Mamba MATRIX Audio Router/Switcher

Technical Specification
Ver 1.0



Property of NetworkSound, Inc
Sacramento CA USA
All Rights Reserved @2022

Technical Specification:

1.0 Audio Inputs and Outputs :

Bal or Unbalanced Inputs via Tascam DB25 Analog Pin Out

16x16 or 32x32 Input x Output

I/Os are via DB25 Tascam Analog pinout compatible connectors (2 or 4 x in and 2 or 4 x out)

Use standard DB25 to XLR or TRS break out cables. - NOT Included.

Balanced Input: -60 dBu to +22 dBu max.

Unity Gain (Output == Input)

THD 0.0007% @ 1K , +0dB (THD and Freq. resp. graphs available)

Can support Single ended or unbalanced Inputs

Mic inpts are OK if no Phantom Power is needed. Hot mic or dynamic mic OK

Unbalanced inputs = +16 dB max. and THD @ 0.003%

Balanced or unbalanced outputs

Input impedance: 10KOhm and Output impedance: 100 Ohm

2.0 Hardware:

1U Rack box - 16x16 Model: (19”Lx1.75”Hx7”D)

1U Rack box - 32x32 Model: (19”Lx1.75”Hx10""D)

16 (32) Balanced or Unbalanced Input 2(4) x DB25 (Tascam Analog pin out Standard)

16 (32) Balanced or Unblanaced Outputs on 2(4) x DB25 (Tascam Analog Standard)

Power supply - 110-250 VAC Universal Power Supply

WiFi- HOTSPOT - Internal - MAMBA MATRIX (Name can be changed using the App)

3.0 Network Connectivity:

Works on HotSpot Mode (wifi direct) or Client to your home WiFi Router Concurrently

You can connect to WiFi Hotspot and access the matrix on a browser using 192.168.4.1 on URL window

You can add your home wifi name / password on the Setup page to connect to your home wifi network (auto)

In the client mode, just open a browser and type in Host name (same as hotspot name - e.g. Mamba Matrix.local on URL window)

Make sure your device is connected to home wifi router (same as Mamba Matrix setup)

Both Hotspot and WiFi Home Router are password controlled (secure access only)

Please see the picture of wifi setup page for more details or setup document

4.0 App [same for 16x16 and 32x32]

Browser based App and works on any browser on your Phone/Tab/PC

No need to download an App from Apple or Android store

Connect using Wifi direct (select "Mamba Matrix" on your device) or Home wifi network

Use standard browser on your device and type in 192.168.4.1 IP address on URL window

16x16 Full matrix with each matrix point (button) selectable by simple touch

Split a single Input to as many as Outputs

Select the Matrix by simply touch (1-1 or 15-6 etc etc)

Upload button (only way to change matrix routing) on HW to avoid unnecessary selection

Reset the Matrix, Mute ALL, Auto config (1-1 and 16-16) Buttons for quick configuration

Change wifi name [wifi password protected - default]

Save and Recall scene (file) to Matrix Router

Change input and output channel label names

SW update thru PC (download from Server to PC and then to Matrix unit)

Enable 32 on SETUP menu and you will have 32x32 matrix. Due to space it is presented in 4 Quadrants.

*** No mixing of inputs to single output (no 2 or more In to 1 out)

6.0 Box Size:

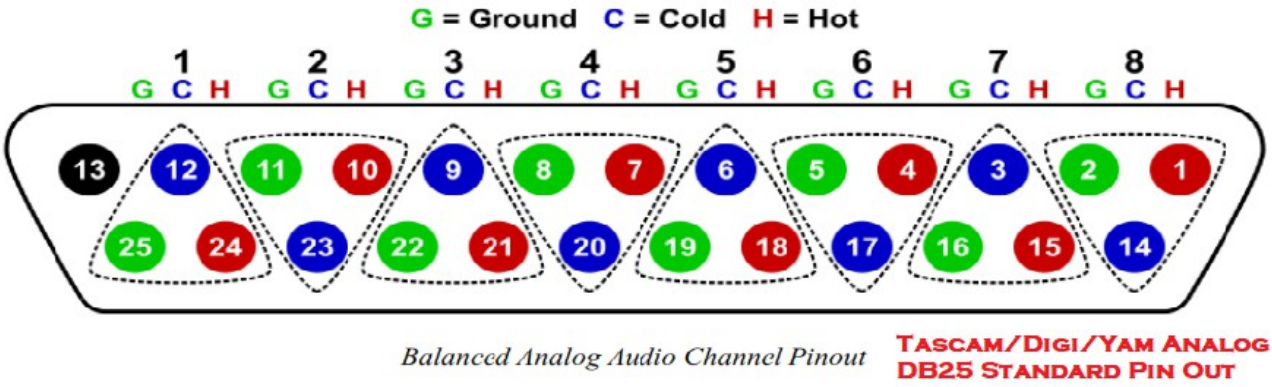
16x16: 1U with 7" depth. [19" L x1.75"H x7" D]

Weight: 5 pounds

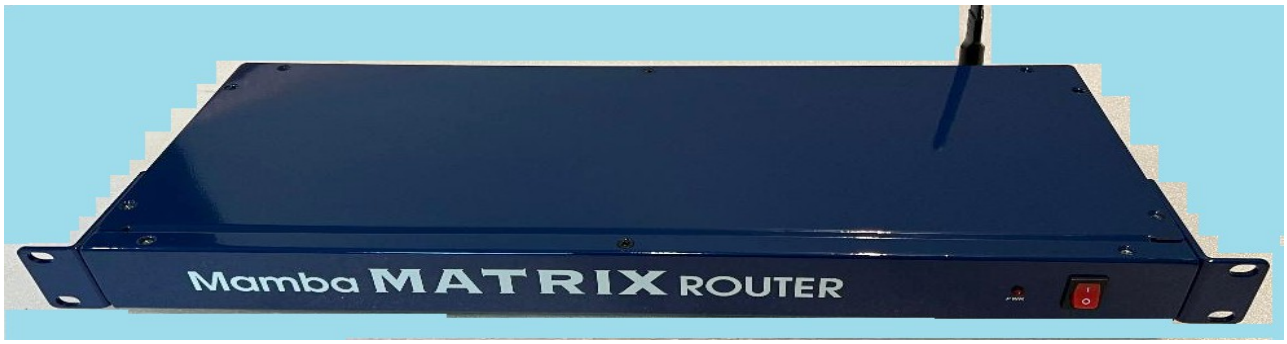
32x32 -1U with 10" depth. [19" L x1.75"H x10" D

weight: 8 Pounds

7.0 DB25 Tascam Analog Pin out

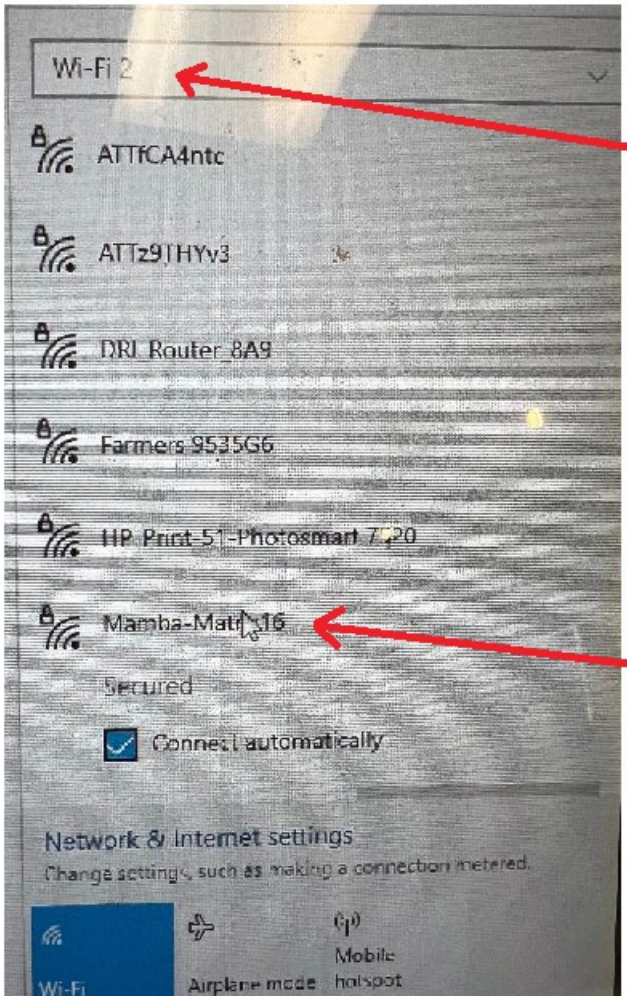


8.0 Matrix Unit Front and Back [16x16 and 32x32]









Select WiFi2 [USB to wifi]

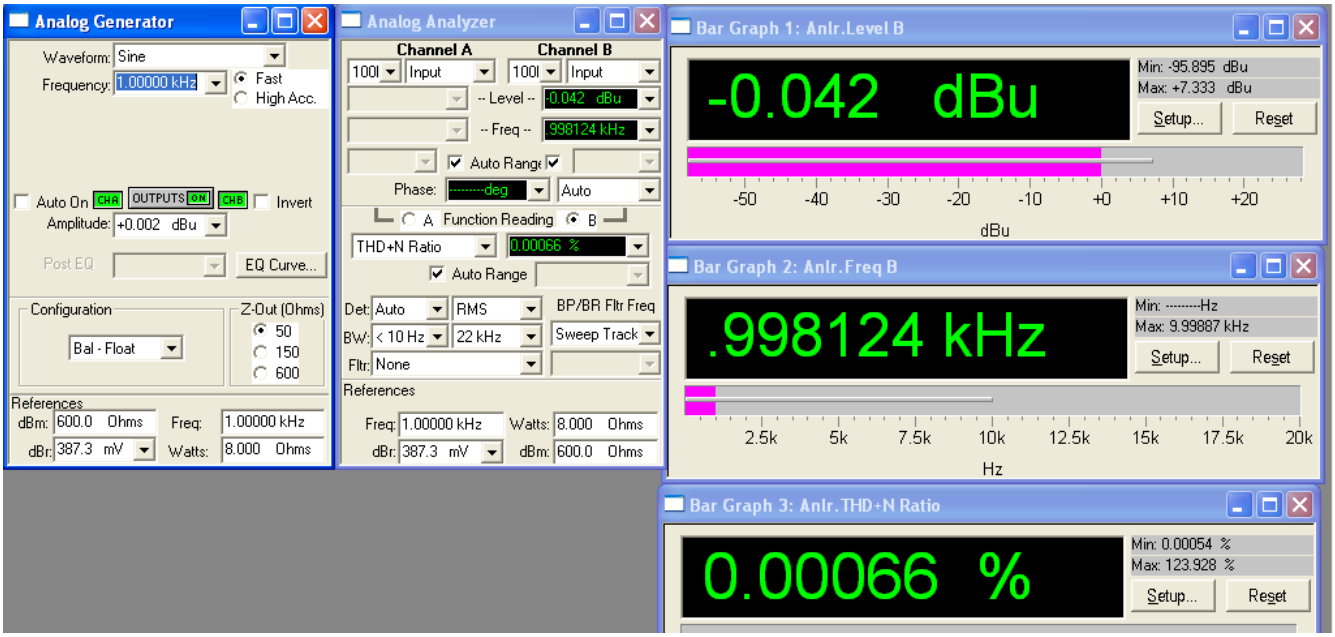
1. Connect USB to wifi adaptor to a USB port on PC
2. Select wifi2 on wifi icon on your PC
3. Look for Matrix16 or Matrix 32 wifi name [make sure the Matrix box is ON]
4. Select the wifi and connect to it. Wait for it to connect.
5. Once it is connected, a new browser window - type 192.168.4.1 and enter
6. You should see the Matrix App

Select Mamba-Matrix16 or 32

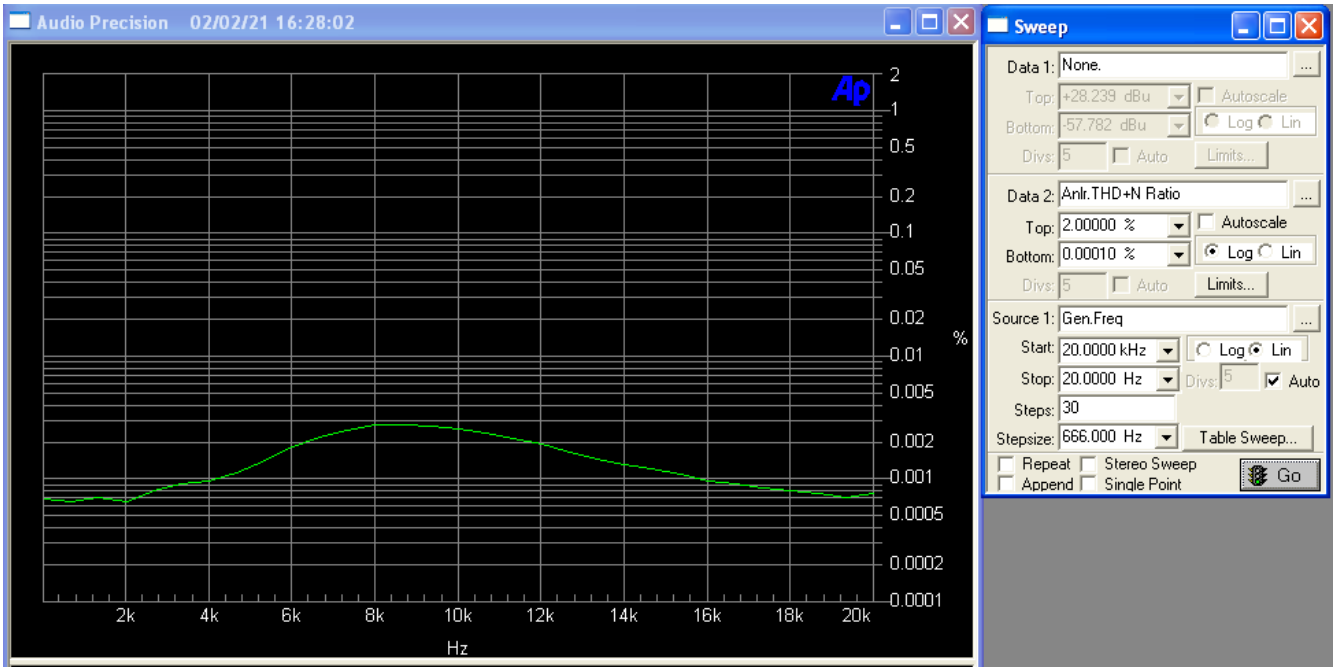


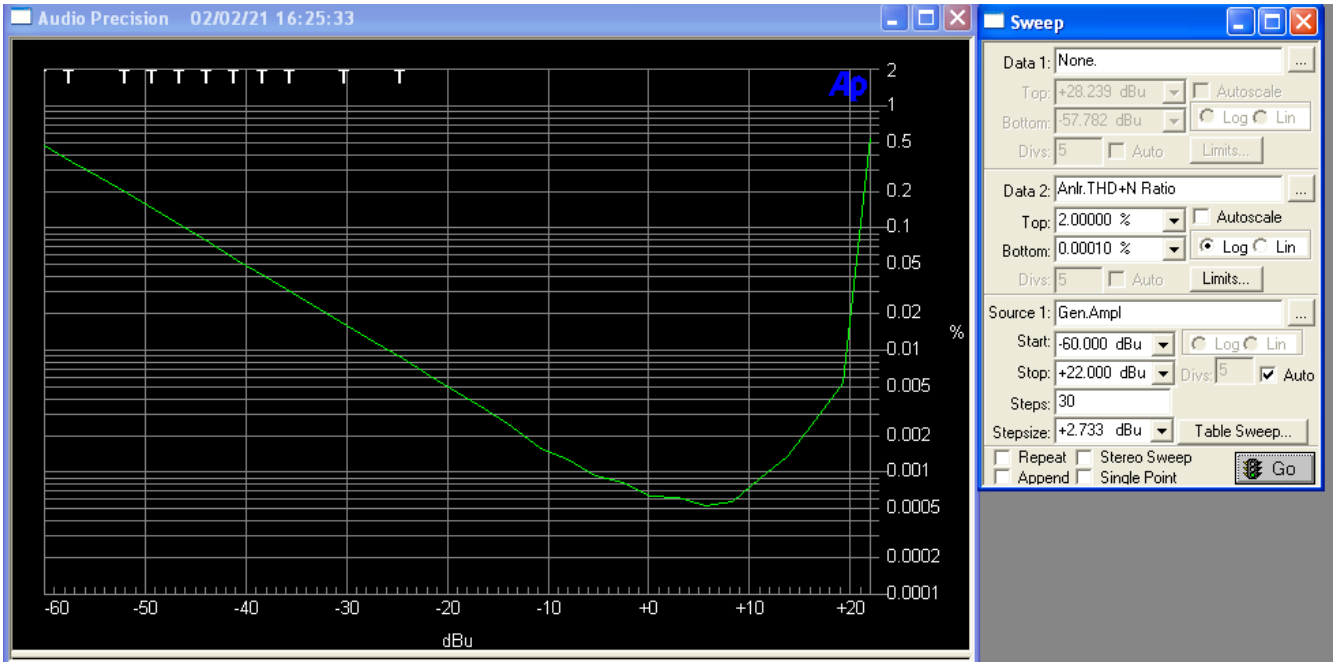
(FREE - included with Matrix)

9.0 USB to Wifi Access of Matrix unit from PC



10.0 THD+N graphs.

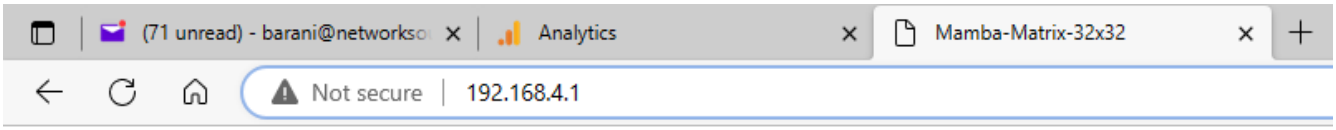



Audio Precision 02/02/21 16:25:33
Ap
2
1
0.5
0.2
0.1
0.05
0.02
0.01
0.005
0.002
0.001
0.0005
0.0002
0.0001
%
-60
-50
-40
-30
-20
-10
+0
+10
+20
dBu
Sweep
Data 1: None.
Top: +28.239 dBu
Autoscale
Bottom: -57.782 dBu
Log Lin
Divs: 5
Auto
Limits...
Data 2: Anlr.THD+N Ratio
Top: 2.00000 %
Autoscale
Bottom: 0.00010 %
Log Lin
Divs: 5
Auto
Limits...
Source 1: Gen.Ampl
Start: -60.000 dBu
Log Lin
Stop: +22.000 dBu
Divs: 5
Auto
Steps: 30
Stepsize: +2.733 dBu
Table Sweep...
Repeat
Stereo Sweep
Append
Single Point
Go

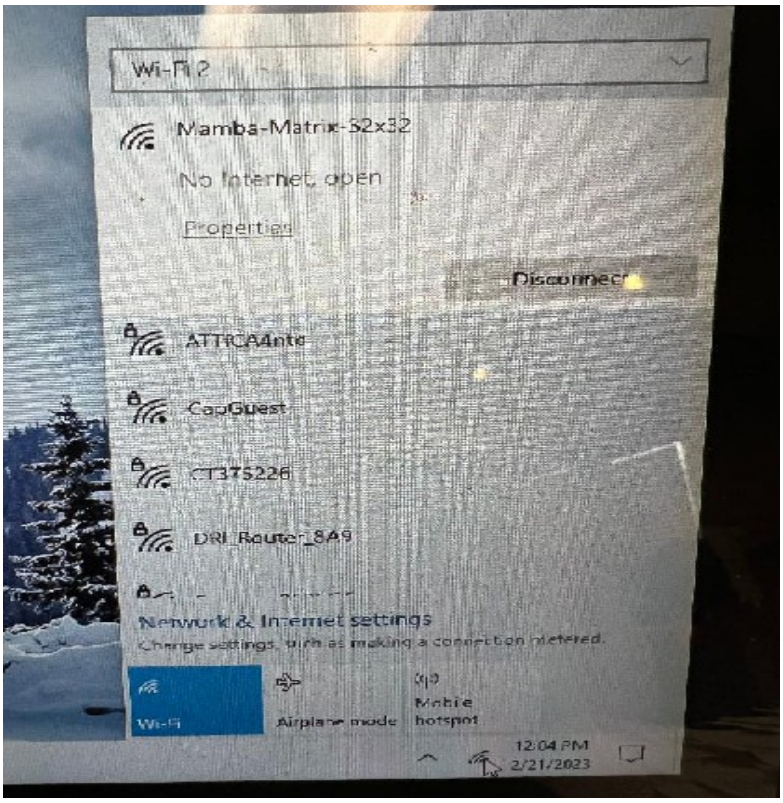
Quick Setup Guide – Mamba MATRIX Router 32x32
[Using USB-WiFi Adaptor from a PC]

Thanks for purchasing the Mamba MATRIX Router. This is a quick guide to setup the Matrix and Access the App. We suggest using one access (USB-wif or wifi dir) at a time.

1. Power ON the Matrix unit and make sure the RED LED is ON. Power cord incl.
2. You can choose to use the antenna (back) or leave it. Antenna is needed for distance beyound 20-25 ft. Be gentle with screw and unscrew the antenna.
3. Connect the USB-wifi Adaptor to your PC USB port.
4. Click on the wifi icon on your PC (where you select the wifi network)
5. You should see the below info. Wifi2 (usb-wifi adaptor) and select Mamba-Matrix-32x32. Ignore if it says no internet connection. You can also select connect always.
6. Open a browser window. Type 192.168.4.1 and you should see the App. You can follow the App features on rest of the manual as described.



7. The Unit is configured default as 1-1 and 32-32 already. You can connect the DB cables for in and out and test audio. The input DBs 32 in are at bottom and Out on Top



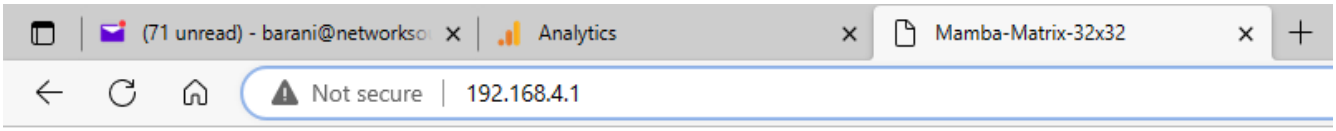


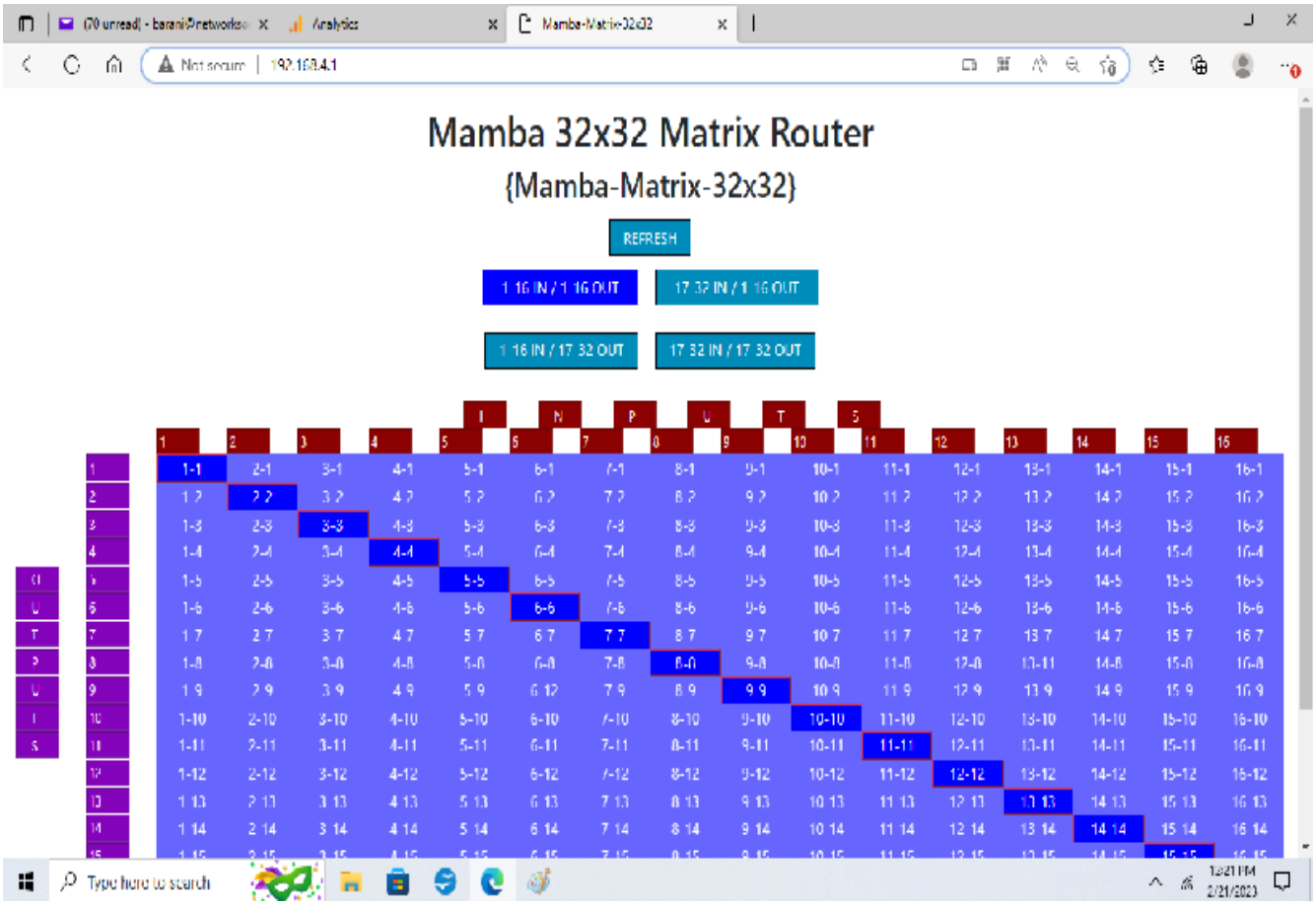
(FREE - included with Matrix)

* YOUR PC IS CONNECTED TO BOTH Local WIFI and Mamba MATRIX WiFi- No ISSUES *

Quick Setup Guide – Mamba MATRIX Router 32x32
[Using WiFi Direct from a Phone or PAD]

1. Make sure the unit is ON
2. On your PAD, select wifi option and look for Mamba-Matrix-32x32
3. Connect to it. Ignore if it says NO internet connection
4. Wait for wifi icon appear on the left top corner (Mean pad is connected to Matrix)
5. Open a browser and type in 192.169.4.1
6. You should see the Matrix 32x32 App as below.





Please contact us @ support@networksound.com OR 978 384 0780 for any help.