



NERO MAX 12 Information

1. NERO MAX Expansion Points
2. Hard-Wired Network Lan Connection
3. Wi-Fi Connection Option
4. RS232 Controls
5. RS-232 Control Codes
6. OSD Control App Quick Start
7. App Quick Start: Function Instructions
8. App Quick Start: Settings and Connections
9. Optional Control Keypads and IR Remote



Control
App

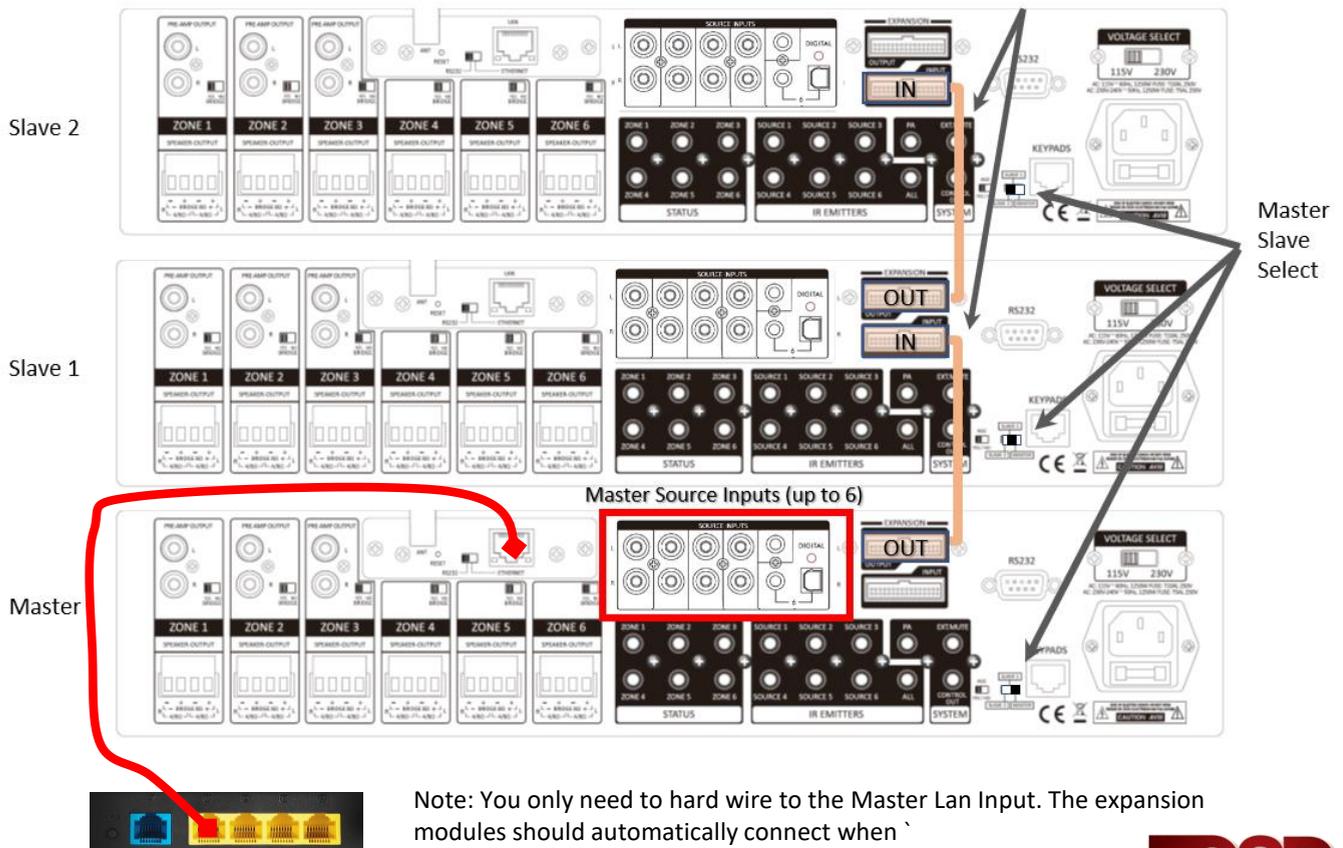


CASCADING SOURCES INTO ADDITIONAL ZONES

The MAP-1200EW can allow 6 sources to be distributed to up to 18 zones on 3 different units using the provided ribbon cable to connect between units. To do this first each unit needs to be addressed according using the MASTER/SLAVE switch. There are 3 positions for this, Master, Slave 1, and Slave 2 which help identify each unit.



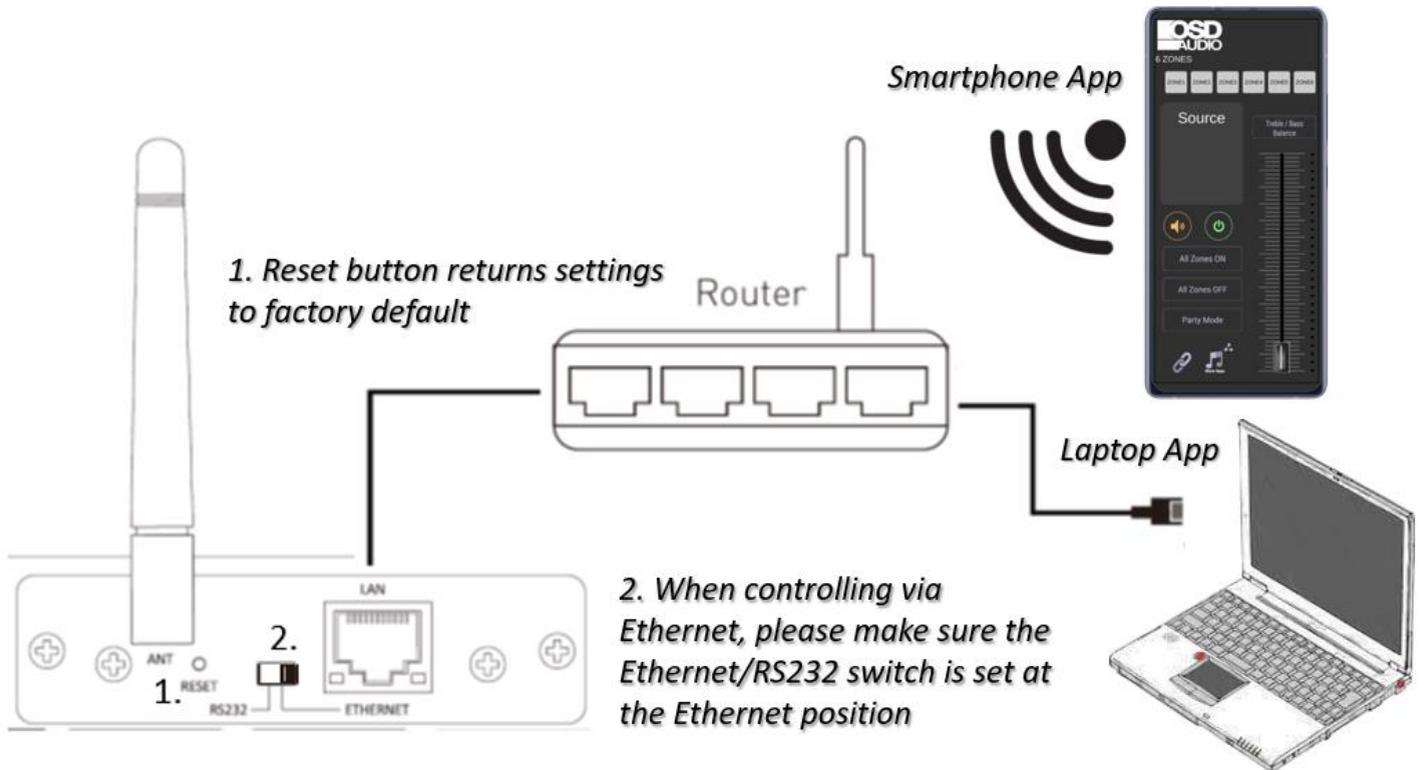
Once each unit is correctly addressed, use the provided ribbon cables to connect the OUTPUT of the original MASTER unit into the INPUT of Slave 1. To cascade the sources into a third unit, using the provided expansion ribbon cable, go out of the OUTPUT port from the device addressed as SLAVE 1 into the INPUT port of the device addressed as SLAVE 2.



Router

ETHERNET CONNECTION

There is a RJ-45 jack on the rear panel of this amplifier for the connection to Ethernet. Please use a good quality Cat5e/5 cable, and follow the connecting diagram below.



1. Connect the LAN port on the rear panel of controller to the local Wi-Fi Router. The Ethernet connection mainly for Wi-Fi control via APP or other control devices.

Note: When controlling via ETHERNET, please make sure the ETHERNET/RS232 switch is set at ETHERNET position.

WI-FI CONNECTION

Because high stability and easy to setup, connecting to Ethernet via Cat5e/5 cable is always recommended. In case wireless connection is needed to use for the installation, please follow the below steps to setup the Wi-Fi connection:

1. Power on MAP-1200EW and make sure the amplifier is not out of Wi-Fi range of router.
2. Using PC, Smart phone or Tablet (PC is recommended), searching the Wi-Fi connection and find out the Wi-Fi signal from this amplifier.
3. Connect to the Wi-Fi of this amplifier.
SSID: LINK Password: 12345678
4. Please visit <http://192.168.16.254> configuration webpage,
Default name: admin Password: admin
5. Click "AP Client", then "Apply".
The router will restart.



English 简体中文 繁体中文

- HLK-RM04
 - Wizard
 - Operation Mode
 - Internet Settings
 - WAN
 - LAN
 - DHCP clients
 - VPN Passthrough
 - Advanced Routing
 - Wireless Settings
 - Basic
 - Advanced
 - Security
 - WDS
 - WPS
 - AP Client
 - Station List
 - Statistics
 - Firewall
 - Administration

Operation Mode Configuration

You may configure the operation mode suitable for you environment.

- Bridge:**
All ethernet and wireless interfaces are bridged into a single bridge interface.
- Gateway:**
The first ethernet port is treated as WAN port. The other ethernet ports and the wireless interface are bridged together and are treated as LAN ports.
- Ethernet Converter:**
The wireless interface is treated as WAN port, and the ethernet ports are LAN ports.
- AP Client:**
The wireless apcli interface is treated as WAN port, and the wireless ap interface and the ethernet ports are LAN ports.

NAT Enabled:

TCP Timeout:

UDP Timeout:

Apply

Cancel

6. After the restart, "AP Client" will show on the webpage.

Click "AP Client" and select the local network which you want to connect. Then click "Apply", the router will restart.

English 简体中文 繁体中文

- HLK-RM04
 - Wizard
 - Operation Mode
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 - Wireless Settings
 - Basic
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AP Client Feature

You could configure AP Client parameters here.

AP Client Parameters

SSID	<input type="text" value="505"/>
MAC Address (Optional)	<input type="text"/>
Security Mode	<input type="text" value="WPA2PSK"/>
Encryption Type	<input type="text" value="AES"/>
Pass Phrase	<input type="text" value="Masz2019"/>

Apply

Cancel

SCAN

Site Survey

Ch	SSID	BSSID	Security	Signal(%)	W-Moe	ExtCh	NT
1	TP-LINK_ADA744	f8:d1:11:ad:a7:44	WPA1PSK/WPA2PSK/TKIP/AES	50	11b/g/n	ABOVE	In
1	luoyusi	a4:56:02:62:f3:39	WPA1PSK/WPA2PSK/AES	44	11b/g/n	ABOVE	In
1	NETCORE_E1E7	08:10:78:d2:e1:e7	WPA2PSK/AES	39	11b/g/n	ABOVE	In
4	ChinaNet-bzyQ	38:e2:dd:14:2d:e0	WPA1PSK/WPA2PSK/TKIP/AES	39	11b/g/n	NONE	In
6	Netcore_E14817	08:10:79:e1:48:17	WPA1PSK/WPA2PSK/AES	100	11b/g/n	ABOVE	In
6		24:69:68:8d:3a:38	WPA1PSK/WPA2PSK/AES	65	11b/g/n	BELOW	In
10	PHICOMM_60	cc:81:da:dc:f5:68	WPA1PSK/WPA2PSK/TKIP/AES	55	11b/g/n	NONE	In
10	505	04:d4:c4:b9:78:48	WPA2PSK/AES	100	11b/g/n	NONE	In
11	Guest	0e:fe:18:7f:00:c7	WPA1PSK/WPA2PSK/AES	100	11b/g/n	NONE	In
11	mansion_sz	dc:fe:18:7f:00:c7	WPA1PSK/WPA2PSK/AES	81	11b/g/n	NONE	In

7. Visit the configuration webpage of the local network of router.
The local network of router will assign a new IP for the amplifier automatically.

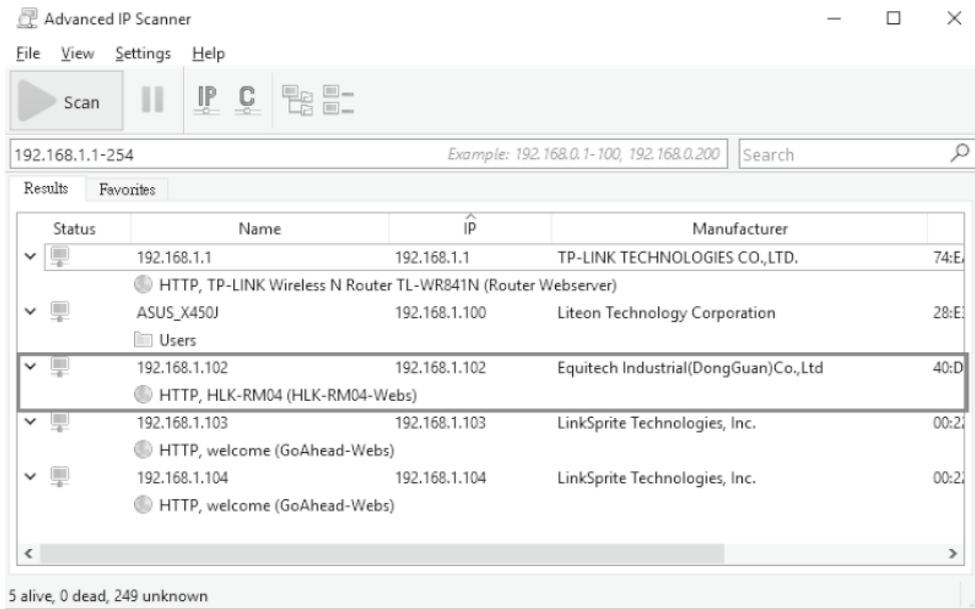


Set the switch to Ethernet . Connect the Cat5e/6 cable to Ethernet port and Lan port of the Router. Two ways to find the address of the NERO MAX12

1. Open the IE web browser of the PC, log in to the WEB configuration page of the local Router to find the IP address of the NERO MAX 12 (shown as below)

	X450J 在线时长: 59分钟24秒	IP: 192.168.100.8 MAC: 28-E3-47-CD-64-40
	B01B 在线时长: 59分钟16秒	IP: 192.168.100.11 MAC: 00-22-6C-CA-B0-1B
	B3EC 在线时长: 59分钟15秒	IP: 192.168.100.9 MAC: 00-22-6C-CA-B3-EF
	MAP-1200EW 在线时长: 54分钟23秒	IP: 192.168.100.7 MAC: 10-A4-BE-FB-0C-07
	KENNYLAI 在线时长: 51分钟12秒	IP: 192.168.100.13 MAC: 4C-ED-FB-D9-D1-B0

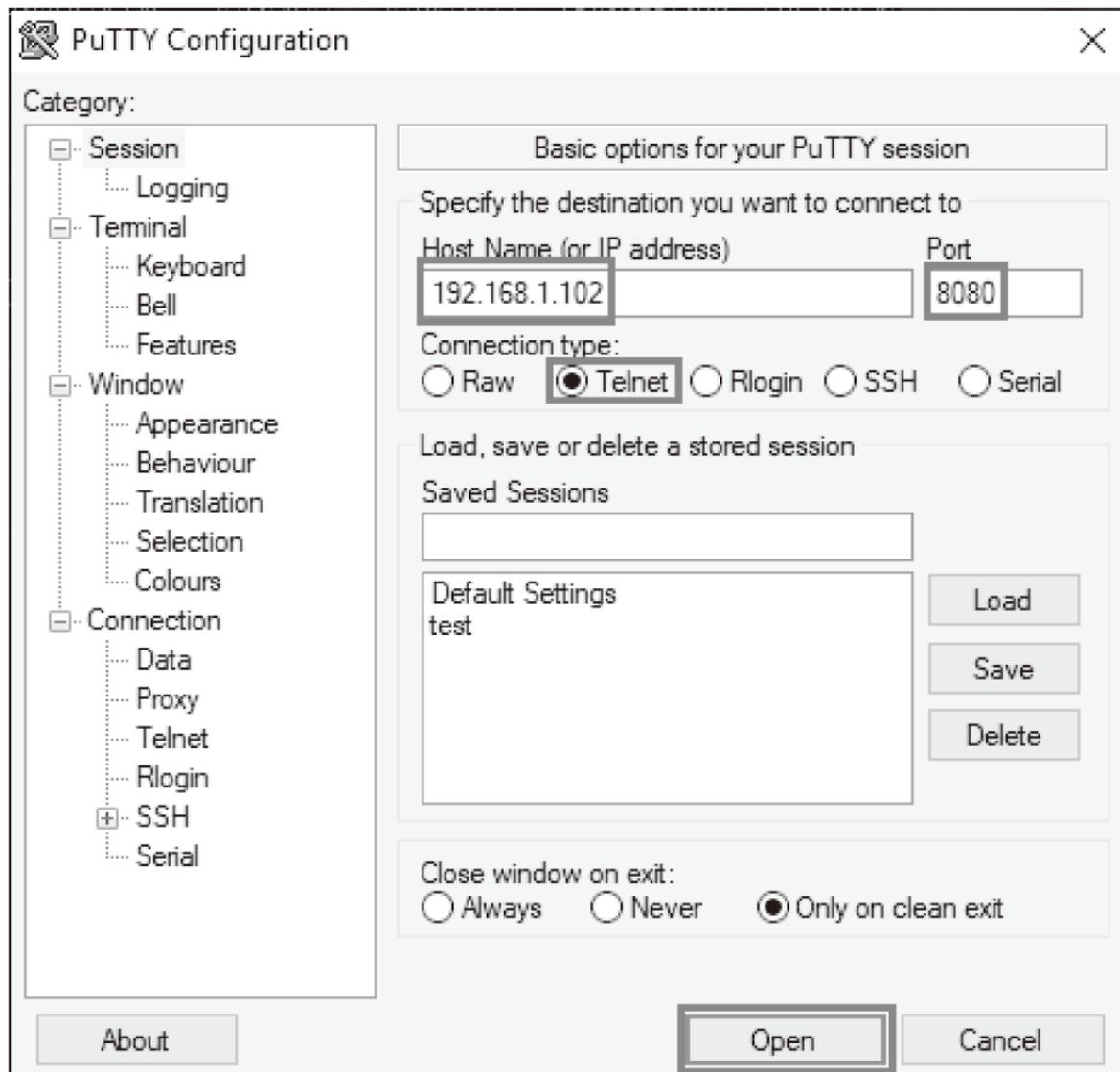
2. Using “Advance IP Scanner” software to find the IP address Please visit www.advanced-ip-scanner.com for free download



Then enter the IP address of the NERO MAX 12 to the IE browser (shown as below), ensure the Serial Configure is 9600, n, 8,1.After finishing this step, NERO MAX12 could be controlled through the local Network.



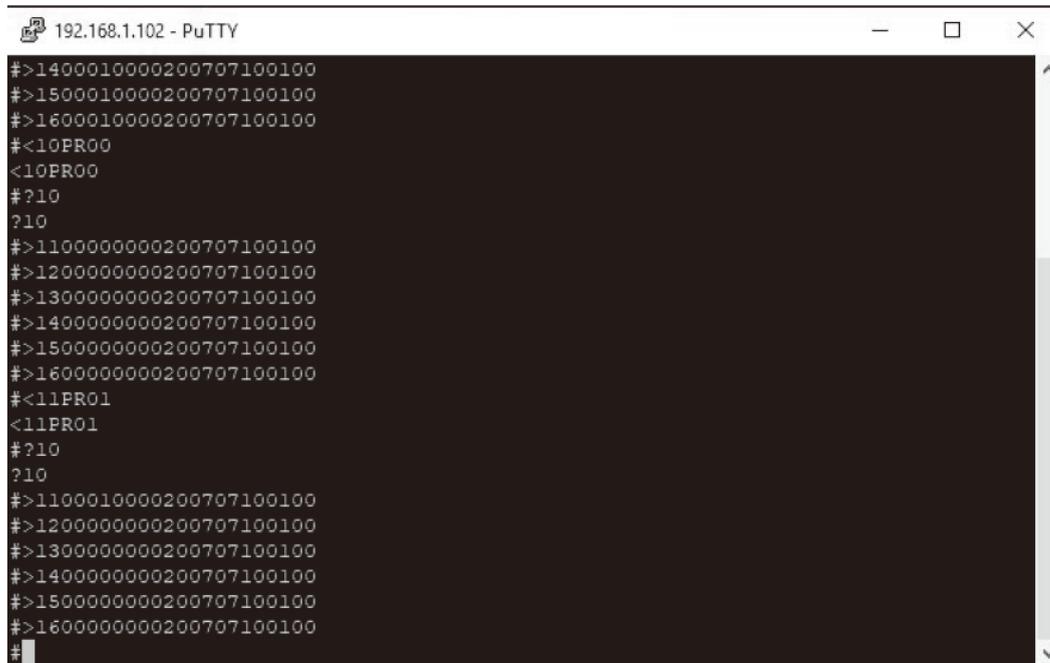
Download free software “PuTTY” Tool from the internet to control the device.
Operation diagram as below:



Click Telnet, enter the IP address of MAP-1200EW and port: 8080.

Click Open.

When the IP address connected, the operation diagram shows as below:



```
192.168.1.102 - PuTTY
#>1400010000200707100100
#>1500010000200707100100
#>1600010000200707100100
#<10PR00
<10PR00
#?10
?10
#>1100000000200707100100
#>1200000000200707100100
#>1300000000200707100100
#>1400000000200707100100
#>1500000000200707100100
#>1600000000200707100100
#<11PR01
<11PR01
#?10
?10
#>1100010000200707100100
#>1200000000200707100100
#>1300000000200707100100
#>1400000000200707100100
#>1500000000200707100100
#>1600000000200707100100
#
```

Key in the command code to control NERO MAX 12.

For the detail of command codes, please find the RS-232 command codes in this instruction manual

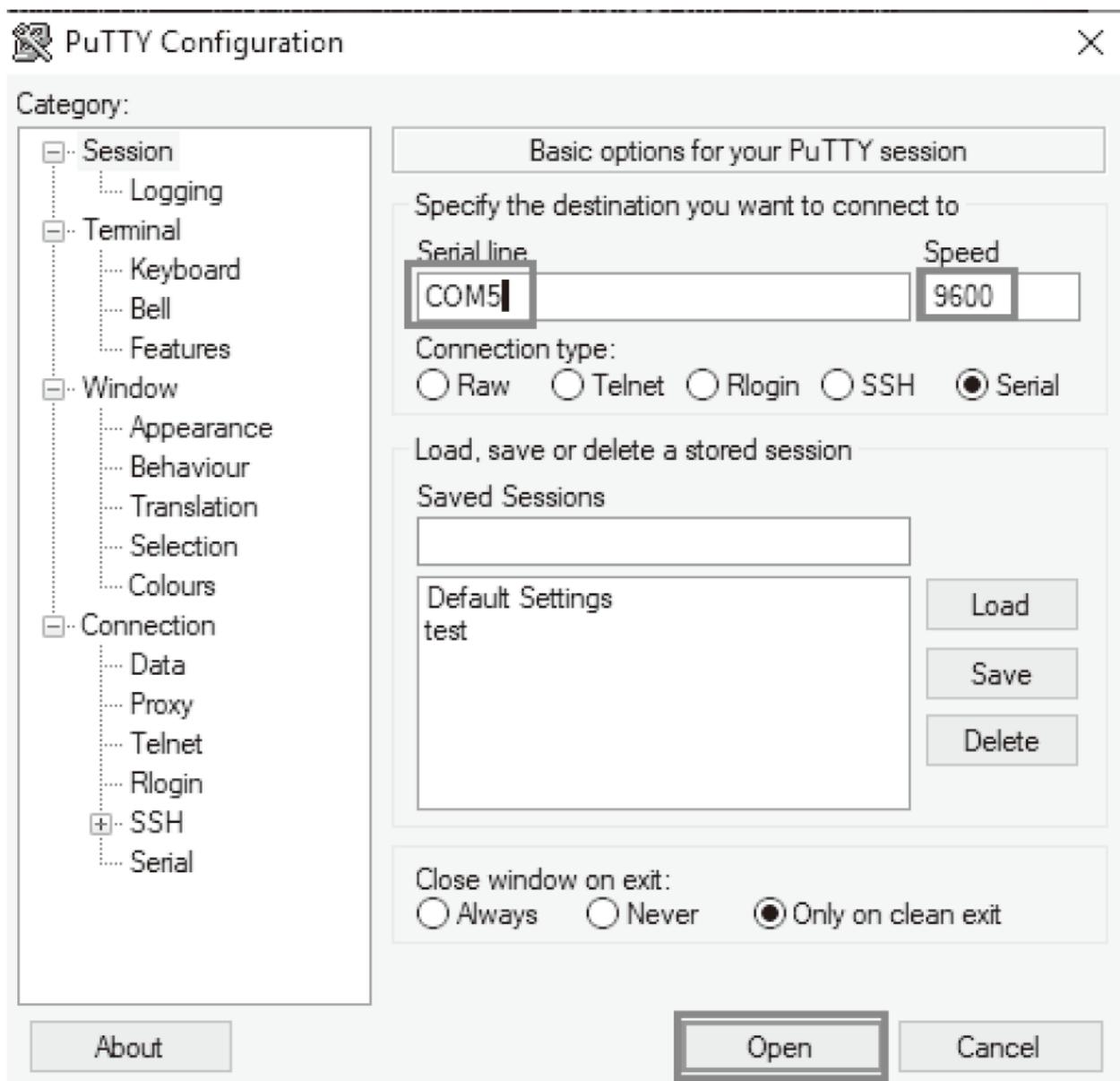
RS-232 CONTROL

The NERO MAX 12 provides an RS-232 serial port connection located on the back panel and uses a USB-to-Serial Comm cable connection. The NERO MAX 12 supports bi-directional RS-232 communication with third party automation system. All keypads and remote-control operations can be controlled via RS-232 in addition to system expansion up to 18 zones or 3 NERO MAX 12 units linked together using the included 18 pin expansion cable.

Note: Set the switch to RS-232 position

Baud Rate 9600, 8, N, 1 DB9 Connector Pin out, TX, RX GND

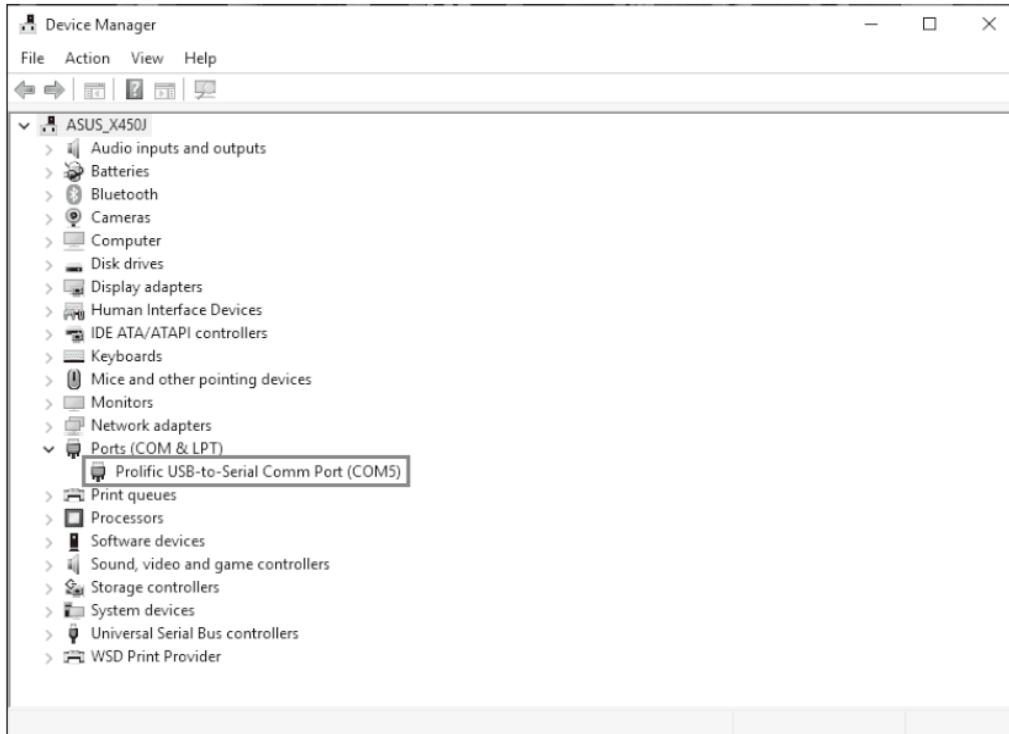
Using free software “PuTTY” Tool to control the device. Operation diagram below



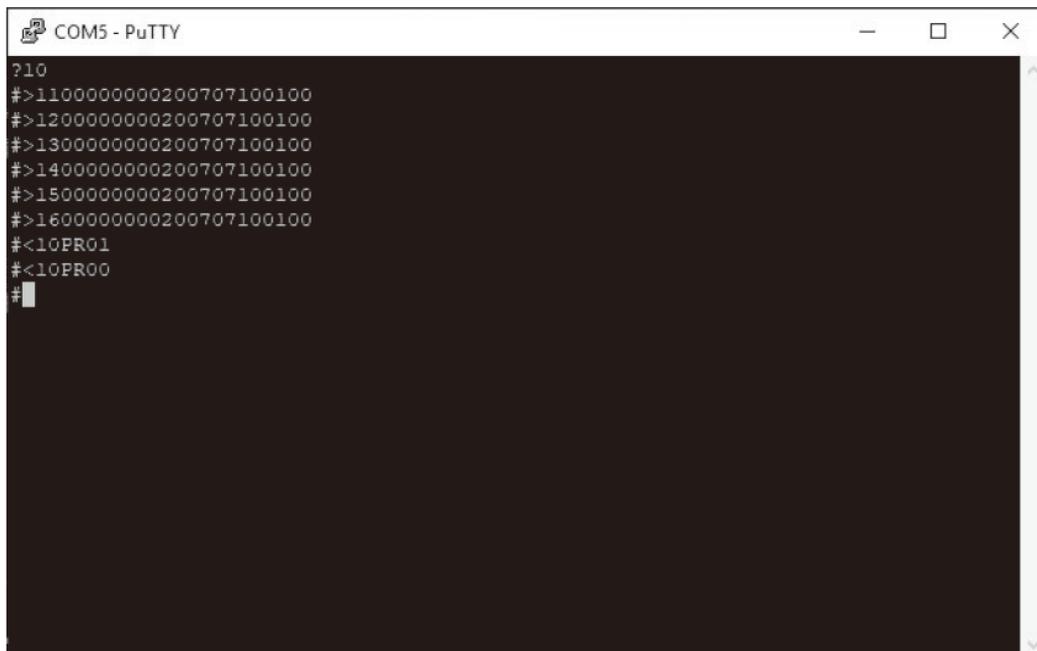
Click Serial, check the COM port and enter the Baud rate 9600.

Click Open.

Note: To find the information for the COM port, please open the device manager of the computer, shown as below:



When the IP address connected, the operation diagram shows as below:



Key in the command code to control the NERO MAX 12

NERO MAX 12 RS-232 CONTROL CODES

(Baud Rate: 9600,8,N,1 , DB9 Connector Pin out, Tx, Rx, GND)

'CR':Carriage Return (0x0D)

Not case sensitive

Control Command Structure <xxPPuu'CR'

Reply Control Command Structure >xxPPuu'CR'

xx: Represent control command code

10 :All zones of host computer 1

20 :All zones of host computer 2

30 :All zones of host computer 3

11 : Zone1 of host computer 1

12 : Zone2 of host computer 1

13 : Zone3 of host computer 1

.....

PP: Represent Control action code

PR:Power control

PR00:Power off

PR01:Power on

MU:Mute control

MU00:Mute off

MU01:Mute on

DT:Do Not Disturb control

DT00:DT control off

DT01:DT control on

VO:Volume control

VO(00-38):Volume control

TR:Treble control

TR(00-14):Treble control

BS:Bass control

BS(00-14):Bass control

BL:Balance control

BL(00-20):Balance control

CH:Source Channel control

CH(01-06):Source control

Ask command structure(1) ?xx'CR'

xx: Represent control command code

10 :All Zones of host computer 1

20 :All Zones of host computer 2



30 :All Zones of host computer 3

11 :Zone1 of host computer1

12 :Zone2 of host computer1

13 : Zone3 of host computer1

21 : Zone1 of host computer2

22 : Zone2 of host computer2

23 : Zone3 of host computer2

.....

Reply Command: >xxaabbccddeeffgghhijj'CR'

aa:PA Control status

bb:Power Control status ([5]:Backup Zone Power Status (only on zone)

cc:Mute Control status

dd:DT Control status

ee:Volume Control status

ff:Treble Control status

gg:Bass Control status

hh:Balance Control status

ii:Source Control status

jj:The connection status of line control(00:unconnected 01:connected)

Ask command structure (2) ?xxPP'CR'

xx: Control Command Structure

10 :All Zones of host computer 1

20 :All Zones of host computer 2

30 :All Zones of host computer 3

11 : Zone1 of host computer 1

12 : Zone2 of host computer 1

13 : Zone3 of host computer 1

14 : Zone4 of host computer 1

15 : Zone5 of host computer 1

16 : Zone6 of host computer 1

.....

PP: Represent Control action code

PA:PA Control

PR:Power Control

MU:Mute Control

DT:DT Control

VO:Volume Control

TR:Treble Control

BS:Bass Control



BL:Balance Control

CH:Source Control

LS: The connection status of line control

Reply command: >xxPPuu'CR'

Enter1<*****'CR' Change Source 1 display name;*****It must be 8 effective

ASCII code

Enter2<*****'CR' Change Source 2 display name

Enter 3<*****'CR' Change Source 3 display name

Enter 4<*****'CR' Change Source 4 display name

Enter 5<*****'CR' Change Source 5 display name

Enter 6<*****'CR' Change Source 6 display name

Enter M<*****'CR' Change display name of connect control when it starts

Enter <9600'CR' Change RS232 to rate 9600

Enter <19200'CR' Change RS232 to rate 19200

Enter <38400'CR' Change RS232 to rate 38400

Enter <57600'CR' Change RS232 to rate 57600

Enter <115200'CR' Change RS232 to rate 115200

Enter <230400'CR' Change RS232 to rate 230400

When unplugging and re-plugging the AC power cord, the Baud speed rate will return to 9600.

REPRESENT OF CONTROL ACTION CODE

Symbol	Master、 Slave1、 Slave2	Zone	Controlactioncode	ControlRange
<	1、 2、 3	1-6	PR(POWER)	(00-01)
<	1、 2、 3	1-6	MU(MUTE)	(00-01)
<	1、 2、 3	1-6	CH(SOURCE)	(01-06)
<	1、 2、 3	1-6	VO(VOLUME)	(00-38)
<	1、 2、 3	1-6	TR(TREBLE)	(00-14)
<	1、 2、 3	1-6	BS(BASS)	(00-14)
<	1、 2、 3	1-6	BL(BALANCE)	(00-20)

EXAMPLES OF RS-232 COMMAND CODE

AllZoneON	<10PR01	Zone1ON	<11PR01
AllZoneOFF	<10PR00	Salve1/Zone1OFF	<21PR00
AllZoneMuteON	<10MU01	Zone6MuteON	<16MU01
AllZoneMuteOFF	<10MU00	Salve2/Zone5MuteOFF	<35MU00
AllZoneSource01	<10CH01	Zone1Source01	<11CH01
AllZoneSource06	<10CH06	Zone6Source06	<16CH06
AllZoneVolume00	<10VO00	Zone1Volume00	<11VO00
AllZoneVolume38	<10VO38	Zone6Volume38	<16VO38
AllZoneTreble(-7)	<10TR00	Zone1Treble(-7)	<11TR00
AllZoneTreble(0)	<10TR07	Zone1Treble(0)	<11TR07
AllZoneTreble(7)	<10TR14	Zone1Treble(7)	<11TR14
AllZoneBass(-7)	<10BS00	Zone6Bass(-7)	<16BS00
AllZoneBass(0)	<10BS07	Zone6Bass(0)	<16BS07
AllZoneBass(7)	<10BS14	Zone3Bass(7)	<13BS14
AllZoneBalance(atLeftCH)	<10BL00	Zone1Balance(atLeftCH)	<11BL00
AllZoneBalance(atMiddle)	<10BL10	Zone1Balance(atMiddle)	<11BL10
AllZoneBalance(atRightCH)	<10BL20	Zone1Balance(atRightCH)	<11BL20
InquiryMasterAllZoneStatus	?10	InquirySlave1AllZoneStatus	?20

INQUIRY COMMAND STRUCTURE

Symbol	Master、Salve1、Salve2	Zone
?	1、2、3	1-6

InquiryMasterAllZoneStatus	?10
InquirySlave1AllZoneStatus	?20
InquirySlave2AllZoneStatus	?30

REPLY COMMAND

>xxaabbccddeeffgghhijj xx:Unit/Zone

>1100000000200707100100 aa:PAINStatus

 bb:PowerStatus

 cc:MuteStatus

 dd:DTStatus

 ee:VolumeStatus

 ff:TrebleStatus

 gg:BassStatus

 hh:BalanceStatus

 ii:SourceStatus

 jj:KeypadConnectionStatus(00:Unconnected,01:Connected)

APP QUICK START

Download the control APP:

1. The control APP is available for Apple iPhone/iPad and Android smart phone/Pad,

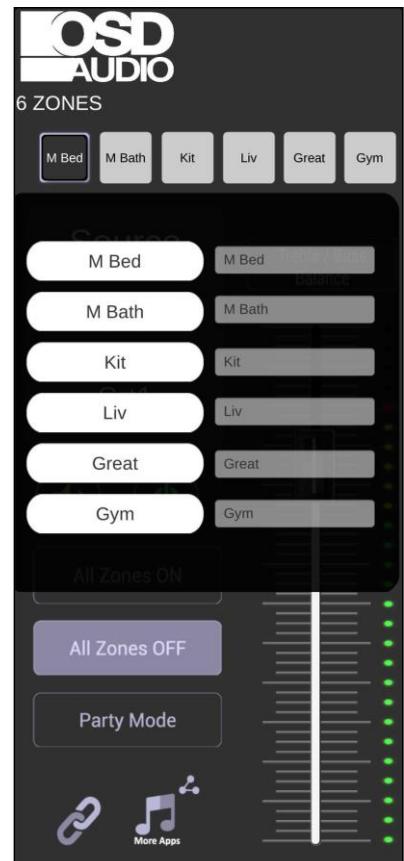
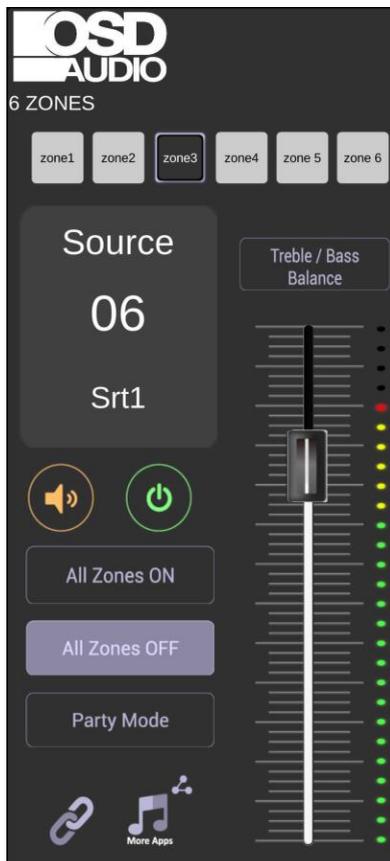


2. Please search OSD Control App on Google Play / App store to download

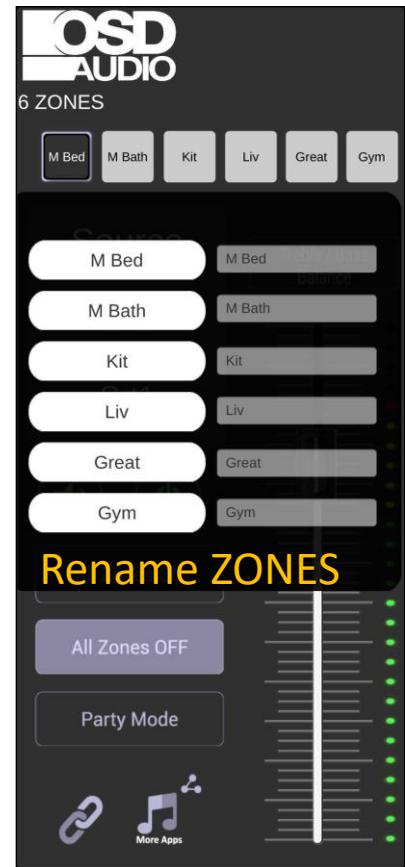
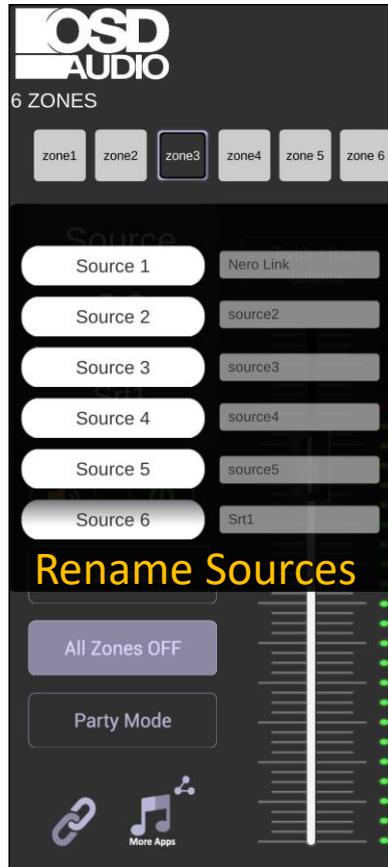


OSD Control 4+
OSD Optimal Speaker Design
Designed for iPad
Free

Screenshots [iPad](#) [iPhone](#)



APP QUICK START - FUNCTION INSTRUCTION



1. Output Zone Selection

(Press and hold the button to change the zone name)

2. Input Source Selection

Press and select the input source. The name of input source could be changed.

3. Treble/Bass/Balance

4. Volume for individual zone

5. Mute for individual zone

6. Power ON/OFF for individual zone

7. All Zones ON

8. All Zones OFF

9. Party mode

All zones will be synchronize and controlled from the specific zone.

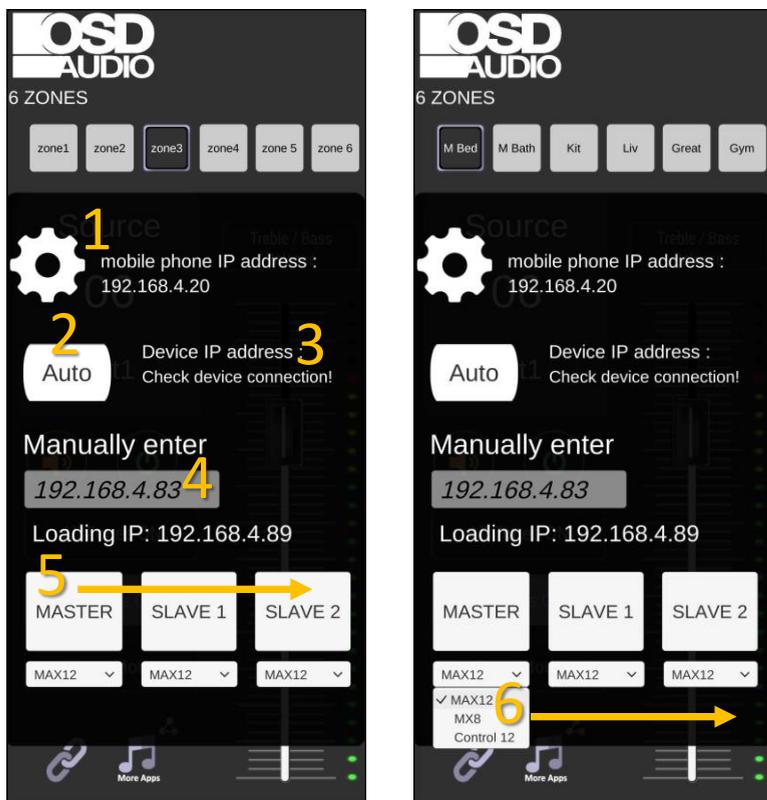
10. Settings and Connection

Please read the instruction in next page for properly connection.

11. Streamer icon

Press this icon to open the streamer APP.

APP QUICK START - SETTINGS AND CONNECTION



1. Mobile phone IP address

When the smart phone or Pad is connected to local network, the IP will automatically show on this area.

2. AUTO

Press AUTO to search the device IP.

3. Device IP address

When the IP is found, the APP will connect to the device automatically.

4. Manually Enter

Manually enter the device IP to connect to the device.

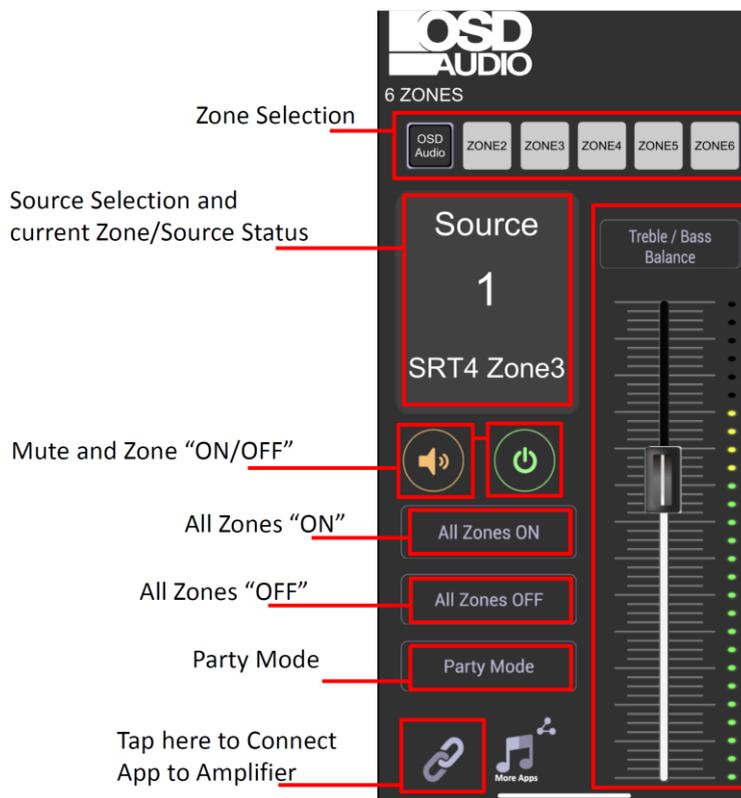
5. MASTER/SLAVE Selection

When the MASTER amplifier connecting with additional SLAVE1/SLAVE2 amplifiers, press one of these buttons to determine which amplifier will be controlled.

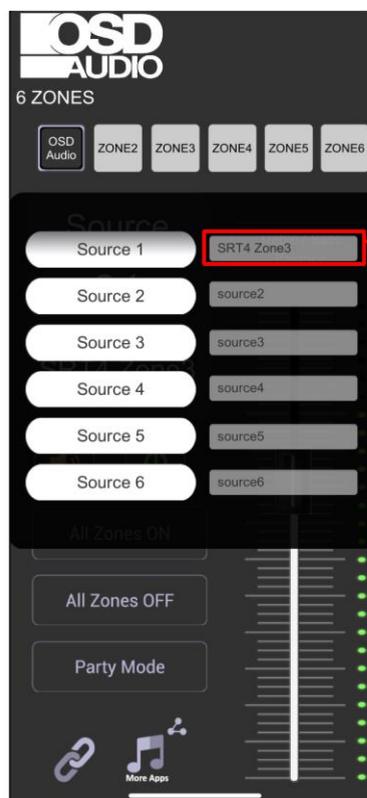
6. MAX12/MA8/Control 12

Select MAX12/ Six Zones, MAX8/4 Zones, Or Control 12/6 Zones Preamp Only for the corresponding MASTER/SLAVE1/SLAVE2 amplifier/Preamp.

More OSD Control App Information:



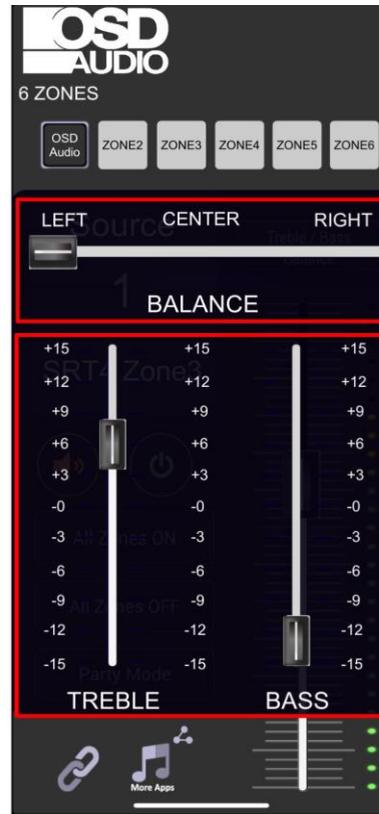
Tap/hold display box and you will have the option to updated the name of each source input.



Tapping on each section will let you change the name of each source.

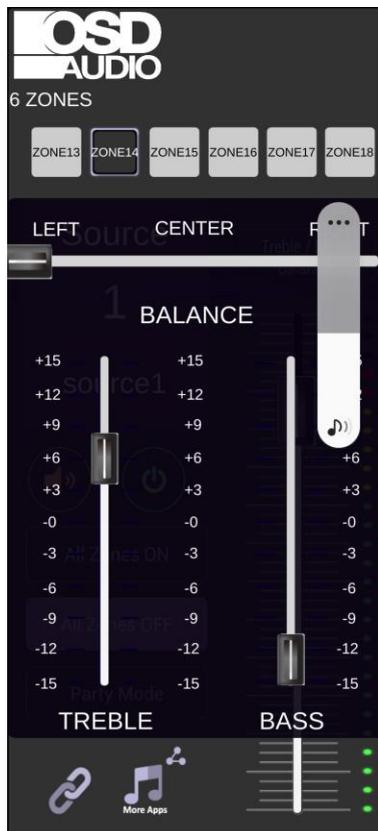


Tap/hold "Treble / Bass Balance" will let you open the feature for Balance, Bass, and Treble adjustments.

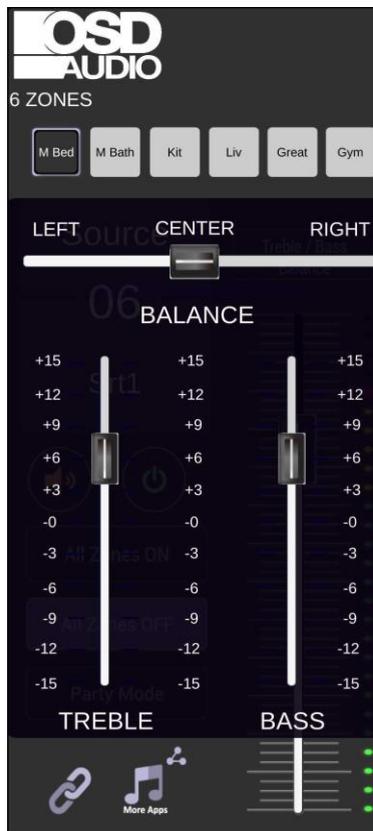


Balance Adjustment

Treble and Bass Adjustment



This may Pop up, not good



Balanced Adjustment



NERO MAX 12; Optional Control Keypads and IR Remote

OPTIONAL CONTROL KEYPAD

Sold Separately

(NERO MAX12 Keypad/IR Remote Kit)

Includes 6 Key-Pads and one IR Remote

Free OSD Control App duplicates Keypads

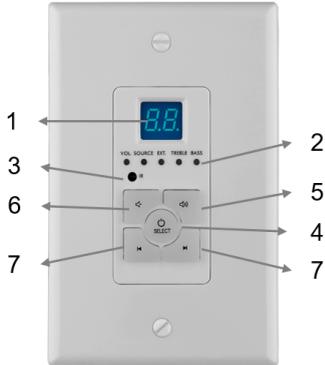
1. Numeric LED Display
2. Selection and Status LED's
3. IR Receiver Sensor for respective zone
4. Power/Status; Press and Hold to turn ON/OFF.

When ON, Press to toggle through settings

5. Increase Volume, Treble or Bass
6. Decrease Volume, Treble or Bass
7. Source Select Advance/Back



Free OSD Control App duplicates Keypads



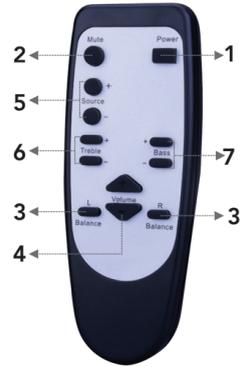
REMOTE CONTROL

M12IRR INFRARED REMOTE-CONTROL FEATURES

The M12IRR infrared remote control provides complete zone control through the IR receiver located on the NERO Max 12 keypad. All keypad functions can be accessed using the M12IRR. In addition to the keypad functions, the M12IRR has a MUTE button to temporarily mute audio in the zone. Once the MUTE function is activated the keypad's LED display will flash, indicating the mute status. Press the MUTE button to continue playing music or press the keypad volume up or down buttons to un-mute the zone. One M12IRR is included with the Optional Max 12 Keypads.

IR Remote Control works with Keypads only. It is included with Optional Keypad Kit

1. Power: switches power (On/Off) for the respective zone
2. Mute: allows you to mute a respective zone
3. Bal: Left & Right Balance in stereo mode
4. VOL: Volume adjustment up/down
5. Source: Used to select signal input for the respective zone
6. Treble: Enhance or reduces the high frequency up and down
7. Bass: Adjust Bass enhance and reduce for the respective zone



Note: IR Remote only works with the Control Pads with their built in IR Receivers

