

# McLELLAND®

## MAP-1200PRE | 6 Source /6 Zone Multi-room Controller



OWNERS MANUAL

# DEAR CUSTOMER

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

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## WARNING

1. Do not expose this unit to water, moisture, or excessive humidity.
  2. Do not install or place this unit in a built-in cabinet, or other confined space without adequate ventilation.
  3. To prevent risk of electrical shock or fire hazard, due to overheating do not obstruct unit's ventilation openings.
  4. Do not install near any source of heat, including other units that may produce heat.
  5. Do not place unit near flames.
  6. Only clean unit with a dry cloth.
  7. Unplug unit during lightening storms or when not used for an extended period of time. A surge protector is strongly recommended.
  8. Protect the power cord from being walked on or pinched, particularly at the plugs.
  9. Use unit only with accessories specified by the manufacturer.
  10. Refer all servicing to qualified personnel.
- 

## CAUTION

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,  
DO NOT REMOVE COVER (OR BACK).  
NO USER-SERVICEABLE PARTS INSIDE.  
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



# INTRODUCTION

McLELLAND MAP-1200PRE is a functional 6x6 matrix controller, easy-to-install, highly compatible, expandable and user-friendly audio distribution system. With few simple steps to install, it provides up to 18 zones which all can be controlled by packaged keypads or IR remote controller. Six line-level inputs are provided where to any line-level music source such as a CD-player, Tuner, MP3 player, smartphone or other devices can be connected. An Optical digital input to manage the sound of a flat screen or a CD player to have high resolution of sound quality to each output zone. Simply determine the different output power of amplifiers to suit the demand of each output zone, so every audiophile in every zone can use IR controller or keypads to enjoy the powerful audio. High functionality and performance bring you musical enjoyment just the way you want it.

- \* 6 Line input sources, including RCA, Stereo 3.5mm and OPTICAL.
- \* Provides 6 output zones.
- \* Keypad to control each output zone.
- \* Enable control over Ethernet TCP/IP.
- \* RJ45 Ethernet port for the wired connection to the local network.
- \* Another RJ45 Ethernet expansion port for connecting with smart TV or other device.
- \* RS-232 port allows 2-way communication with the Home Automation system.
- \* Built-in IR receiver & IR remote controller for Source select/Volume/Treble/Bass.
- \* 12V DC trigger output to external device when the zone is power on.
- \* Expandable up to 18 Zones by additional 2 units.
- \* 6 LEDs for 6 zones Power On, Standby and Mute.

# SPECIFICATION

S/N Ratio .....	-110dB
THD .....	0.05% (1V)
Frequency Response .....	20Hz - 20KHz (-0.5dB)
Input Impedance .....	>47 K Ohms
Input Sensitivity .....	1V
Crosstalk .....	-75dB (@1kHz)
Output Impedance .....	100Ohms
Output Level .....	3V
Trigger Out Voltage .....	DC +12V
Infrared Frequency .....	38kHz
Input Connectors .....	RCA, 3.5mm stereo, OPTICAL
Output Connectors .....	Terminal Block
Network Connector .....	RJ-45, Standard 10/100Mb
Power Supply .....	DC 15V/1.6A
Power consumption .....	24 W, Max.
Dimensions .....	440 mm x 44 mm x 196 mm (WxHxD)
Weight .....	2Kgs

# PACKAGE CONTENTS

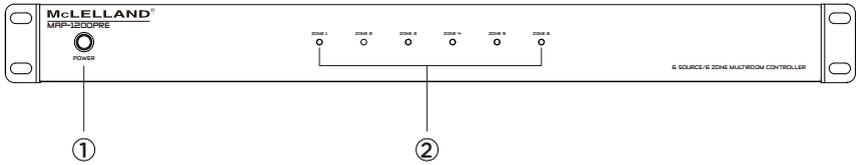
- \* 6x6 Controller
- \* Rack Mounting Ears - 2 (Installed on Controller)
- \* Terminal Blocks - 12 (Installed on Controller)
- \* External Adaptor
- \* User Manual

**There is an optional package for additional accessory, including:**

- \* Remote Control
- \* Expansion Ribbon Cable
- \* Keypad Connection Hub and Decora Wall-plate
- \* PoE Keypads with built-in IR RX and Decora Wall-plates - 6

**If these optional package is needed, please contact your local dealer.**

# FRONT PANEL



## 1. Power ON/OFF/ STANDBY

Depress the power button to turn on the system. Press it again to release the latch and power the unit off.

**Note** that even the Master Controller is powered on, each zone will remain in Standby mode until the zone keypad is activated.

## 2. Standby/Zone ON LED

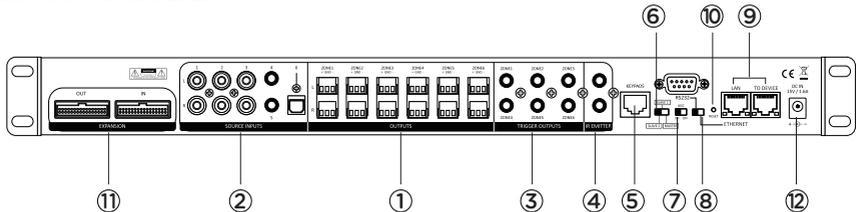
These six LEDs illuminate to indicate the status of each zone.

Blue: In Standby mode.

White: In Activate mode.

Blue/White: In Mute mode.

# REAR PANEL



## 1. PRE-AMP OUTPUT

Stereo Line level output on each zone. Connect to the input of amplifiers or powered speakers.

## 2. SOURCE INPUTS

Source1-3 : RCA Stereo Input

Source4-5: 3.5mm Stereo Input

Source6: OPTICAL Digital Input

## 3. TRIGGER OUTPUT

When the zone is activated, the corresponding jack will output 12VDC to trigger other device.

## 4. IR EMITTER

IR Outputs to control sources

## 5. KEYPAD

RJ-45 jack Connects to the keypad hub for 6 keypads.

## 6. MASTER/SLAVE SWITCH

Set the unit ID when connecting multi Controller systems

## 7. AGC

Automatic Gain Control, brings low level up to a present-level.

## 8. ETHERNET/RS232 SWITCH

ETHERNET: When the amplifier connects to Ethernet.

RS232: When the amplifier control by PC or Control Device via RS-232 port.

## 9. ETHERNET PORTS

Dual LAN ports, one connects to the LAN port of local router. Another connects to network TV or other device which requires Ethernet.

## 10. RESET

The RESET button is used to reset the ETHERNET back to factory default settings.

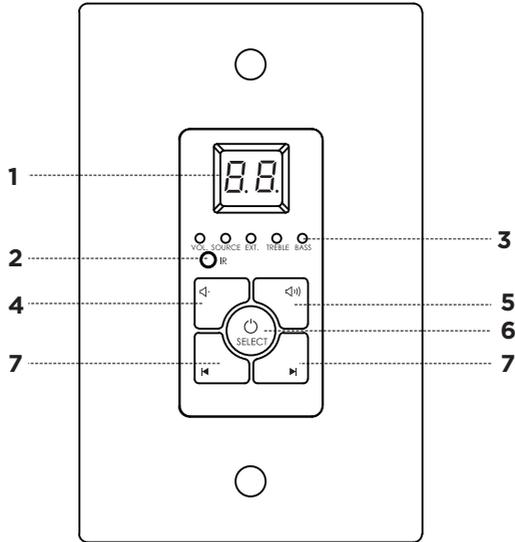
## 11. EXPANSION IN/OUT PORT

Expandable to 18 zones with 3 x Multi-zone Controller systems.

## 12. DC INPUT

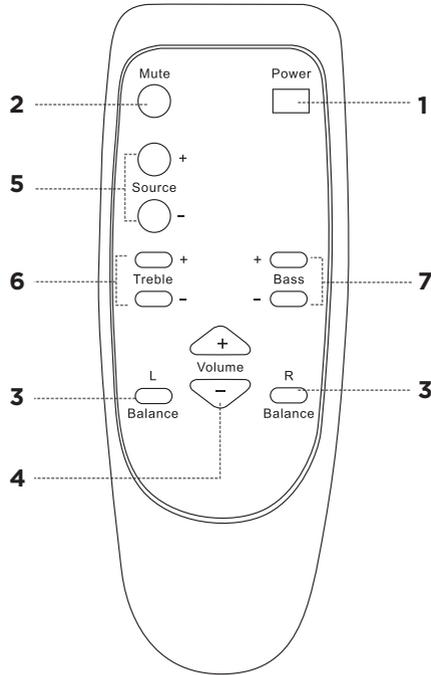
Connect the supplied DC adapter to the DC IN jack, and then plug it into a standard household outlet

# KEYPAD



1. Numeric LED Display
2. IR Receiver Target
3. Selection and Status LED's
4. Power/Status. Press and Hold to Turn Zone ON/OFF. When ON, Press to toggle through settings
5. Increase Volume, Treble or Bass
6. Decrease Volume, Treble or Bass
7. Source Select

# REMOTE CONTROL



1. Power: switches power (On/Off) for the certain zone.
2. Mute: allows you to mute a certain zone.
3. BAL: These L & R buttons can adjust the balance of L/R channel in stereo mode.
4. VOL: Volume adjustment
5. Source: Used to select signal input.
6. Treble: This allows you to enhance or reduce Treble of signal in individual zone.
7. Bass: This allows you to adjust the Bass for the individual zone

# CONNECT AND OPERATE

Before you begin to install the MAP-1200ED, it is important to implement good installation practices:

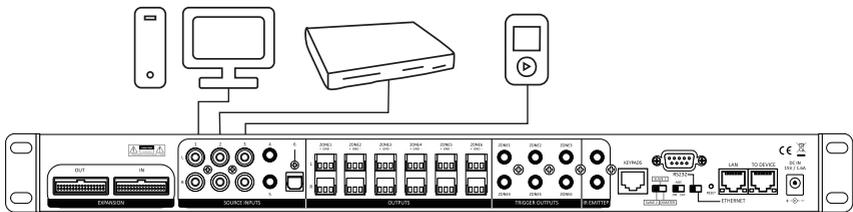
1. Make sure that AC power is disconnected before making ANY connections to the main unit and attached devices.
2. Install in a well-ventilated environment
3. Do not install above or below sources of heat
4. Use good quality cabling
5. The unit can be installed within a rack using the provided mounting rack ears

## CONNECTING THE SOURCES

The MAP-1200PRE provides 6 x stereo unbalanced line level source inputs which can be accessed by any zone. Inputs 1-3 provide RCA jacks for connecting the audio sources with RCA outputs.

Inputs 4 and 5 provide inputs on 3.5mm stereo jacks and input 6 also provides one Digital Optical input for digital source like TV ARC, DVD and CD players or cable/ satellite boxes.

Always use good quality shielded RCA cables to connect sources to the MAP-1200PRE and keep RCA cables as short as possible to avoid RF interfere.

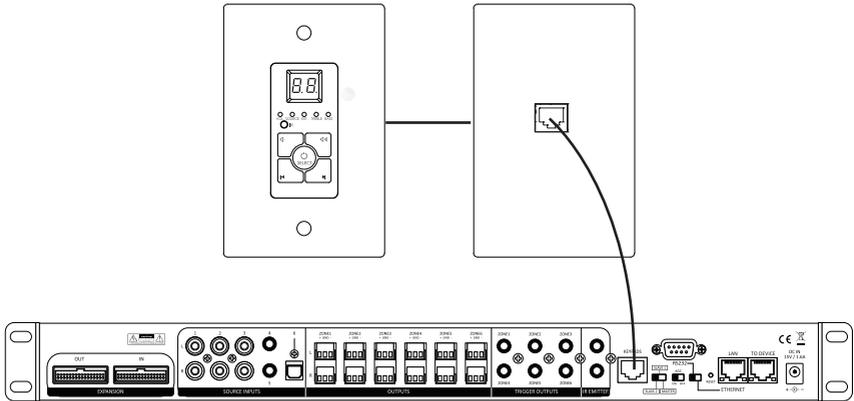


Some sources such as MP3 players and Cell Phones may require a 3.5mm Stereo to RCA Cables in order to connect to the controller

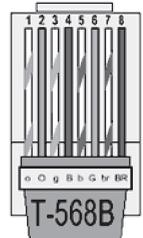


# CONNECTING THE KEYPADS

The MAP-1200PRE comes with 6 POE enabled keypads. This allows for source control from each specific zone as well as IR routing to the appropriate source devices once selected. The MAP-1200PRE also comes with a hub that allows for all 6-keypads to be connected to the amp via Cat5e/6.



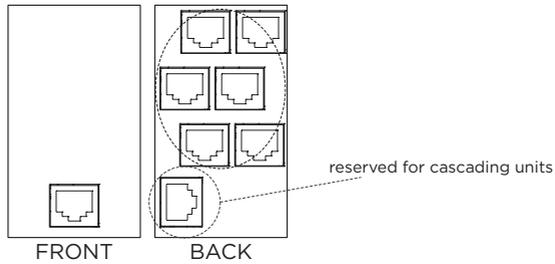
Without power being connected, connect a Cat5e/6 cable to the RJ45 port labeled KEYPADS on the back of the AMP We recommend terminating the Cat5e/6 using the 568B standard.



At this point it is also important to address your keypads. Refer to the chart below which is also found on the PCB board of the back of the keypad to set the dip switches according to the zone you would like it to control.

ZONE-1			ZONE-2			ZONE-3		
ON	ON	OFF	ON	OFF	ON	ON	OFF	OFF
1	2	3	1	2	3	1	2	3
ZONE-4			ZONE-5			ZONE-6		
OFF	ON	ON	OFF	ON	OFF	OFF	OFF	ON
1	2	3	1	2	3	1	2	3

Connect the other end of the Cat5e/6 to the lone RJ45 port found on the front side of the Keypad Hub. The front is what fits into the provide decora plate. Note that the Cat5e/6 between the unit and the hub should only be between 7-10ft. The RJ45 ports on the back of the Keypad Hub are not assigned but the single RJ45 port isolated on the bottom of the hub is reserved for cascading units.

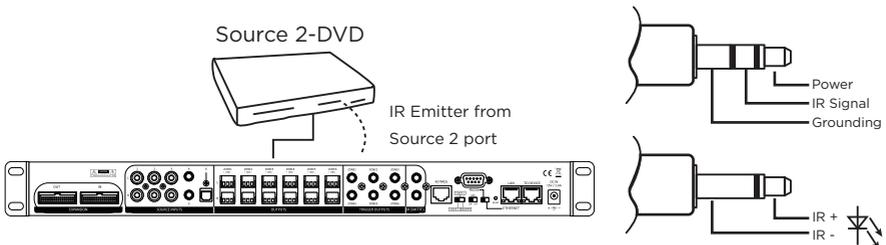


Connect the other end of the terminated Cat5e/6 to the RJ 45 port on the back of the assigned keypad and installation is complete. Complete zone and source control as well as IR and power are provided through the single Cat5e/6.

## INFRARED EMITTER OUTPUTS

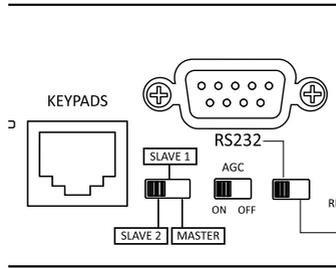
There are two Infrared (IR) emitter outputs on the rear panel. These outputs are used to control the connected source components remotely through the MAP-1200PRE IR system.

For example, connect an IR emitter to IR Emitter output jack of the controller, and then connect the flasher to the IR receiver window on one of connected sources. Now you can use the source remote control in any zone and control your source through the keypads remotely. The keypad should have the corresponding source selected for the IR to work. Repeat this for another Infrared (IR) enabled sources for complete IR source control.



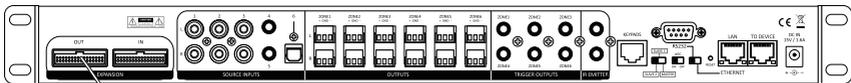
# CASCADING SOURCES INTO ADDITIONAL ZONES

The MAP-1200PRE allows 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 to identify each unit.

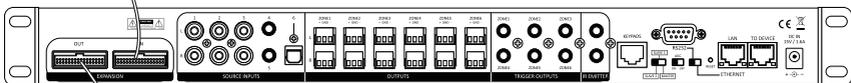


Once each unit is correctly addressed, use the provided ribbon cables to connect the OUTPUT of the original MASTER unit into the INPUT of Slave 1. To cascade the sources into a third unit, using the provided expansion ribbon cable, go out of the OUTPUT port from the device addressed as SLAVE 1 INTO the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

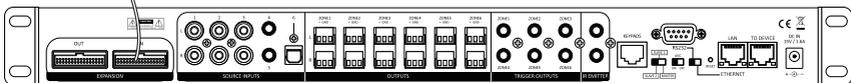
## Master



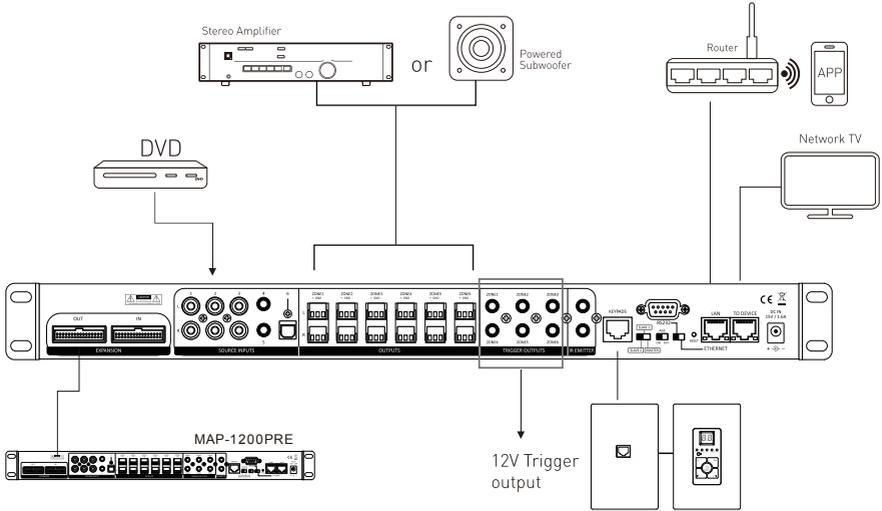
## SLAVE 1



## SLAVE 2



# CONNECTION DIAGRAM



## ETHERNET PORTS INSTRUCTION

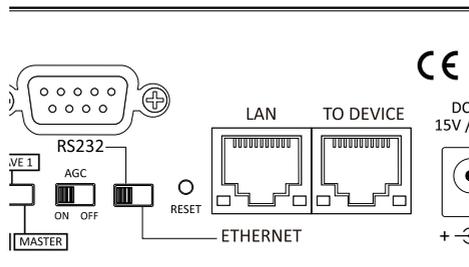
There are two RJ-45 jacks on the rear panel of this amplifier for the connection to Ethernet.

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.
2. Connect another port (TO DEVICE) on the rear panel of controller to the smart TV or other Network devices.

The port simply works as SWITCH function as long as the LAN1 port enabled to Ethernet.

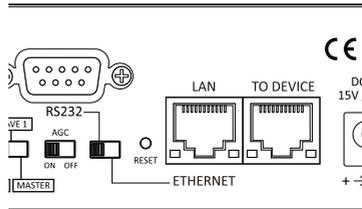
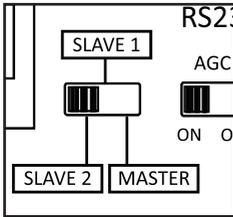
**Note:** When controlling via ETHERNET, please make sure the ETHERNET/RS232 switch is set at ETHERNET position.



# INTEGRATED NETWORK

The controller and APP are easy to install and connect to the local network, simply connect the RJ-45 IN port to the router via Cat5 cable, and also make sure your smart devices connect to the same local network. After connecting the controller to the router by Cat5 cable, the controller will connect with the local network automatically.

In case, having the problem for connecting to the network, please check the position of switches on the rear panel.



Please switch to MASTER and ETHERNET.

Note. Please do not press “Reset” button.

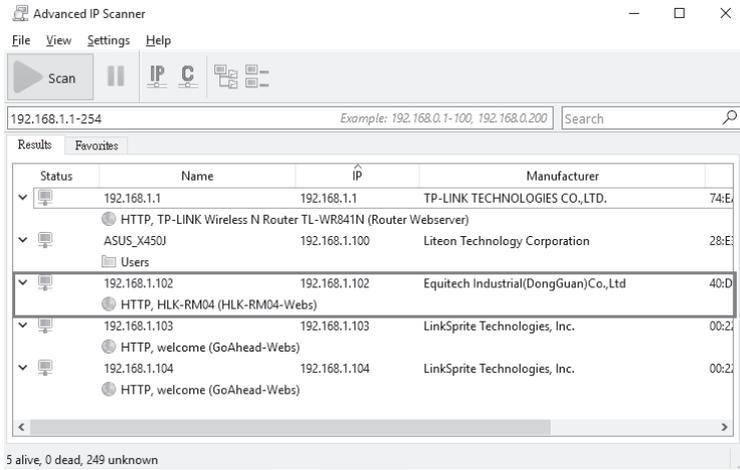
Note. Please do not connect the Ethernet port of MAP-1200PRE to the computer directly.

1. Open the IE web browser of PC, log in to the WEB configuration page of local Router to find the IP address of MAP-1200PRE (shown as below)

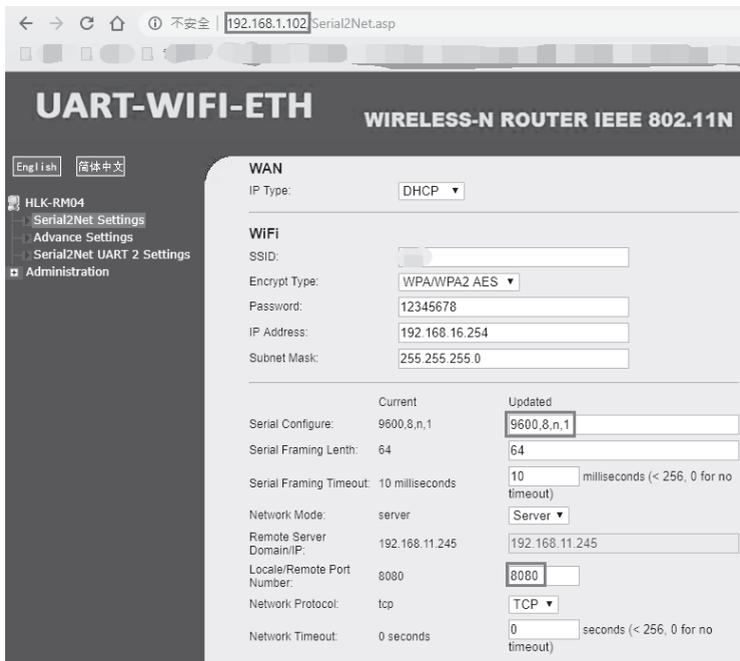
	X450J 在线时长: 59分钟24秒	IP: 192.168.100.8 MAC: 28-E3-47-CD-64-40
	B01B 在线时长: 59分钟16秒	IP: 192.168.100.11 MAC: 00-22-6C-CA-80-1B
	B3EC 在线时长: 59分钟15秒	IP: 192.168.100.9 MAC: 00-22-6C-CA-83-EF
	MAP-1200PRE 在线时长: 54分钟23秒	IP: 192.168.100.7 MAC: 10-A4-BE-FB-0C-07
	KENNYLAI 在线时长: 51分钟12秒	IP: 192.168.100.13 MAC: 4C-ED-FB-D9-D1-80

## 2. Using “Advanced\_IP\_Scanner” software to find the IP address.

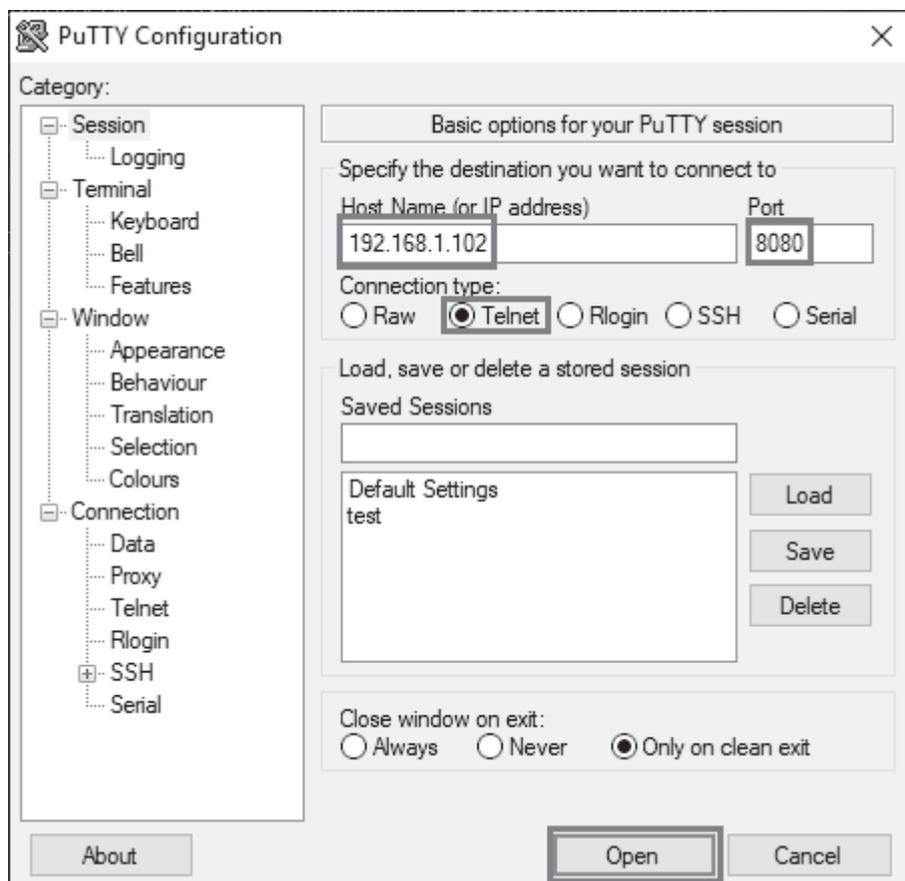
Please visit [www.advanced-ip-scanner.com](http://www.advanced-ip-scanner.com) for free download.



Then enter the IP address of MAP-1200PRE to the IE browser (shown as below), ensure the Serial Configure is 9600,n,8,1. After finishing this step, MAP-1200PRE could be controlled through the local Network.



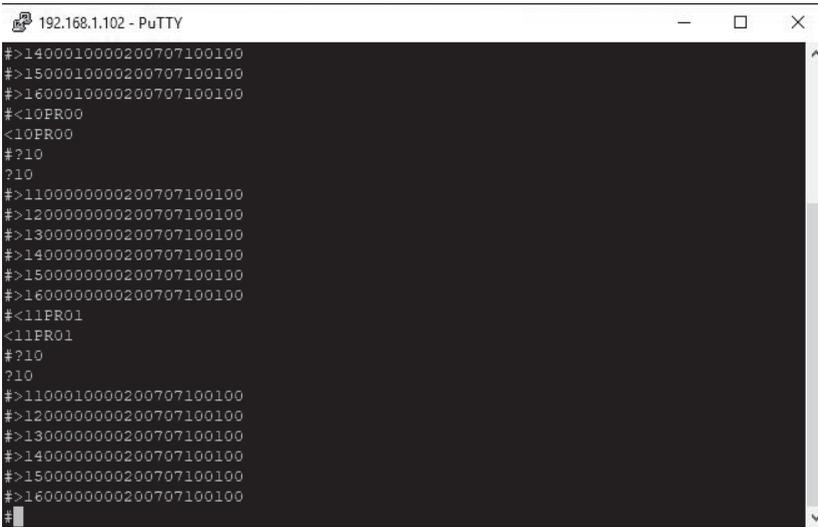
Download free software “PuTTY” Tool from the internet to control the device.  
Operation diagram as below:



Click Telnet, enter the IP address of MAP-1200PRE 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 MAP-1200PRE.

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

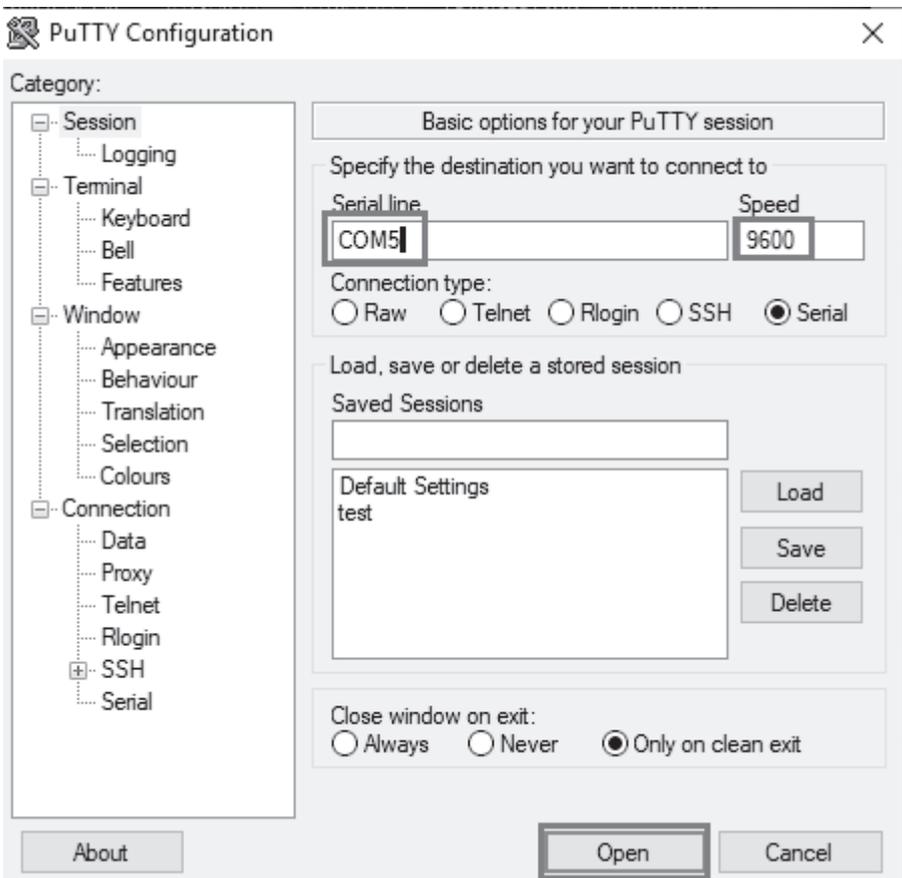
# RS232 CONTROL

The MAP-1200PRE provides an RS-232 serial port connection located on the back panel and uses a USB-to- Serial Comm cable connection. The MAP-1200PRE supports bi-directional RS-232 communication with third party automation systems. All keypad and remote control operations can be controlled via RS-232 in addition to system expansion up to 18 zones or 3 MAP-1200PRE units linked together using the included 18 pin expansion cable.

Note: Set the switch to RS232 position.

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

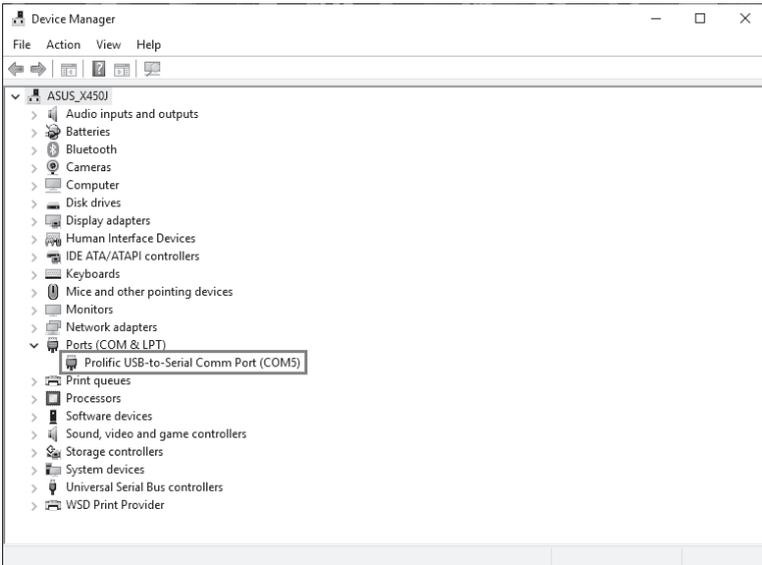
Using free software “PuTTY” Tool to control the device. Operation diagram as below:



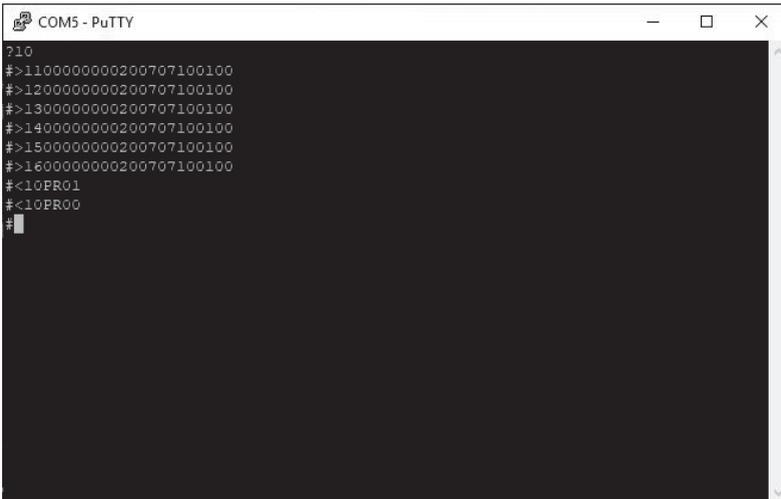
Click Serial, check the COM port and enter the Baud rate 9600.

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 MAP-1200PRE.

## MAP-1200PRE 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 computer3

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:

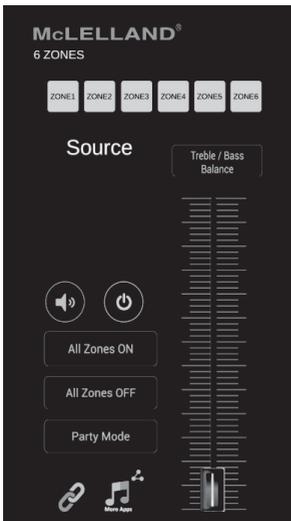
1. The control APP is available for Apple iPhone/iPad and Android smart phone/Pad,



2. Please search "MAP-800/1200" on Google Play / App Store to download.

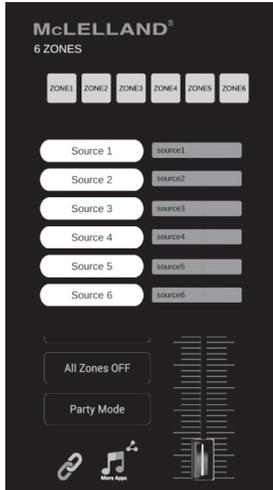


3. Download and install the APP



**Note.** This APP is applied to McLELLAND controller and Multi-Room amplifiers

# 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. 6 Zones/4 Zones Selection

Select 6 Zones or 4 Zones for corresponding MASTER/SLAVE1/SLAVE2 amplifier.

**Note:** MAP-1200PRE is 6 zone controller.