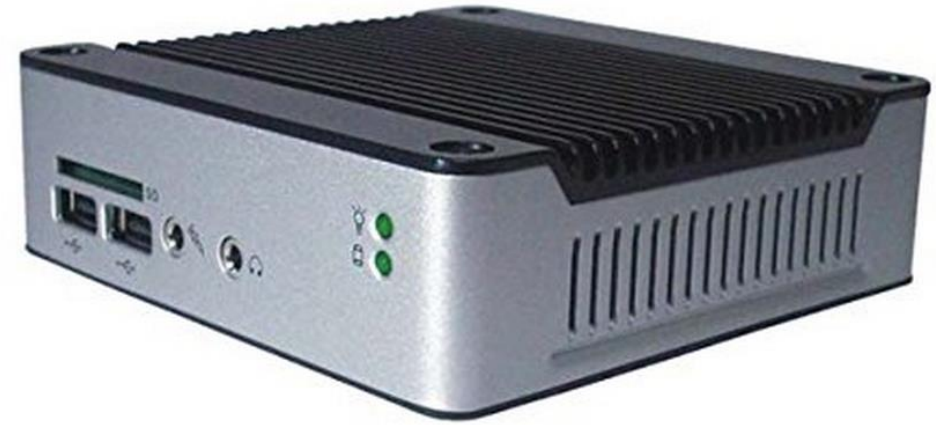
ProDigital Network Controller
500810



Installation Guide

P/N: 94-000785-A SE-000785-A

MuxLab

Table of Contents

1. Overview

1.1. Description

The MuxLab Network Controller is a Linux-based PC that allows users to control hub-installed MuxLab products via an Ethernet Web interface.

When installed on a local area network (LAN), the MuxLab Network Controller can scan the LAN for MuxLab products and allows the user to configure and control these products through an Ethernet Web interface.

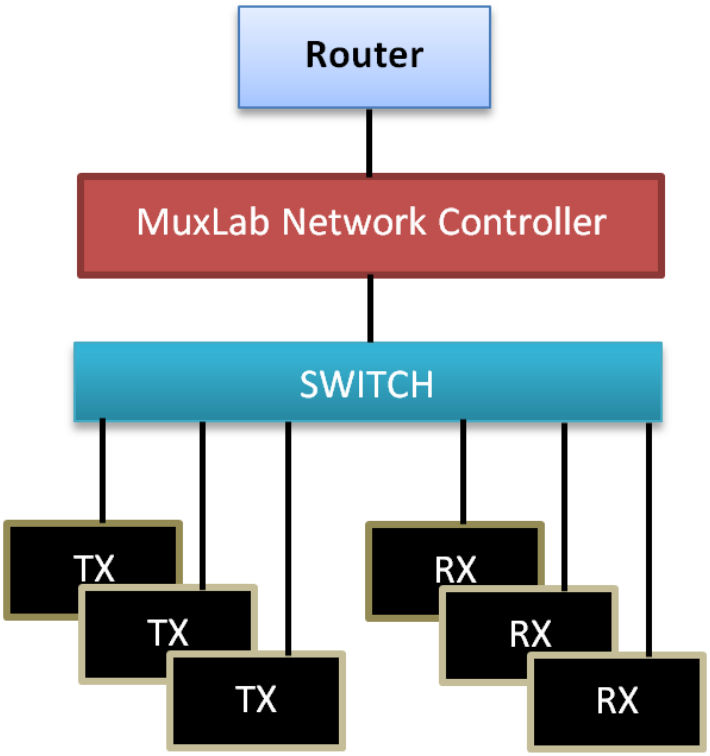


Figure 1: System Overview

Applications include commercial and residential AV systems, classroom projector systems, digital signage, boardroom systems, multi-room systems, classroom training, retail systems, collaborative PC systems, and medical information systems.

1.2. Features

Front Panel

- Power LED
- HDD LED
- SD card slot
- Audio mic in
- Audio line out
- USB 2.0 ports

Back Panel

- Power switch
- DC power jack
- PS/2 Keyboard or mouse port
- RJ-45 (LAN) jack
- RS-232 port
- VGA port
- USB 2.0 port

2. Technical Specifications

MuxLab Network Controller	
CPU	Vortex86MX+
Memory	1GB DDR2 (32-bit DRAM bus, EBOX-3310MX series).
BIOS	AMI BIOS
VGA	Resolution up to 1920 x 1200 colors (EBOX-3310MX series)
Keyboard and Mouse	PS/2 keyboard and mouse
On-Board SATA	SATA 2.0 connector(1x)
Peripherals	• USB 2.0 ports (3x) • SD slot (1x) • Serial ports (2x) • Audio (Mic In, Line Out)
Operating System	Ubuntu 10.04
Matrix Switching Time	3 seconds (maximum)
Operating Temperature	5 ºC to 50 ºC
Dimensions	4.52 x 4.52 x 1.4 inch (115 x 115 x 35 mm)
Weight	1.1 lb (0.5 kg)
Accessories Included	External Power Adaptor
Regulatory	FCC, CE, RoHS, WEEE
Warranty	Two (2) years
Order Information	500810 ProDigital Network Controller

Table 1: Technical Specifications

3. Installation and Use

3.1. Part List

The MuxLab Network Controller comes with the following parts:

- Base unit (Qty 1)
- External Power Adapter (Qty 1)

Please verify that both parts are present before proceeding.

Figure 2: Base Unit

Figure 3: External Power Adaptor

3.2. Product Overview

The external connections and connection indicators of the MuxLab Network Controller are detailed in **Figure 4: Front Panel** and **Figure 5: Back Panel**. Please familiarize yourself with them before installing the unit.

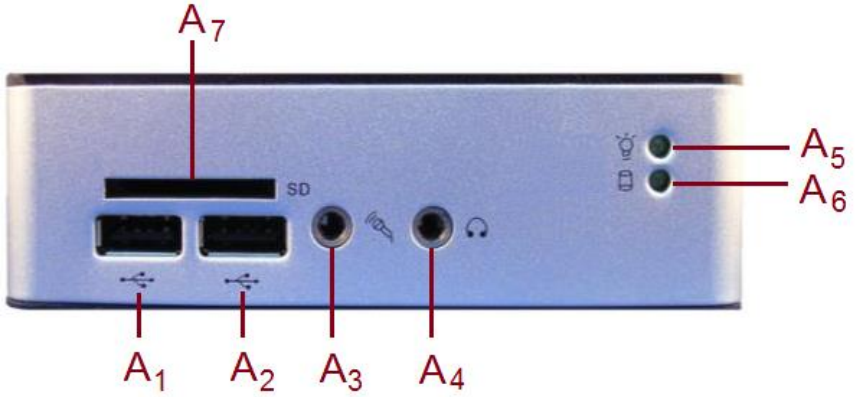


Figure 4: Front Panel

A_1 = USB 2.0 Port
A_2 = USB 2.0 Port
A_3 = Microphone Input
A_4 = Speaker Output
A_5 = Power LED (Green)
A_6 = Hard Drive LED (Green)
A_7 = SD Slot

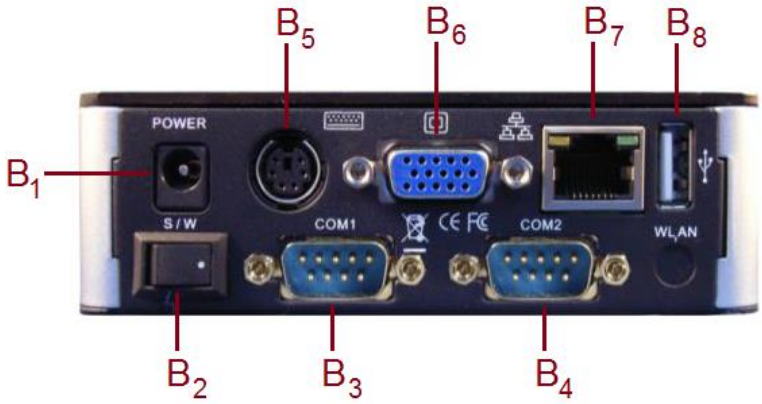


Figure 5: Back Panel

B_1 = DC Power Jack
B_2 = Power Switch
B_3 = COM1 Port (RS232)
B_4 = COM2 Port (RS232)
B_5 = PS/2 Keyboard or Mouse (6-pin)
B_6 = VGA Port (15-pin)
B_7 = Ethernet Port (RJ45)
B_8 = USB Port 2.0 Port

3.3. Installation Procedure

Installing the MuxLab Network Controller (MNC) is a two-step process:

Process 1: Configuring the IP address of the MNC
Process 2: Physically installing the MNC to the network router

Note:
- The IP address of the network router on which the MNC will be installed must be known.
- The MNC comes with a static IP address of **192.168.168.50** and with DHCP disabled.

Process 1: Configuring the IP address of the MNC

Refer to **Figure 5: Back Panel**.

1. On the back panel of the MNC:
   A. Plug the supplied power adaptor into the DC power jack. Ensure that the other end of the power adaptor is plugged into a power socket.
   B. Ensure that the power switch is in the ON position (white dot • pressed in).
   C. Connect one end of an Ethernet cable to the Ethernet port. Ensure that the other end of the Ethernet cable is connected to a computer.

Refer to **Figure 6: Internet Browser Entry**.

2. On the computer to which the other end of the Ethernet cable is connected, open up an Internet browser (Explorer, Chrome, Firefox, etc.) and type the following address in the address bar near the top of the screen:

   http://192.168.168.50/mnc/

   NOTE: **mnc** must be written in lower case

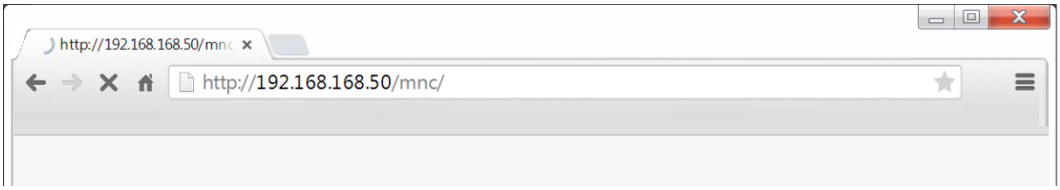
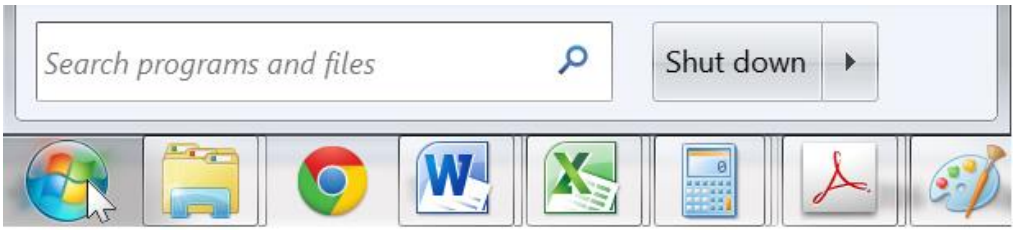


Figure 6: Internet Browser Entry

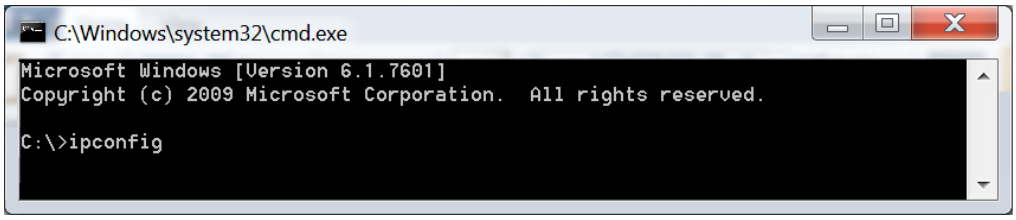
3. Press **Enter** on the keyboard. If the browser connects to the MNC, go to Step 7.

4. If the browser fails to connect to the MNC, a failure message will appear. Perform the following steps (refer to **Figure 7: Determining Computer IP Address**):
   A. Move the mouse to the bottom of the screen and click on the **Start** button at the lower left.
   B. Click into the *Search programs and files* box just above the **Start** button and type `cmd`. Press **Enter** on the keyboard.
   C. A DOS window will appear. Type `ipconfig` and press **Enter** on the keyboard.



Step 4A

Step 4B



Step 4C

Figure 7: Determining Computer IP Address

The following screen will appear (**Figure 8: Computer IP Address**):

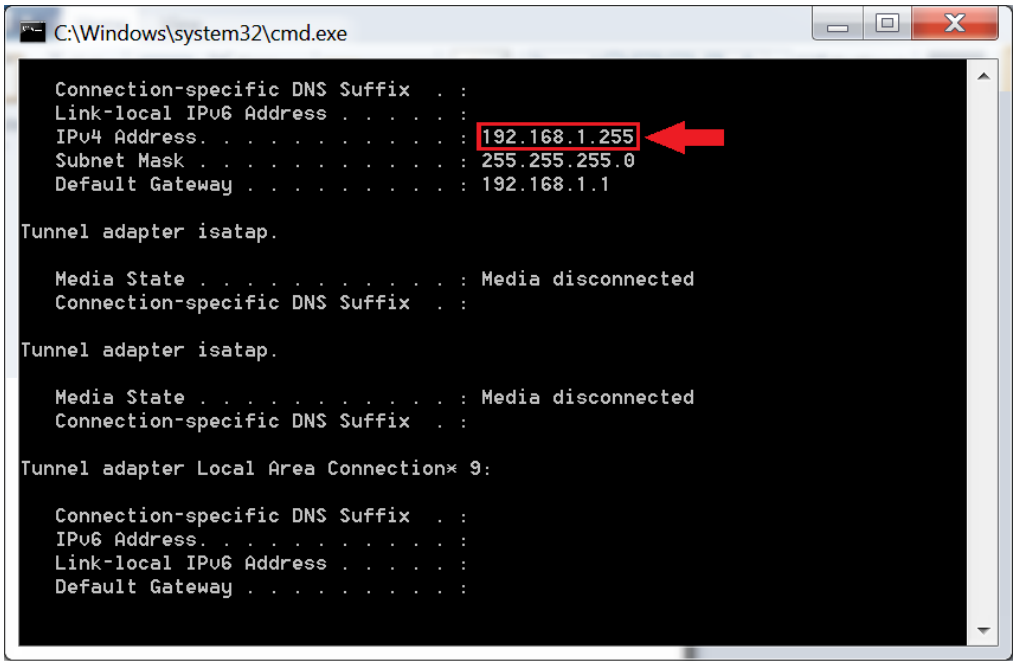


Figure 8: Computer IP Address

5. If the `IPv4 Address` (shown in red box) does NOT begin with the numbers `192.168.168`, perform the following steps (refer to **Figure 9** to **Figure 12**):

   A. Type `exit` and press **Enter** on the keyboard.

   B. Move the mouse to the bottom of the screen and click on the **Start** button at the lower left.

   C. Click on **Control Panel**

   D. Click on **Network and Internet**

   E. Click on **Network and Sharing Center**

   F. Click on **Local Area Connection**

   G. Click on **Properties**

   H. Click on **Internet Protocol Version 4 (TCP/IPv4)**. It will turn blue.

   I. Click on **Properties**

   J. Click the **Use the following IP address** radio button.

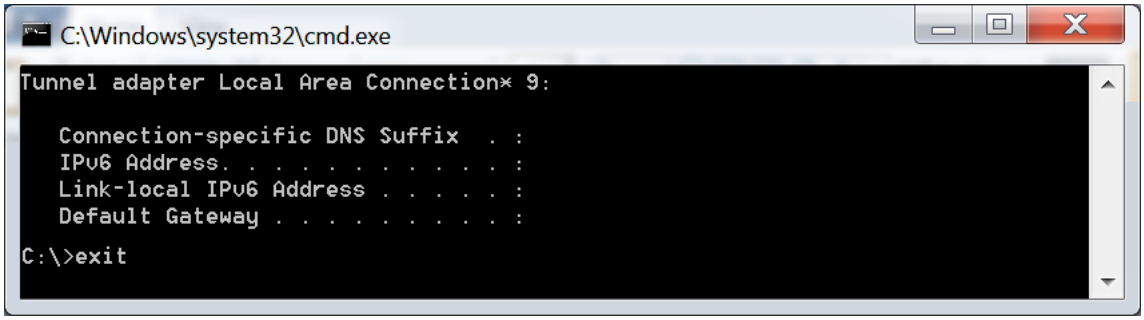
   K. In the **IP address** box, type the following:

   192.168.168.*x*

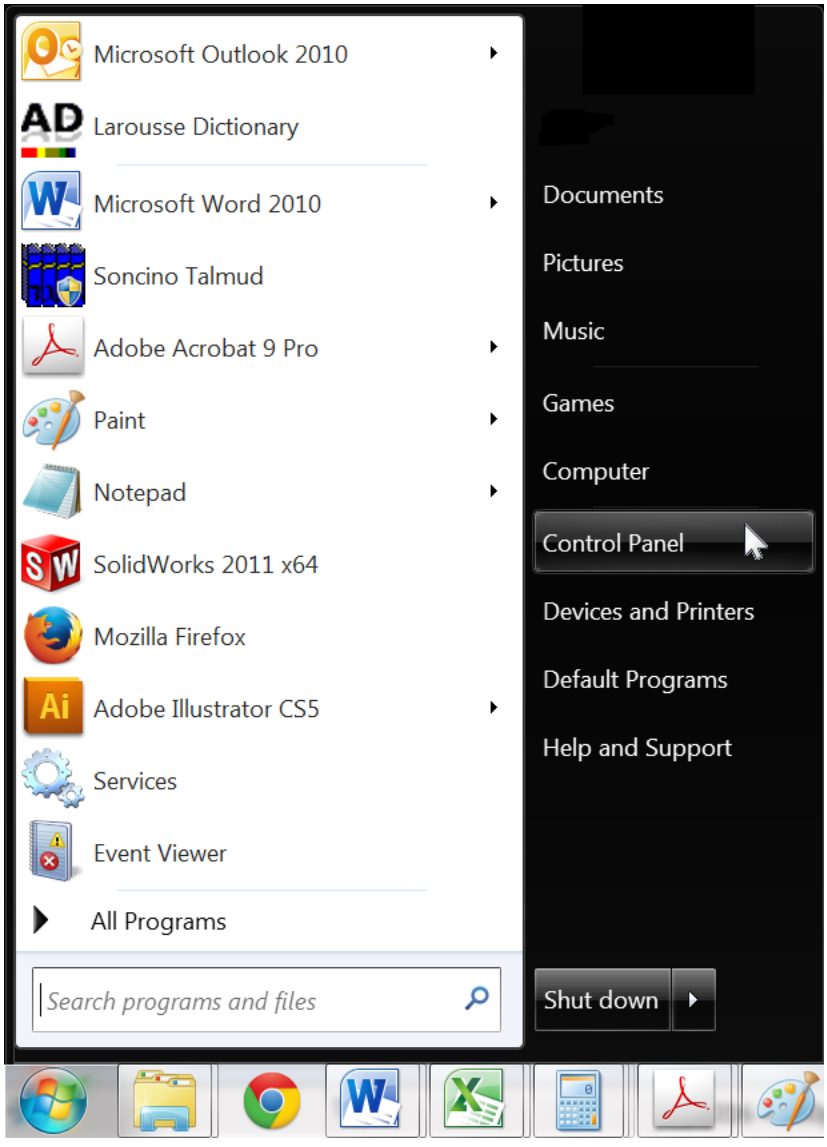
   Where *x* can be any number from 2 to 254 except for 50

   L. In the **Subnet mask** box, type the following:

   255.255.255.0

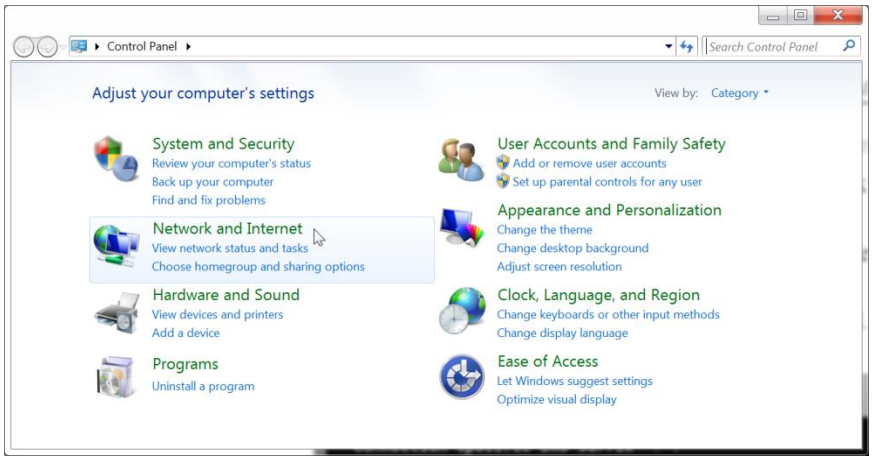


Step 5A

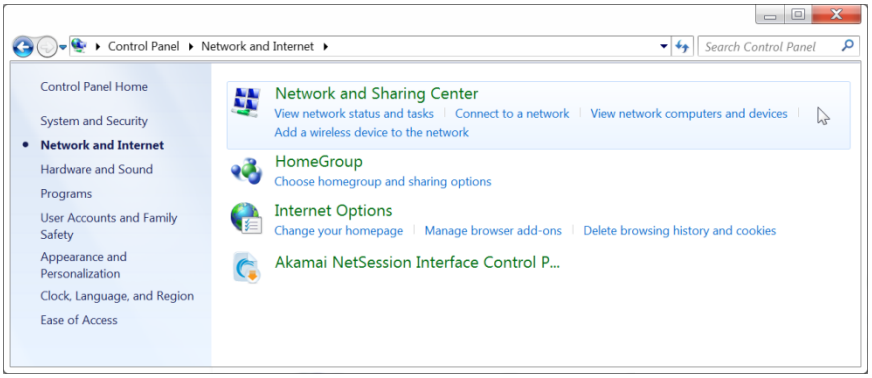


Steps 5B-5C

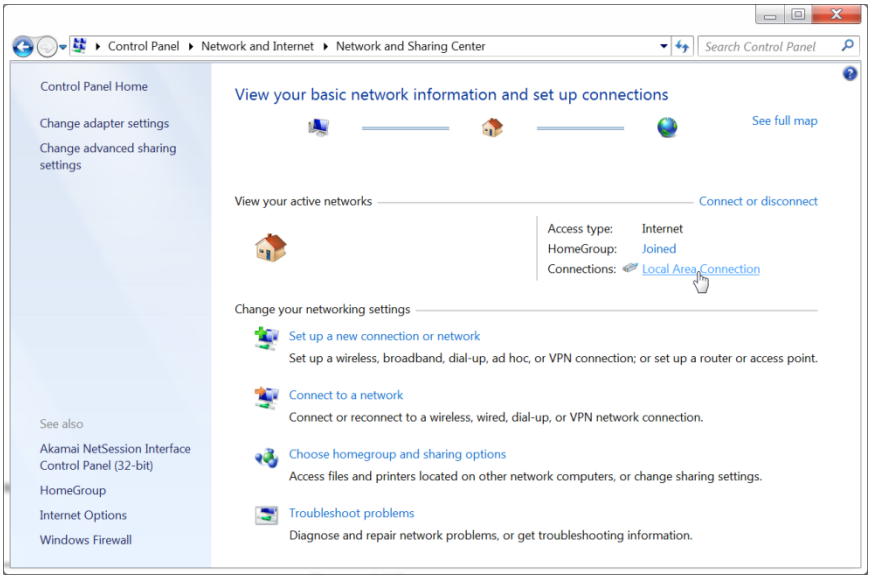
Figure 9



Step 5D

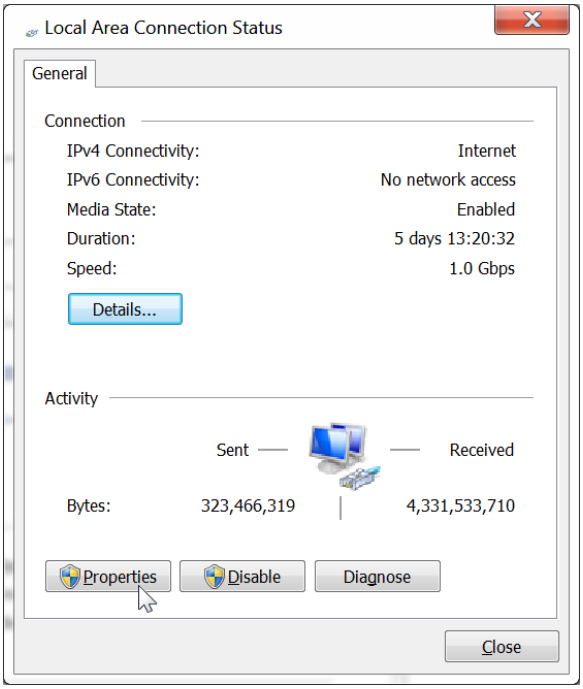


Step 5E

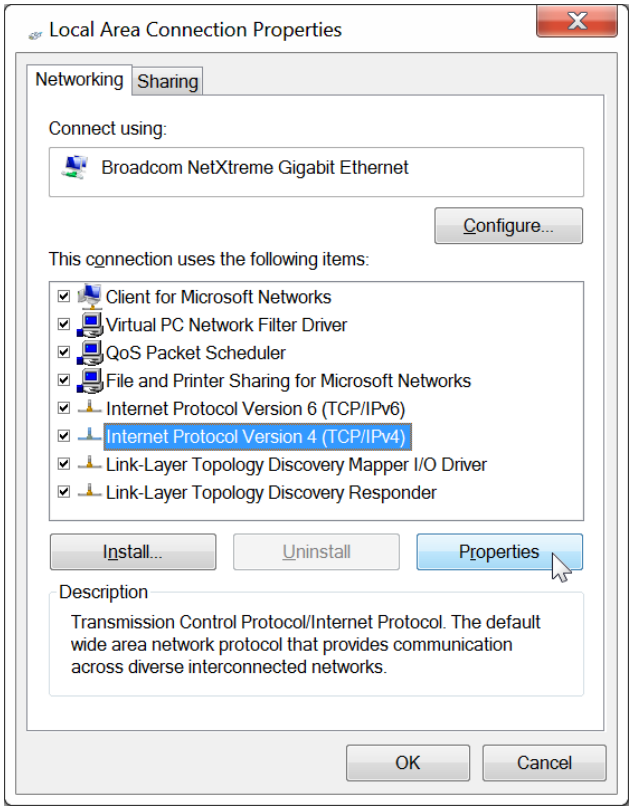


Step 5F

Figure 10

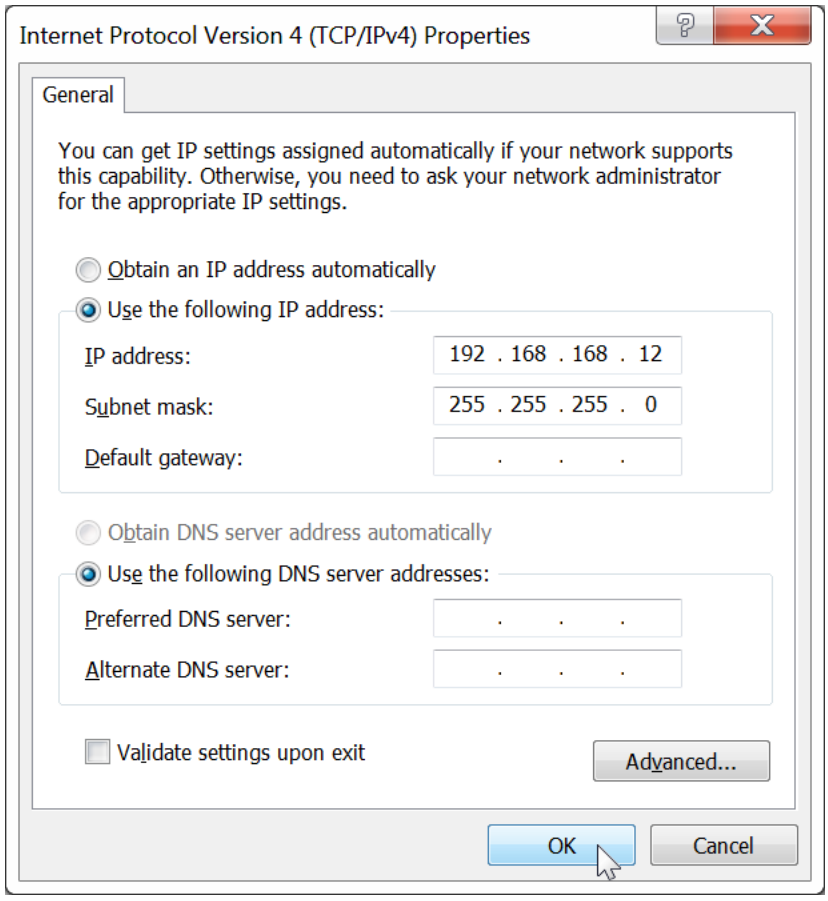


Step 5G



Steps 5H-5I

Figure 11



Steps 5J-5K-5L

Figure 12

The computer is now ready to communicate with the MNC.

Refer to **Figure 13: Internet Browser Entry**.

6. Open up an Internet browser (Explorer, Chrome, Firefox, etc.) and type the following address in the address bar near the top of the screen:

   http://192.168.168.50/mnc/

   NOTE: **mnc** must be written in lower case

Figure 13: Internet Browser Entry

Refer to **Figure 14 Login Screen**

7. The MuxLab Network Controller Web interface **Login Screen** will appear.

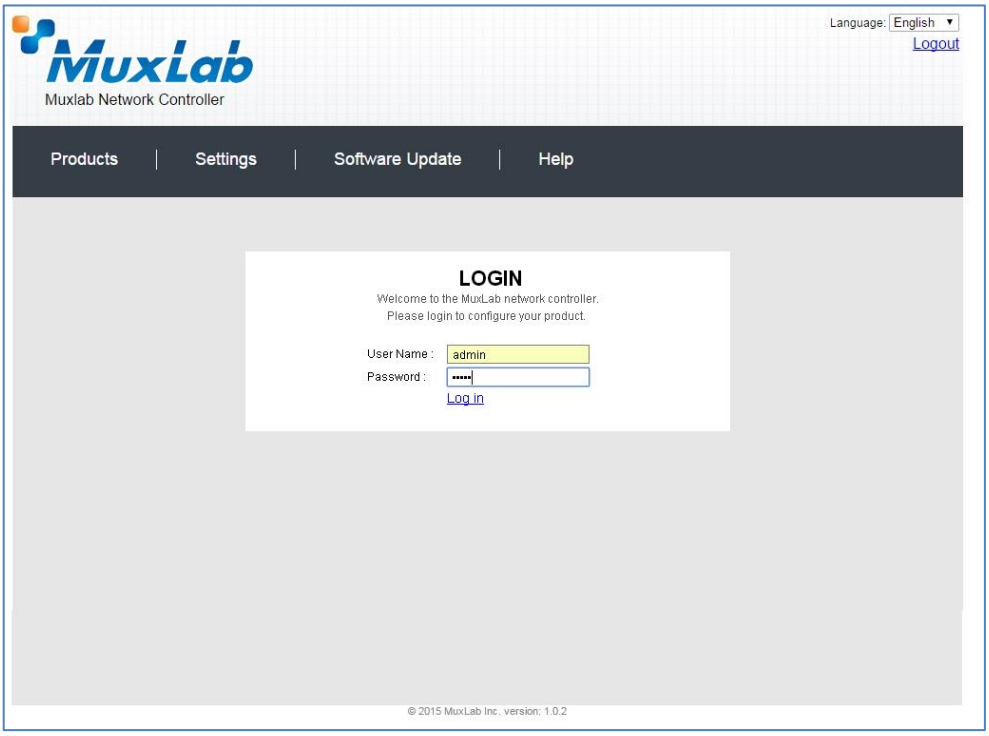


Figure 14 Login Screen

8. In the **User Name** box, type admin.
9. In the **Password** box, type admin. Ensure that it is in lower case.
10. Click **Log in**.

Refer to **Figure 15 Network Settings Screen**

11. Click the **Settings** tab. The Network Settings screen will.
12. Next to **Use DHCP**, ensure that the **No** radio button is selected.
13. In the **IP address** boxes, type the first 3 entries of the IP address of the network router on which the MNC will be installed.

    For example, if the IP address of the network router is 168.168.1.1, type the following in the **IP address** boxes:

    168.168.1.*x*

    Where *x* can be any number from 1 to 254. The number *x* also cannot be the last number of the IP address of network router.

    In this example, the last number of the IP address of the network router is 1, meaning that *x* cannot be 1. It can therefore be any number from 2 to 254. In **Figure 15**, *x* was chosen to be 5.

14. In the **Network mask** boxes, type 255.255.255.0

15. In the **Router** boxes, type the IP address of the network router (eg. 168.168.1.1).

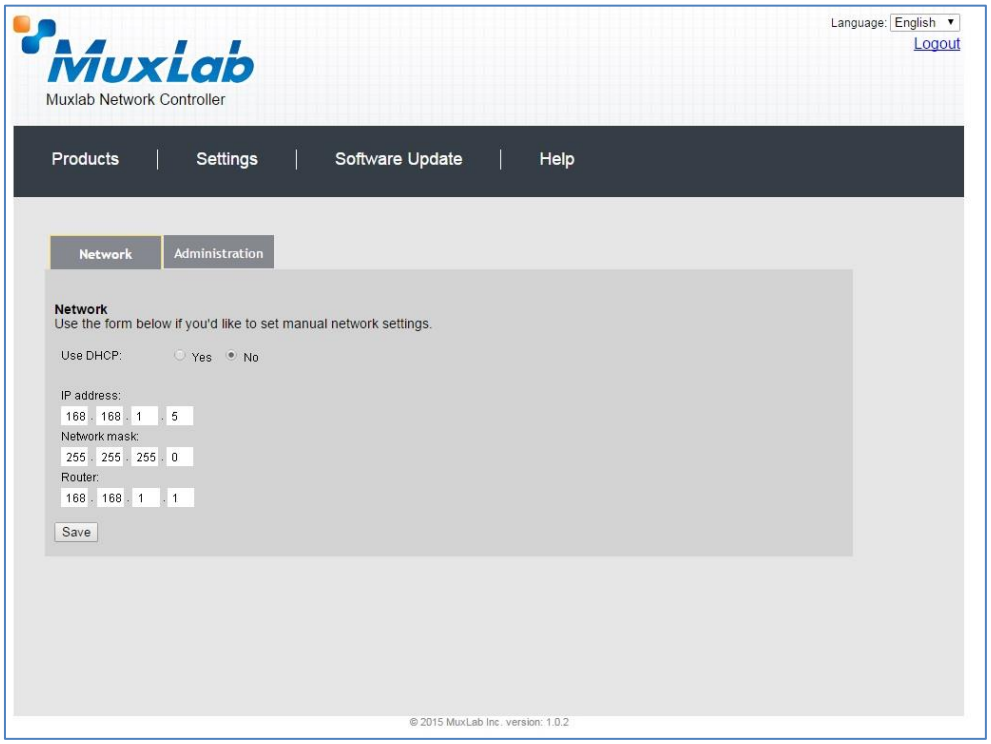


Figure 15 Network Settings Screen

1. Click on **Save**. The MNC will reboot (see **Figure 16 MNC Reboot Screen**).

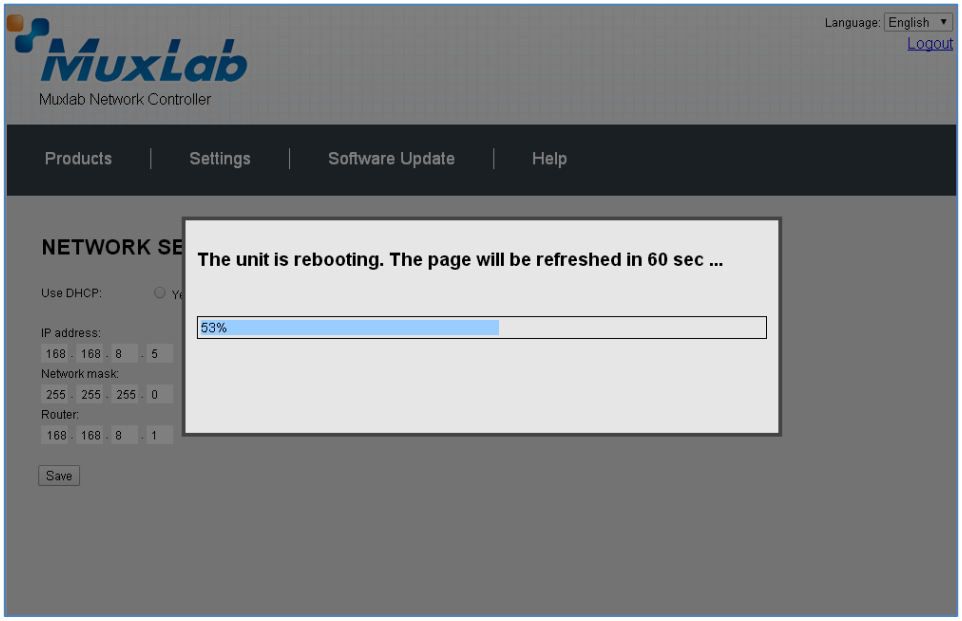


Figure 16 MNC Reboot Screen

The MNC is now configured to work with your network router.

Process 2: Physically installing the MNC to the network router

1. Disconnect the Ethernet cable from the computer and connect it to the network router. Ensure that the other end is still connected to the back panel of the MNC.

3.4. Ethernet Web Interface

The Ethernet Web interface allows the user to program the MNC remotely from a Windows based computer.

Ensure that the computer is connected by an Ethernet cable to the network router on which the MNC is physically installed. Open up an Internet browser (Explorer, Chrome, Firefox, etc.) and type the following text in the address bar near the top of the screen:

aaa.bbb.ccc.5/mnc/

NOTE: **aaa.bbb.ccc** represent the first three digits of the network router on which the MNC is physically installed.

The MuxLab Network Controller Web interface **Login Screen** will appear (**Figure 17**).

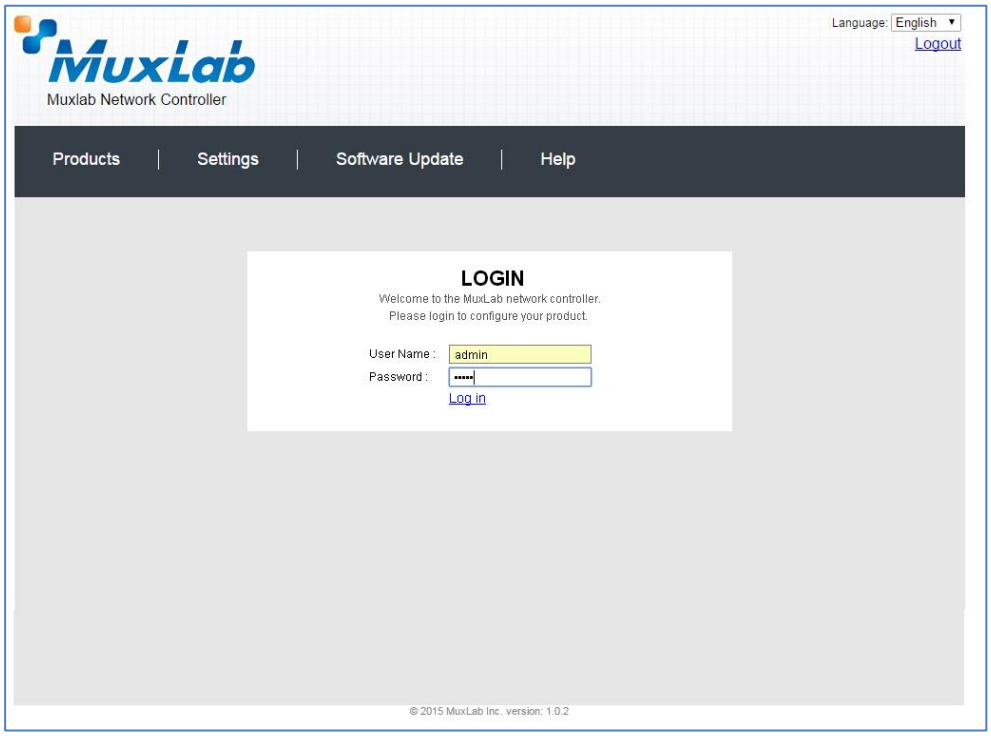


Figure 17 Login Screen

In the **User Name** box, type admin.

In the **Password** box, type admin. Ensure that it is in lower case.

Click **Log in**.

You are now ready to program the MuxLab Network Controller.

Products Screen

Once the user has logged in, the **Products** screen will appear (**Figure 18)**.

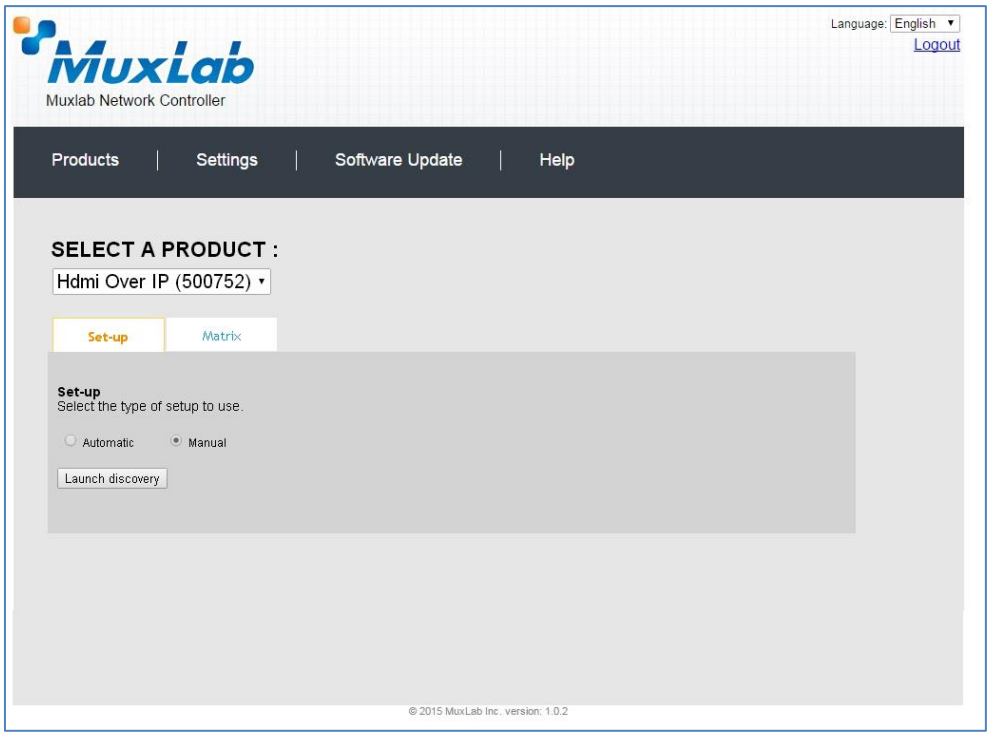


Figure 18: Products Screen

In the **SELECT A PRODUCT** drop down box, click on **HDMI over IP (500752)**.

A dialog box will then appear, asking the user if he wants to load a previously saved device list (in case such a list already exists in memory). This dialog box will appear even if no device list exists in memory.

Two tabs appear in the **Products** screen (**Set-up** and **Matrix**), with the **Set-up** tab being active. The **Set-up** tab offers the user two options for the type of set-up: **Automatic** or **Manual**.

> **Automatic** means that the software will scan the system for every dip-switch enabled device and override its manual dip-switch settings by software control.
>
> **Manual** means that the software will allow the manual dip-switch settings of any such device to remain active.

After selecting **Automatic** or **Manual**, click on **Launch discovery**. The system will then scan the network for all sources and displays, which will be presented in tabular form (**Figure 19**).

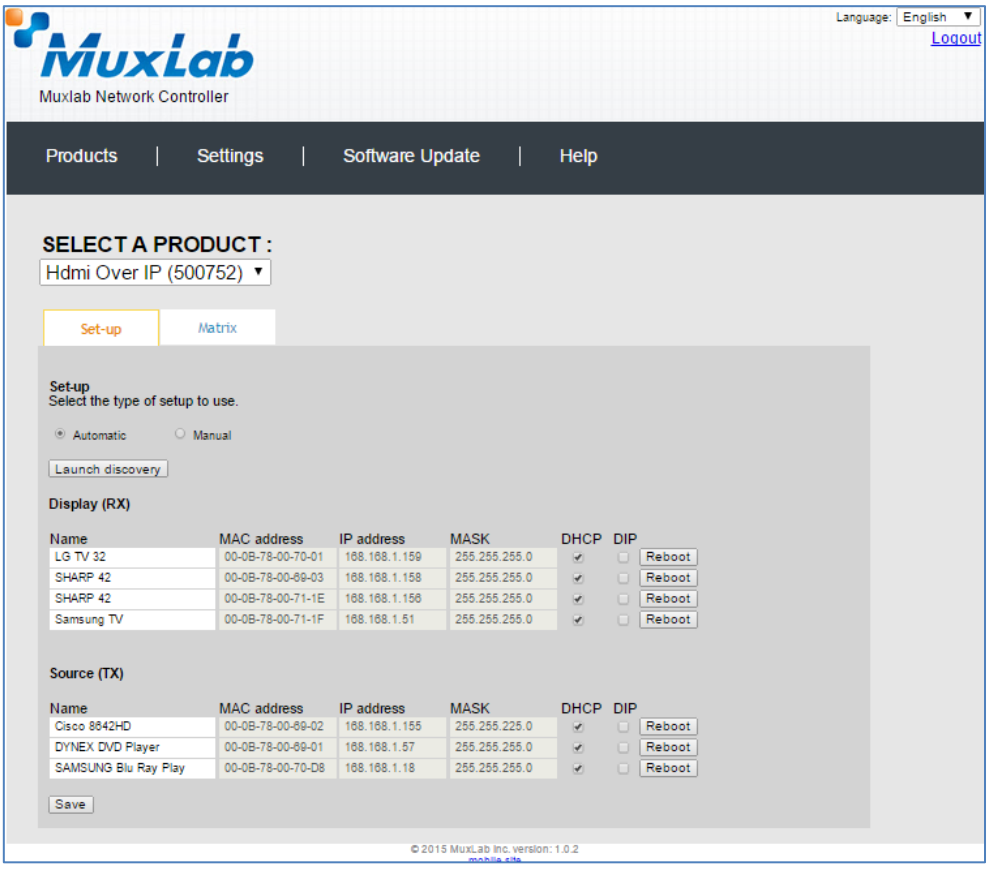


Figure 19: Sources and Displays

To change the name of any Display (RX) or Source (TX), click the **Name** box to edit its contents. Several **Name** boxes can be edited before saving changes (**Figure 20**).

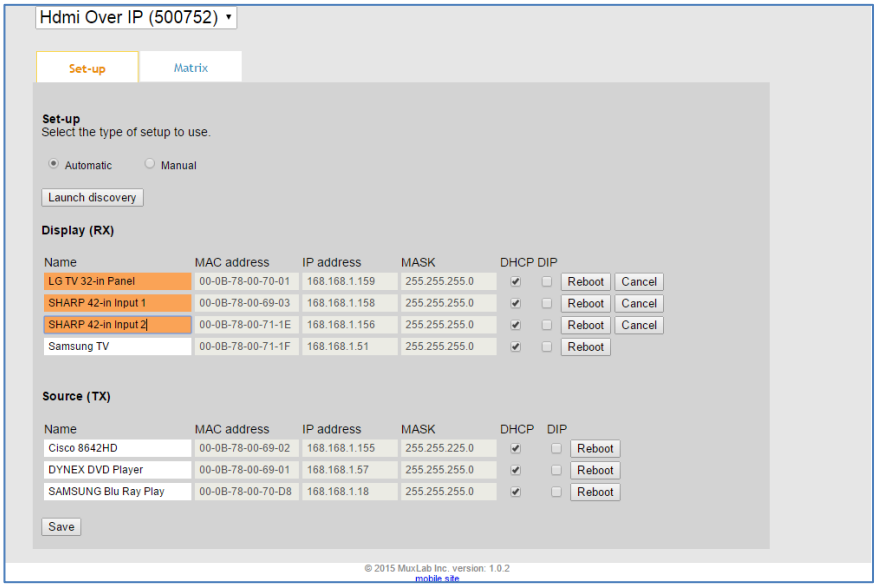


Figure 20: Name Changes

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (**Figure 21)**.

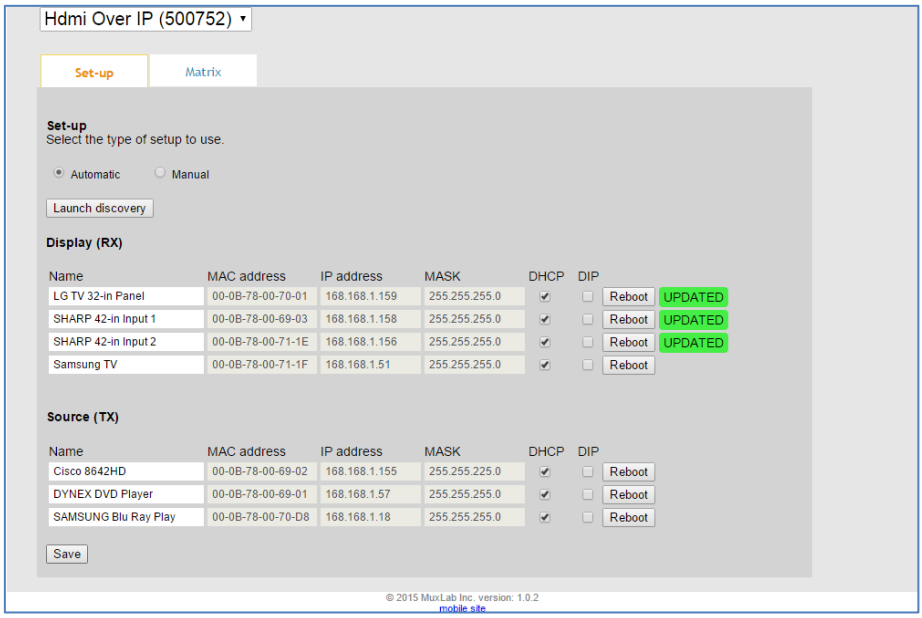


Figure 21: Saving Name Changes

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("presets"), as well as to edit and delete existing presets (**Figure 22**).

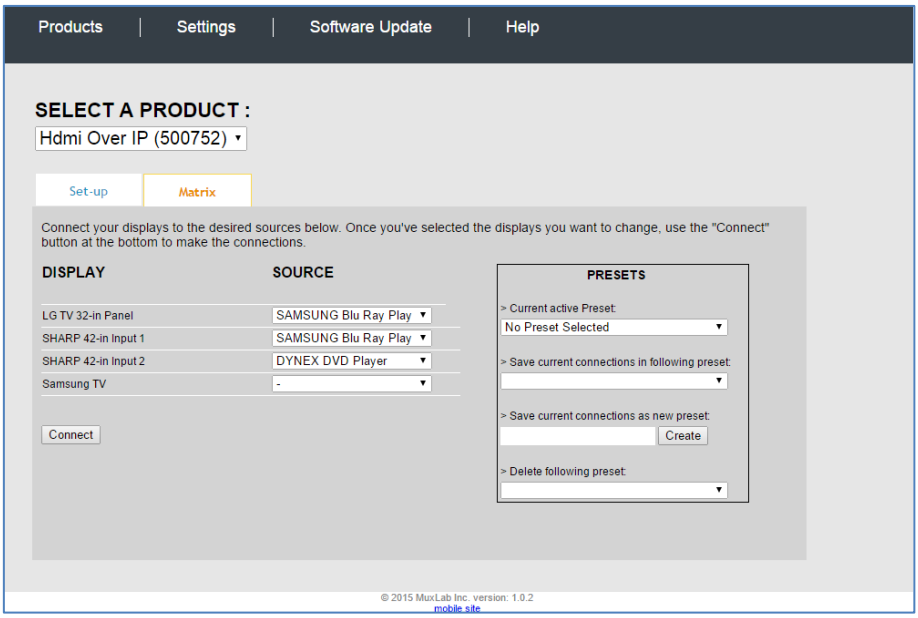


Figure 22: Matrix Tab

Figure 23 and **Figure 24** demonstrate how to connect a display to a source. The user clicks on the drop-down list next to the given display ("Samsung TV") and selects which source to connect to (**Figure 23**).

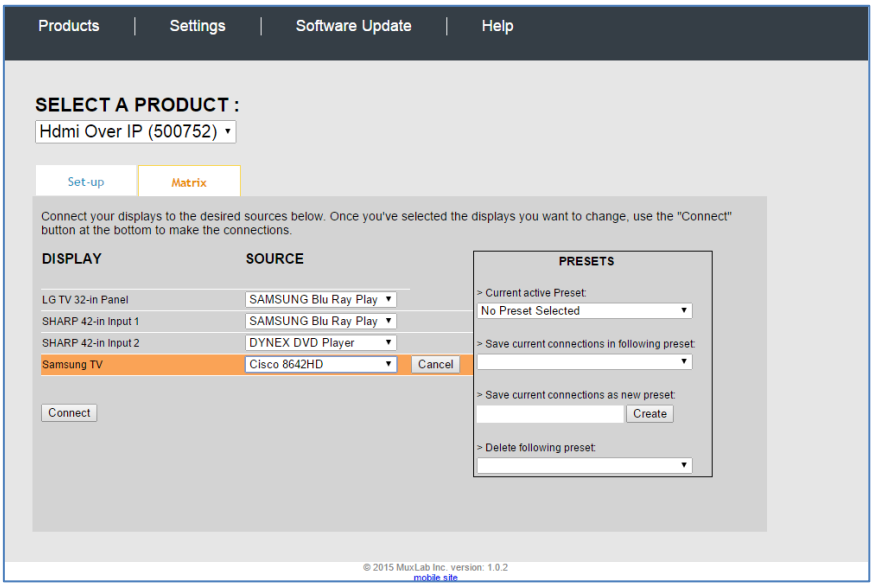


Figure 23: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), click on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (**Figure 24**).

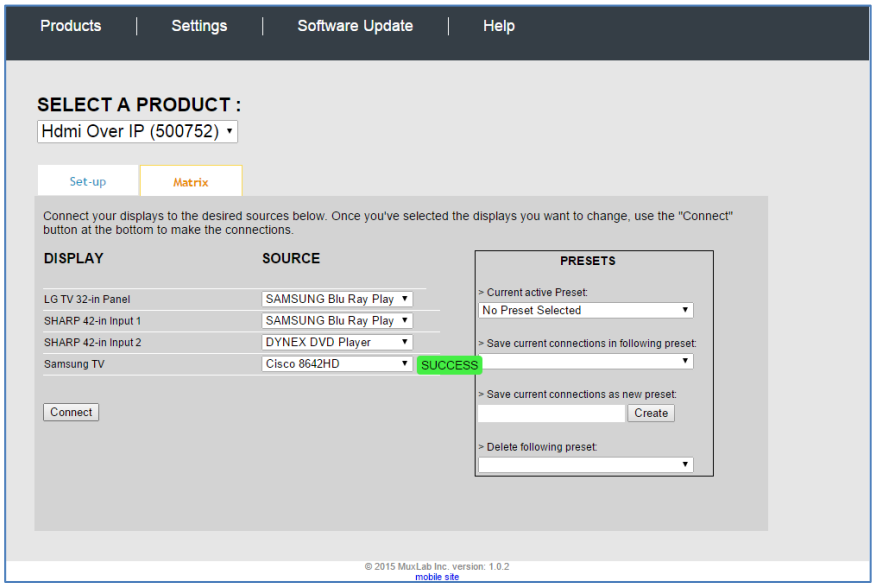


Figure 24: Finalize Change

To create a new preset, the user clicks the > **Save current connections as new preset** box (Figure 25) and types a name. This name will be linked to the connection scheme currently being shown within the **Matrix** tab.

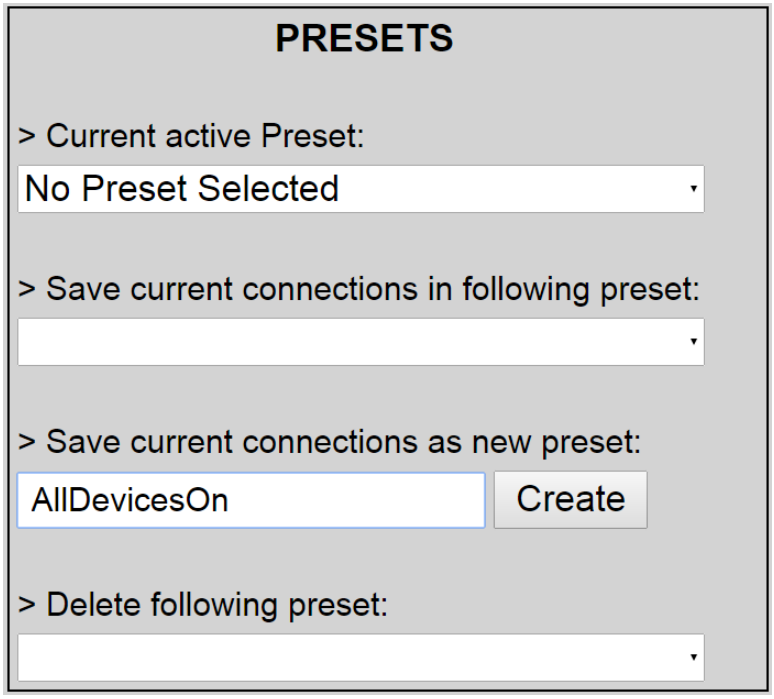


Figure 25: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** box (**Figure 26**).

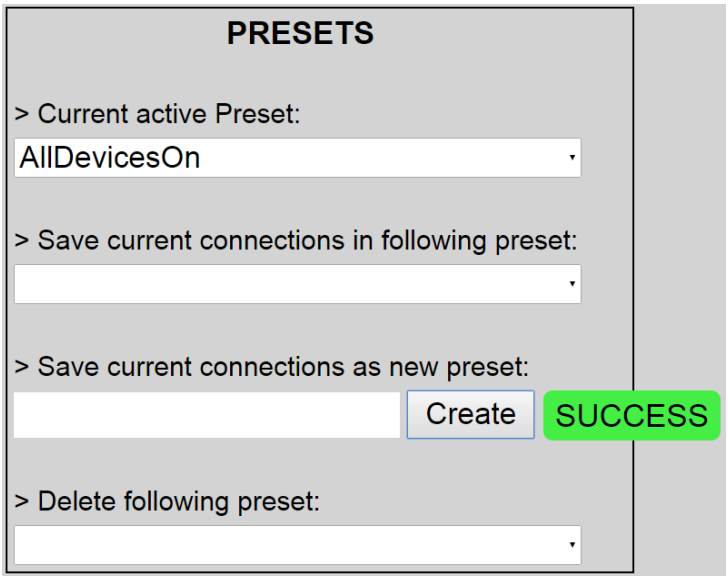


Figure 26: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (**Figure 27**Figure 25).

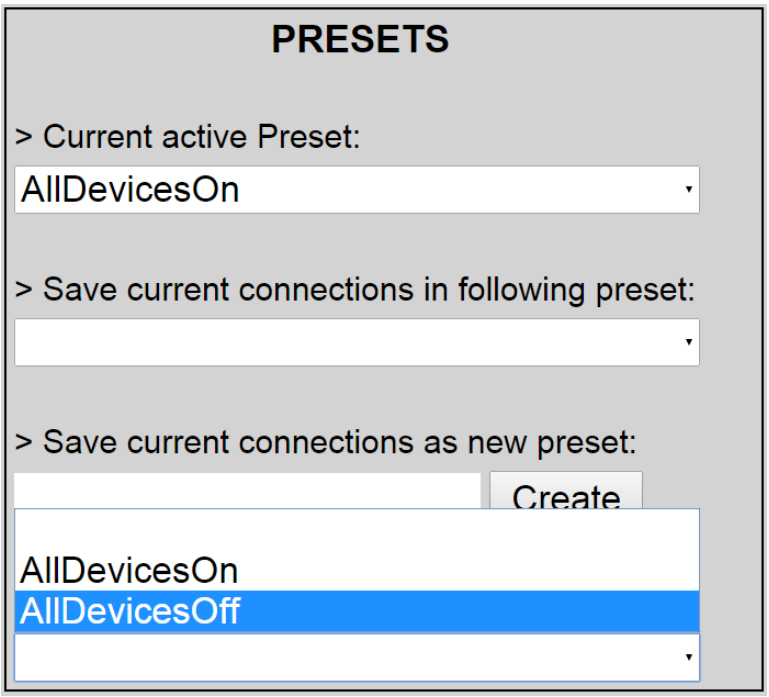


Figure 27: Delete Preset

Once selected, the preset will be deleted and a green SUCCESS tag will appear next to the > **Delete following preset** box (**Figure 28**).

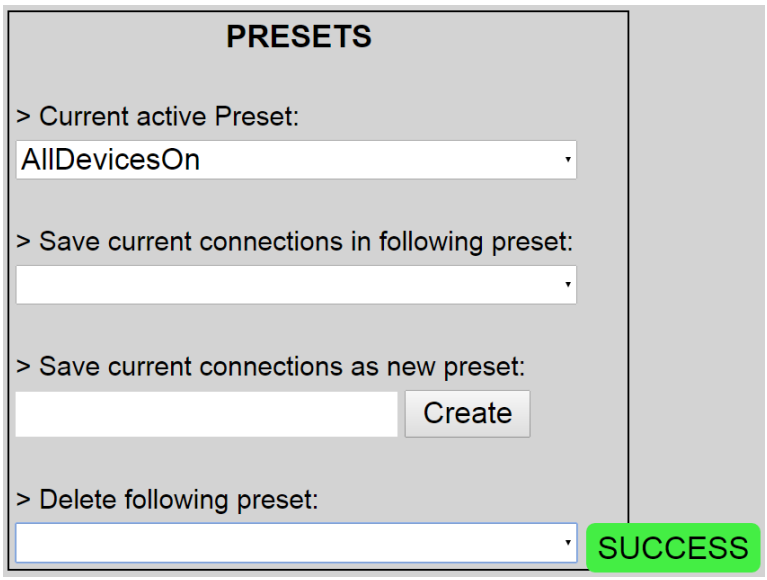


Figure 28: Confirmation of Deleted Preset

To change the currently active preset, the user clicks the > **Save current connection in following preset** drop-down box and selects a preset name (**Figure 29**).

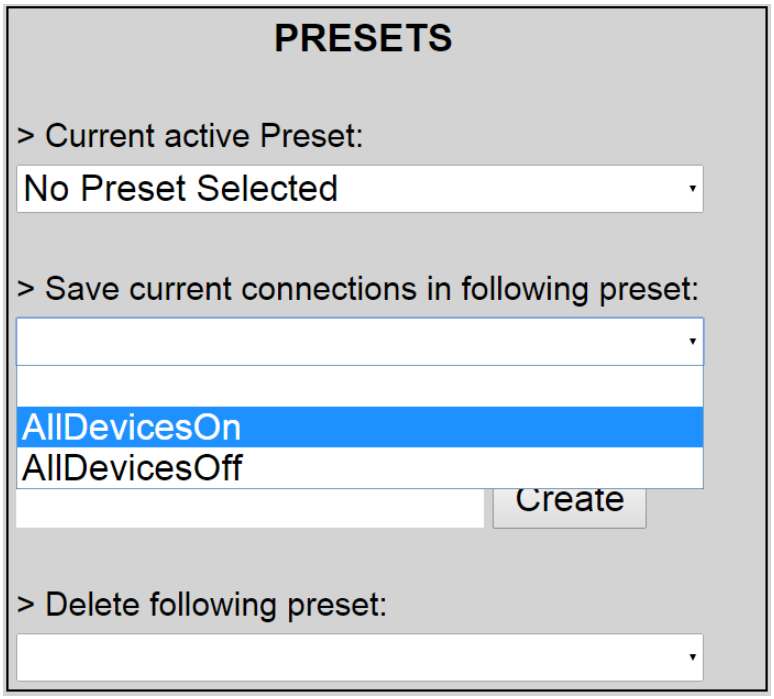


Figure 29: Change Current Active Preset

Once selected, the preset will be made active and a green SUCCESS tag will appear next to the > **Save current connections in following preset** box (**Figure 30**).

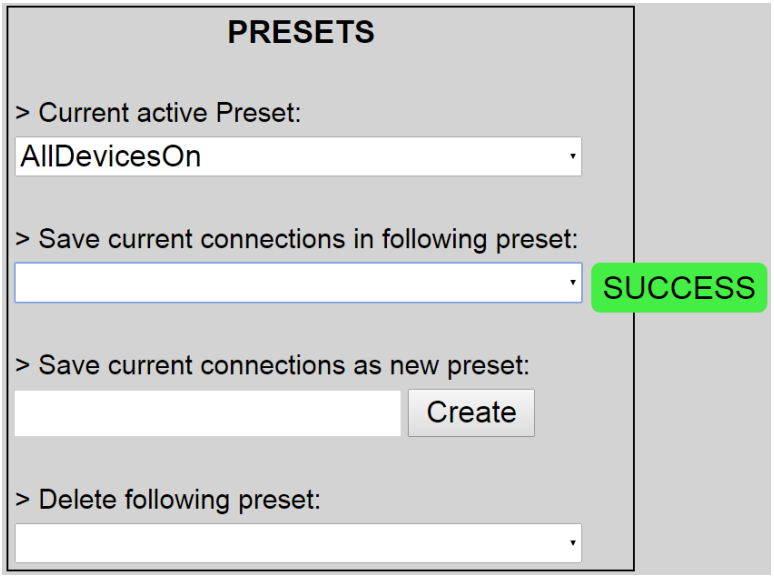


Figure 30: Confirmation of Changed Preset Name

Settings Screen

The Settings screen contains two tabs: **Network** and **Administration**.

The **Network** tab (**Figure 31**) is used to change the IP address of the MuxLab Network Controller (MNC), the network mask, as well as the router IP address. It can also allow DHCP to be used or not.

The **Administration** tab (**Figure 32**) is used to change administrator passwords.

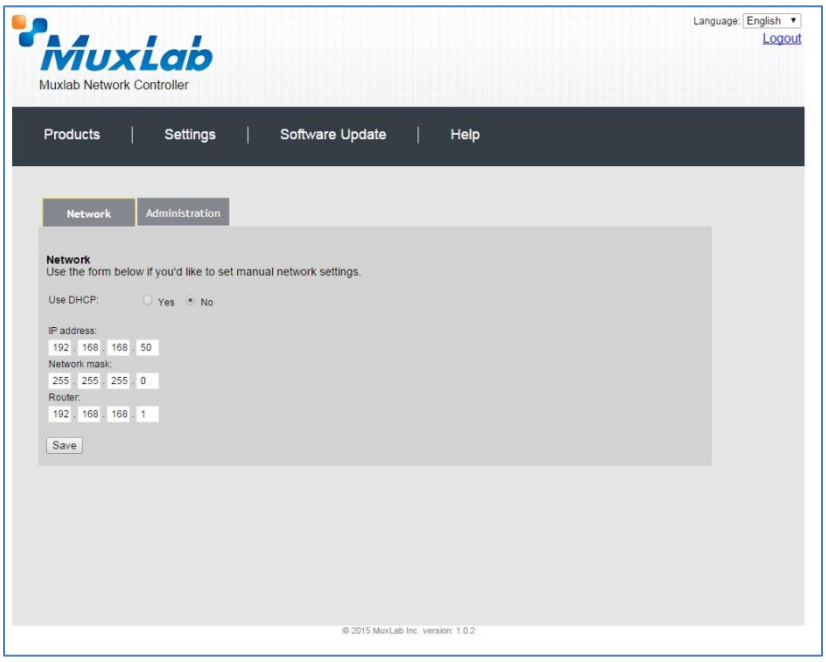


Figure 31: Settings Screen: Network Tab

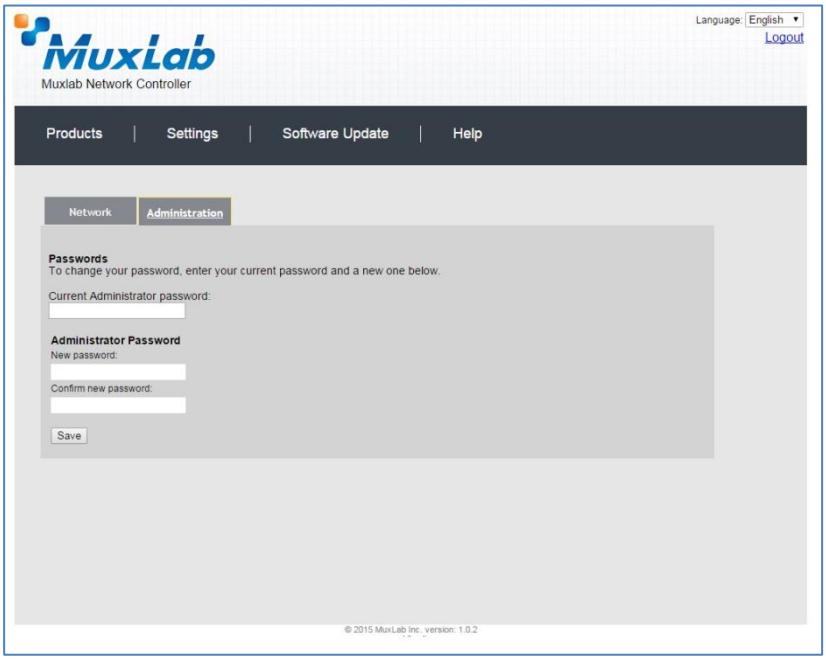
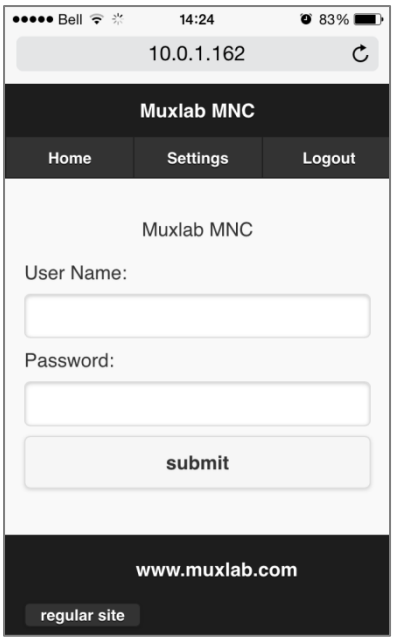


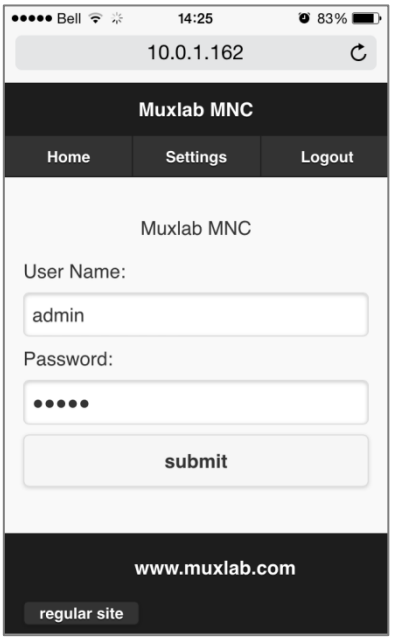
Figure 32: Settings Screen: Administration Tab

3.5. Mobile Interface

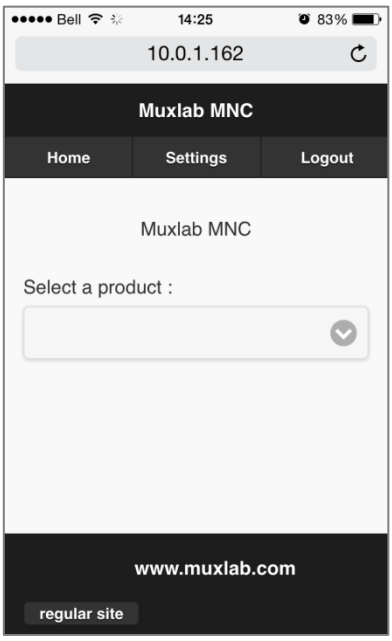
The mobile interface is presented below in a series of annotated snapshots. Note that at any time, the user can navigate to the regular website by clicking **regular site** at the bottom of the screen.



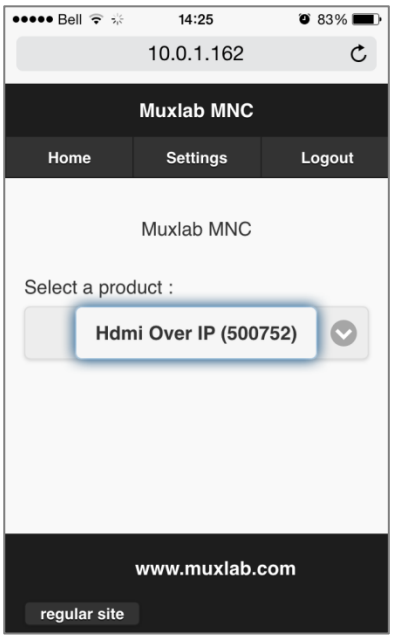
The home page of the MuxLab MNC mobile interface presents the user with two entry fields: **User Name** and **Password**.



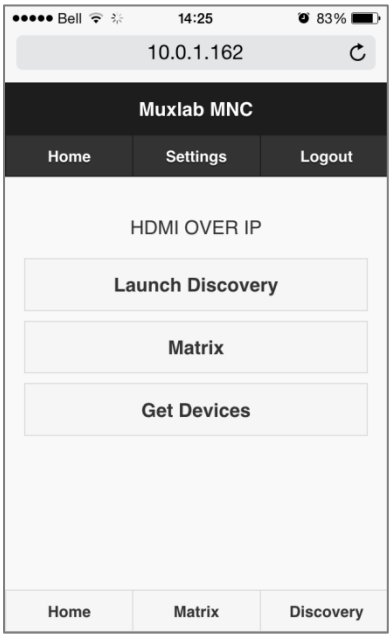
By default, both the **User Name** and **Password** are admin (case-sensitive for **Password**).



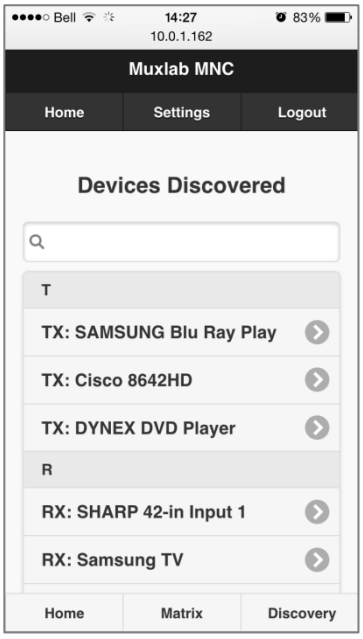
The user is prompted to select a product from a drop-down list.



As with the regular site, the user selects the currently available product: **Hdmi Over IP (500752)**.



The selected product (HDMI OVER IP) appears at the top of the sub-menu. The user has three options from the sub-menu.



After selecting **Launch Discovery** in the sub-menu, the user is presented with a list of Sources (TX) and Displays (RX).

After selecting any Source or Display from the list, the user is presented with the MAC and IP Address of the device in question.

4. Troubleshooting

Table 6 lists common problems, as well as their possible causes and solutions. If the information below does not solve the problem, the technical support contact information can be found at the end of this section.

PROBLEM	POSSIBLE SOLUTIONS
Unable to connect computer to MNC	Ensure that IP address of computer matches IP address of MNC
	Ensure that http://192.168.168.50/mnc/ is written in lower case
Unable to connect terminal to MNC via RS-232 connection	Ensure that RS-232 cable is connected to COM1 port (not COM2 port)

Table 6: Troubleshooting

When contacting your nearest MuxLab dealer or MuxLab Technical Support at 877-689-5228 (toll free in North America) or (+1) 514-905-0588 (International), please have the following information ready:

- Unit model number.
- Description of problem.
- List of tests performed.

5. Appendix

A. Terminal Emulation Parameters

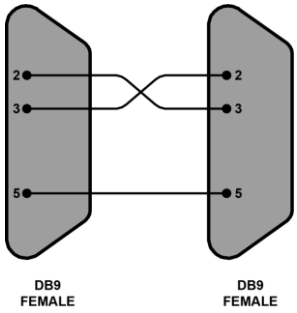
Ensure that the terminal emulation program parameters are set to the following:

BAUD Rate: 115200; Data bits: 8; Stop bits: 1; Parity: None; Flow control: None

B. RS-232 Control and Commands

RS-232 CONTROL

RS-232 commands can be sent from an ASCII terminal directly to the MuxLab Network Controller via an RS-232 connection. Ensure that the RS-232 cable has the null-modem configuration shown below.



An RS-232 cable must be connected to the COM1 port on the back panel of the MuxLab Network Controller. The COM2 port will not function for this purpose.

NOTE: The use of USB to RS-232 converter cables may result in problems, depending on the quality of the converters.

RS-232 COMMANDS

When interfacing with the MuxLab Network Connector (MNC) via an ASCII terminal, three commands are available to the user: `factoryip`, `network`, `dhcpon`

`factoryip` resets the MNC's IP address to the factory default (192.168.168.50), sets DHCP to OFF, and reboots the MNC.

`network` displays the MNC's IP address and MASK address.

`dhcpon` sets DHCP to ON.

NOTE: Each command must be typed in lower case.

C. IP Commands

Please note that commands are case sensitive and arguments must be separated by a single space. Commands must be entered as shown and ended with a carriage return.

The IP command API use HTTP POST with JSON data. Each IP command must be sent to the following URL: http://aaa.bbb.ccc.ddd/mnc/secure_api.php

Each IP command must contain the MuxLab Network Controller (MNC) username and password:

aaa.bbb.ccc.ddd the MNC IP address

p_userName the MNC username

p_password the MNC user password

FORMAT

The IP command (JSON data) has the following formats:

Command **without** data parameters:

```
{"p_targetId":<target id>,"p_cmd":"<command
name>","p_userName:"<MNC User Name >","p_password":"<MNC password
>"}
```

Response format **without** additional data:

```
{"p_targetId":<target id>,"p_cmd":"<command
name>","p_rspStatus:"<command status>","p_msg":"<a message>"}
```

Command **with** data parameters:

```
{"p_targetId":<target id>,"p_cmd":"<command
name>","p_userName:"<MNC User Name >","p_password":"<MNC password
>", "p_data":[{"key1":value1,"key2":value2,… }]}
```

Response format **with** additional data:

```
{"p_targetId":<target id>,"p_cmd":"<command
name>","p_rspStatus:"<command status>","p_msg":"<a
message>","p_data":[{"key1":value1,"key2":value2,… }]}
```

The “p_data” field will depend on the associated command.

The “**p_targetId**” value is:

“0” to send a command for the MNC
“1” to send a command for the “500752” product

COMMAND/RESPONSE LIST

1. Automatic Discovery

Description:

The system will retrieve all the devices in the network and automatically send all the necessary updates to the devices in order to configure them properly (duplicate IP addresses will not be solved by the system; the user must resolve this kind of issue). The system will then return a list of devices found with their attributes.

Command:

{"p_targetId":*1***,"p_cmd":"launch_discovery_auto","p_userName:"***<MNC User Name >***","p_password":"***<MNC password >***"}**

Response:

{"p_targetId":*1***,"p_cmd":"launch_discovery_auto","p_rspStatus:"***SUCCESS***","p_msg":"***<a message>***",**
"p_data":[{"productName":"<value>","modelName":"<value>","customName":"<value>","mac":"<value>","ip":"<value>","mask":"<value>","isDhcp":<0/1>,"multicastGroupIp":"<value>","videoResolution":"<value>","videoFrameRate":"<value>","audioFormat":"<value>","isVideoSignalDetected":<0/1>,"isIrOn":<0/1>,"isDipSwitchEnabled":<0/1>,"isDisplayConnected":<0/1>,"isScreenImageOn":<0/1>,"isScreenTextOn":<0/1>,"connectedMac":"<value>"}, { … }, …]

NOTE: Red text signifies additional attributes for RX devices.

2. Manual Discovery

Description:

The system will retrieve all the devices in the network and will return a list of devices found with their attributes. No other actions will be performed.

Command:

{"p_targetId":*1***,"p_cmd":"launch_discovery","p_userName:"***<MNC User Name >***","p_password":"***<MNC password >***"}**

Response:

{"p_targetId":*1***,"p_cmd":"launch_discovery","p_rspStatus:"***SUCCESS***","p_msg":"***<a message>***",**
"p_data":[{"productName":"<value>","modelName":"<value>","customName":"<value>","mac":"<value>","ip":"<value>","mask":"<value>","isDhcp":<0/1>,"multicastGroupIp":"<value>","videoResolution":"<value>","videoFrameRate":"<value>","audioFormat":"<value>","isVideoSignalDetected":<0/1>,"isIrOn":<0/1>,"isDipSwitchEnabled":<0/1>,"isDisplayConnected":<0/1>,"isScreenImageOn":<0/1>,"isScreenTextOn":<0/1>,"connectedMac":"<value>"}, { … }, …]

NOTE: Red text signifies additional attributes for RX devices.

3. Get Devices from the Database

Description:

The system will retrieve all the devices currently stored in the database

Command:

{"p_targetId":*1***,"p_cmd":"get_devices","p_userName:"***<MNC User Name >***","p_password":"***<MNC password >***"}**

Response:

{"p_targetId":*1***,"p_cmd":"get_devices","p_rspStatus:"***SUCCESS***","p_msg":"***<a message>***","p_data":**[{"productName":"<value>","modelName":"<value>","customName":"<value>","mac":"<value>","ip":"<value>","mask":"<value>","isDhcp":<0/1>,"multicastGroupIp":"<value>","videoResolution":"<value>","videoFrameRate":"<value>","audioFormat":"<value>","isVideoSignalDetected":<0/1>,"isIrOn":<0/1>,"isDipSwitchEnabled":<0/1>,"isDisplayConnected":<0/1>,"isScreenImageOn":<0/1>,"isScreenTextOn":<0/1>,"connectedMac":"<value>"}, { … }, …]

NOTE: Red text signifies additional attributes for RX devices.

4. Update Some Device Attributes

Description:

The system will update the devices specified with the new attributes provided. Note that the devices to be updated MUST already exist in the MNC database.

Command:

{"p_targetId":*1***,"p_cmd":"update_devices","p_userName:"***<MNC User Name >***","p_password":"***<MNC password >***","p_data":[{<"mac":"<device mac address>", <***attribute name***>:<***attribute value***>,…"}, {<"mac":"<device mac address>", <***attribute name***>:<***attribute value***>,…"},…]}**

List of attribute names that can be modified:

"customName" Set the custom name to give to this device
"ip" Set the device IP address (Eg. "192.168.1.80")
"mask" Set the device mask (Eg. "255.255.255.0")
"isDhcp" Set the DHCP on (1) or off (0) (Eg. 1)
"isDipSwitchEnabled" Set the dip switch on(1) or off(0) (Eg.: 0)

Response:

{"p_targetId":*1***,"p_cmd":"update_devices","p_rspStatus:"***SUCCESS***","p_msg":"***<a message>***","p_data":**[{"productName":"<value>","modelName":"<value>","customName":"<value>","mac":"<value>","ip":"<value>","mask":"<value>","isDhcp":<0/1>,"multicastGroupIp":"<value>","videoResolution":"<value>","videoFrameRate":"<value>","audioFormat":"<value>","isVideoSignalDetected":<0/1>,"isIrOn":<0/1>,"isDipSwitchEnabled":<0/1>,"isDisplayConnected":<0/1>,"isScreenImageOn":<0/1>,"isScreenTextOn":<0/1>,"connectedMac":"<value>"}, { … }, …]

NOTE: Red text signifies additional attributes for RX devices.

5. Reboot Device

Description:
The system will reboot the devices

Command:
{"p_targetId":*1***,"p_cmd":"reboot_devices","p_userName:"***<MNC User Name >***","p_password":"***<MNC password >***","p_data":[{"mac":"<device mac address>"}, {…}, …]}**

Response:
{"p_targetId":*1***,"p_cmd":"update_devices","p_rspStatus:"***SUCCESS***","p_msg":"***<a message>***","p_data":**[{"mac":"<device mac address>","rspStatus":"SUCCESS or FAILED","msg":""}, …]}

6. Connect/Disconnect Device

Description:
Perform a connect/disconnect between devices

Command:
{"p_targetId":*1***,"p_cmd":"connection","p_userName:"***<MNC User Name >***","p_password":"***<MNC password >***","p_data":[{"macRx":"<Rx device mac address>","macTx":"<Tx device mac address>"}, {…}, …]}**
"macRx" : the RX mac address to connect/disconnect
"macTx": - To disconnect, use "00-00-00-00-00-00"
- To connect, use the TX device MAC address

Response:
{"p_targetId":*1***,"p_cmd":"connection","p_rspStatus:"***SUCCESS***","p_msg":"***<a message>***","p_data":**[{"macRx":"<Rx device mac address>","macTx":"<Tx device mac address>","rspStatus ":"SUCCESS or FAILED","msg":""}]

7. Select and Apply a Preset

Description:
Apply a (an existing) preset

Command:
{"p_targetId":*1***,"p_cmd":"select_preset","p_userName:"***<MNC User Name >***","p_password":"***<MNC password >***","p_data":[{"presetId":"<preset id number>"]}**

Response:
{"p_targetId":*1***,"p_cmd":" select_preset ","p_rspStatus:"***SUCCESS***","p_msg":"***<a message>***","p_data":**[{"macRx":"<Rx device mac address>","macTx":"<Tx device mac address>","rspStatus ":"SUCCESS or FAILED","msg":""}, …]

NOTE: **"p_data"** *will return all connection results that took place.*

8. Save Current Matrix Connections in a Specific Preset

Description:

Save the current matrix connections in a specific (existent) preset

Command:

{"p_targetId":*1***,"p_cmd":"save_preset","p_userName":"***<MNC User Name >***","p_password":"***<MNC password >***","p_data":[{"presetId":"<preset id number>"]}**

Response:

{"p_targetId":*1***,"p_cmd":" save_preset ","p_rspStatus":"***SUCCSESS***","p_msg":"***<a message>***","p_data":**[{"presetId":"<preset ID number >"}]

9. Save Current Matrix Connections in a NEW Preset Name

Description:

Save the current matrix connections in a NEW preset name

Command:

{"p_targetId":*1***,"p_cmd":"create_preset","p_userName":"***<MNC User Name >***","p_password":"***<MNC password >***","p_data":[{"presetName":"<a new preset name>"]}**

Response:

{"p_targetId":*1***,"p_cmd":" create_preset ","p_rspStatus":"***SUCCSESS***","p_msg":"***<a message>***","p_data":**[{"prestName": "<name of the preset>", presetId":"<preset ID number >"}]

10. Delete a Preset

Description:

Delete a preset

Command:

{"p_targetId":*1***,"p_cmd":"delete_preset","p_userName":"***<MNC User Name >***","p_password":"***<MNC password >***","p_data":[{"presetId":"<preset id number>"]}**

Response:

{"p_targetId":*1***,"p_cmd":"delete_preset ","p_rspStatus":"***SUCCSESS***","p_msg":"***<a message>***","p_data":**[{"presetId":"<preset ID number >"}]

11. Modify Network Setting of the MNC

Description:

Modify any network settings of the MNC (ip/mask/gateway/dhcp)

Command:

{"p_targetId":*0*,**"p_cmd":"modifyNetSettings","p_userName:"***<MNC User Name >*","**p_password":"***<MNC password >*","**p_data":[{"dhcp":"<0/1>"}, {"ip":"<ip address>"},{"mask":"<mask address>"},{"gateway":"<gateway address>"}]}**

Response:

{"p_targetId":0,"p_cmd":"modifyNetSettings","p_rspStatus:"*SUCCESS/FAILED*","**p_msg":"***<a message>*"}

12. Modify Administrator password of the MNC

Description:

Modify the administrator password of the MNC

Command:

{"p_targetId":*0*,**"p_cmd":"changeAdminPswd","p_userName:"***<MNC User Name >*","**p_password":"***<MNC password >*","**p_data":[{"usrname":"<the user name>"}, {"currpswd":"<current passsword>"},{"newpswd":"<new password>"}}]}**

Response:

{"p_targetId":0,"p_cmd":"modifyNetSettings","p_rspStatus:"*SUCCESS/FAILED*","**p_msg":"***<a message>*"}

6. Product Warranty Policy

Items Under Warranty - Company Policy

MuxLab guarantees its products to be free of defects in manufacturing and workmanship for the warranty period from the date of purchase. If this product fails to give satisfactory performance during this warranty period, MuxLab will either repair or replace this product at no additional charge, except as set forth below. Repair and replacement parts will be furnished on an exchange basis and will be either reconditioned or new. All replaced parts and products become the property of MuxLab. This limited warranty does not include repair services for damage to the product resulting from accident, disaster, misuse, abuse, or unauthorized modifications or normal decay of battery driven devices. Batteries, if included with the product, are not covered under this warranty.

Limited warranty service can be obtained by delivering the product during the warranty period to the authorized MuxLab dealer from whom you purchased the product, or by sending it to MuxLab. MuxLab will not accept any such product for repair without a Return Material Authorization number (RMA#) issued by its Customer Service Department and a proof of purchase date. If this product is delivered to MuxLab by mail, you agree to assume risk of loss or damage in transit, to prepay shipping charges to the warranty service location, and to use the original shipping container or equivalent.

THE ABOVE LIMITED WARRANTY IS THE ONLY WARRANTY COVERING YOUR MUXLAB PRODUCT. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IF THIS PRODUCT IS NOT IN GOOD WORKING ORDER, YOUR SOLE REMEDY SHALL BE REPAIR OR REPLACEMENT AS PROVIDED FOR ABOVE. IN NO EVENT SHALL MuxLab BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING ANY LOSS OF PROFITS, LOST SAVINGS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF MUXLAB OR AN AUTHORIZED MuxLab DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; NOR WILL MUXLAB BE LIABLE FOR ANY CLAIM BY ANY OTHER PARTY. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR CONSUMER PRODUCTS, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

Warranty Periods

Any product found to be defective within three (3) months of invoice, including one (1) month shelf life, may be returned for replacement by a new unit or a satisfactory repair within one (1) month of receiving any returned product. The customer must provide MuxLab with the serial number and proof of purchase of the defective unit being returned. All R.M.A.'s issued are subject to inspection by MuxLab, and will be returned to customer if not properly package – units must be returned in original container or equivalent. MuxLab will not accept any such product for repair without an authorization for its Technical Support department and without a return authorization number issued by MuxLab Customer Service department. For credit & replace R.M.A., customer will be liable to pay replacement invoice if defective products are not returned.
Product more than six months old, including shelf life.

The defective unit must be returned prepaid to MuxLab and then the unit will be repaired or if repair is not possible, replaced by an equivalent unit and returned to the customer within one (1) month of receiving any returned product. There is no charge for repair (parts and labor) during the full warranty period.

Items Defective and not under Warranty

For products which are no longer under warranty the policy is repair and return. An amount of 25% of the products published list price at the time of purchase will be charged. Customer must issue a purchase order to cover the cost of repair.
Each unit will be returned to the customer within one (1) month from receipt of the unit by MuxLab. The defective unit must be returned prepaid to MuxLab. The repaired unit will be returned to the customer FOB MuxLab. The repaired unit has a 90 day warranty.

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