



element · X  
Enjoy Hi-Res streaming audio



# MATRIX AUDIO ELEMENT SERIES

ELEMENT X - ELEMENT P - ELEMENT M - ELEMENT I

MANUAL

*There are 4 devices in the Element Series. The X, P, M, and I. The ways to setup and use these devices are similar enough that we decided to include them together in this manual.*

MOON  AUDIO



## THE MATRIX AUDIO ELEMENT X

In the summer of 2019, Matrix Audio introduced their most advanced headphone amplifier, pre-amplifier, DAC, DAP, and music streamer to date: The Element X. The Element X streamer is the flagship of Matrix Audio's Element series line. The Element X provides audiophiles and music lovers everywhere with a quality music player that has all the features of other DACs at a lower price point.

The Matrix Audio Element X DAC section is outfitted with the ES9038 PRO+ DAC chip and an ES9311 low drop-out, low-noise voltage regulator. These two items are designed for high performance audio systems and are one of the reasons the Element X is priced the way it is. It is also equipped with a Crystek CCHD-950 femtosecond clock, which provides options for both balanced and unbalanced listening with most headphones. The Element X has dual 3-pin and 4-pin XLR outputs for balanced listening, and quarter-inch outputs for unbalanced listening. No other Element series streamer has such varied output connection options.

The Element X is double shelled with an inner shell of galvanized steel and an outer shell made from 4mm aluminum. Matrix Audio sought to minimize resonance of its flagship product by focusing on materials and the overall construction of the device. One of the best things about the Element X is its volume control. Matrix Audio had the idea to combine the functionality and advantages of analog audio control with the precision of digital audio control. Composed of a cluster of relays, the Element X has several volume adjustments that can be made, giving the listener complete and accurate control of their music (Note that for every 20dB of attenuation there will be an audible "click" in the relay).

The Element X is made with a Noratel 40W linear power supply that creates the foundation for its fantastic sound quality. The device is equipped with linear regulators and a 4-layered printed circuit board (PCB) that assists in the reproduction of original and accurate sound playback. As beautiful the device is on the inside, the outside is just as much so. The design of the Matrix Audio Element X is a sleek and simplified streamer, stripped of eccentricities like curved corners and a myriad of buttons. The design is timeless – minimalistic yet giving you ease of access to everything you need.

Combining a world-class DAC, DAP, headphone Amplifier, pre-amplifier, music streamer, incredibly low noise-floor, and enough power to drive any headphone on the market, the Element X is one of the best listening experiences you can have.

# element · P

One stop destination for Hi-Res streaming



## THE MATRIX AUDIO ELEMENT P

The Matrix Audio Element P is the only Element series streamer that's configured for speaker connections and playback. The Element P provides you with a 3-in-1 audio source, DAC, and speaker amplifier. Connect it to passive speakers and enjoy a complete Hi-Fi stereo system in one sleep package. The Element P uses a significant amount of what makes the Element X headphone amplifier and streamer so great. They both share the same timing clock, digital input options, and sampling rates of PCM up to 768kHz/DSD up to 22.4MHz. Mastered for MQA decoding and rendering, the Element P is equipped to deliver the original sound of master recordings with your system.

The Element P is equipped with a ES9028 Pro DAC. The ES9028 PRO is designed to meet the demands of high quality and performance that a SABRE DAC can give, but at a more economical price point. The inclusion of this chip over the ES9038 PRO+ is one of the reasons that the Element P is priced the way it is. The volume controls in the other Element models are either digital volume control (Element I & M) or hyper control relay array AND digital volume control (Element X). The Element P's volume control is a MUSES 73720 Resistor Divider. This volume control has incredibly low noise and low distortion with a resistance ladder circuit. This type of control is optimal for the linear volume control of Hi-Fi audio devices like the Element P.

The Element P is made with a custom Noratel 25W linear power supply designed for quiet operations and is equipped with Nichicon audio grade capacitors that filter and cancel any further potential for noise. This configuration is what creates the foundation of its fantastic sound quality. The amplifier is the ICEpower 250ASX2 class D amplifier module. This module from Denmark has a rated power output of 230 Watts per channel at 4 Ohms. This output is capable of driving small bookshelf speakers to small and medium standing speakers. Matrix Audio designed the Element P's linear power supply and placed it on the front end, instead of using the ICEpower module's front-end circuit power output.

By using a separate linear power supply on the Pre-Amp/DAC section of the unit, it separates the ICEpower amplifier power supply from the front-end circuit. This prevents the bleed over of any potential noise. It also means that both power supplies can operate at a more efficient rate. The separation of power supply duties is a plus for any circuit and is another reason the Element P sounds so good.

Double-shelled with an inner shell of galvanized steel and an outer shell of 4mm aluminum like the Element X, Matrix Audio sought to minimize the case resonance of its speaker streamer. By focusing on the materials that it's made of, Matrix Audio minimized the vibration of the player. This type of laser focus in engineering makes a minimally disruptive streamer with respect towards playing operations and output. As their only speaker streamer option in the Element Series line, the Element P allows for quick configuration and set up for any audiophile. If your speakers are on a bookshelf or are freestanding, the Element P will make them come alive.



## THE MATRIX AUDIO ELEMENT M

With the introduction of the Element M, Matrix Audio improved upon the Element I's design. The Element M strikes a balance with the I and furthers its design elements while improving the performance and functionality of it all at a quality price point. Like other Element products, the device is packed with numerous features making it one of the most versatile music streamers on the market.

The Element M has a sampling rate support of up to 768 kHz and DSD up to 22.4 MHz. The Element also supports a TF card slot storage capability. This option provides the player with three storage options instead of only two. Lastly, the Element M is equipped with a Linear 30W power supply that regulates the output voltage by dropping excess voltage. Linear regulated power supplies like this one in the Element M have an incredibly low noise floor, which is one of the reasons why the Element M sounds so great.

The Element M is optimized for MQA decoding and rendering. MQA is a British technology that delivers the sound of an original master recording. The master file is then fully authenticated and made small enough to stream or download.

The headphone amp in the Element M contains an input stage that rejects common-mode distortion. The output stage of the amp is set in a high quiescent current state that gives off a mellow sound performance. It also has a ES9028 PRO DAC. The ES9028 is a quality DAC designed to meet the demands of high quality and performance that a SABRE DAC can give, but at a more economical price point.

As sophisticated as the Element M is on the inside, the outside is no different. It is constructed with a double shell with the inner shell consisting of galvanized steel and the outside made of 4mm aluminum. By focusing on the materials, Matrix Audio was able to minimize the vibrations of the music player, thus reducing case resonance as well. The Element M is Matrix Audio's mid-range product for the entire product line and their most cost-effective network streamer. It's by no means a budget device and competes with some of the best music streamers on the market.



## THE MATRIX AUDIO ELEMENT I

The Matrix Audio Element I is the entry level streamer for Matrix Audio's Element Series amplifiers and streamers. The Element Series has three other streamers, the Element P, Element M, and Element X. Matrix Audio's Element I, M, and X all have headphone amplifiers built in. The Element P is a streamer + speaker Amplifier. The Element I is a cost-effective streamer that provides you with several options on how to listen to music. Use the Element I and Matrix Audio remote app to stream Tidal or Qobuz. Listen to your uploaded audio from an external hard drive with headphones or push your music to Airplay or Roon. Hear how the Element I will leave a lasting impression and become a mainstay for your audio system for years to come.

Matrix Audio's Element I combines the audio circuits of the Element P and Element M streamers. Matrix Audio's intention behind this was to provide a quality streamer and headphone amp under a \$1000 price point. It's outfitted with the same ES9028 Pro DAC chip as the more expensive streamers in the Element series line. The ES9028 PRO is designed for audiophiles who demand high quality performance at an economical price point. The Element I also uses a XMOS XU208 USB controller. The controller allows for input resolutions of up to 24 bit/384 kHz. These two parts of the Element I provide more resolution than an average consumer's digital music library resolution.

The Element streamers product line can be controlled manually for simple functions like volume adjustments and powering it. However, Matrix Audio designed the remote app to provide its customers with a portable and mobile way to control their devices. Download the Matrix Audio remote app from the Apple or Google Play store and connect your player in the app with the video instructions provided in the setup and configuration portion of this guide.

The headphone amp on the Element I is the most discreet of the Element series streamers. Equipped with 1300 megawatts of power, the Element I is able to drive an array of hi-res audio headphones and IEMs. Whether your headphones have high resistance or your IEMs are highly sensitive, the Element I will be up to the task.

The streamer is powered by an external 20W AC adapter power supply. While the Element I doesn't have an external linear power supply, you're always able to upgrade according to what your system requires. Regardless, the powering unit was never compromised during our testing of the streamer and the circuit units of it use independent multi-channel low ripple low dropout (LDO.) This is what makes the Element I perform so well and sound so good.

At Moon Audio, we're thrilled to offer Matrix Audio's entire Element Series streamer line. The Element I provides our customers with a quality streamer for a quality price. It's a great streamer for those who are beginning their journey into the world of audiophilia because of its price, design, and functionality. We hope you enjoy how the Element I gives you more bang for the buck than you can imagine.

# COMPARISON SPECIFICATIONS

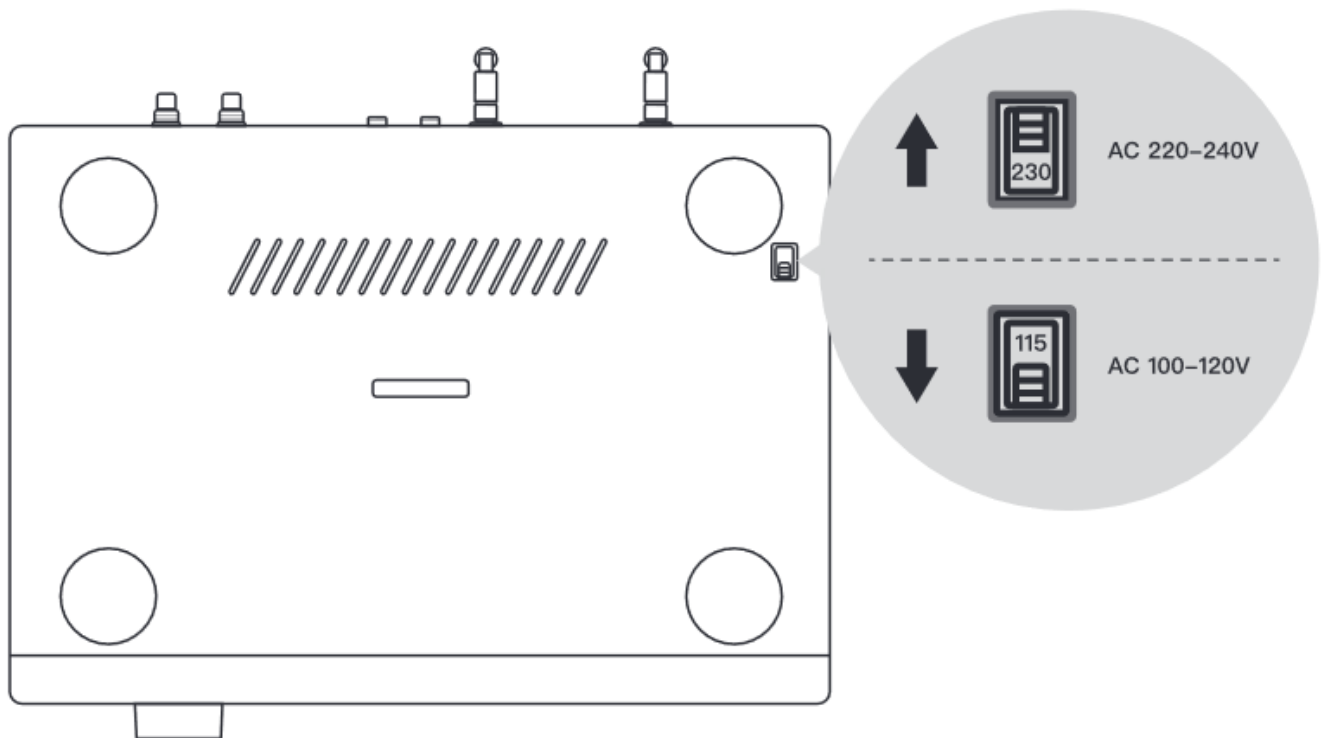
	ELEMENT X	ELEMENT P	ELEMENT M	ELEMENT I
<b>Price</b>	\$3,419.00	\$2,869.00	\$2,049.00	\$1,149.00
<b>DAC</b>	Quad-Core DAC: ES9038 PRO+ & ES9311	Quad-Core DAC: ES9028 PRO	Quad-Core DAC: ES9028 PRO	Dual-Core DAC: ES9028 PRO
<b>USB Chip</b>	XMOS XU216: PCM 16-24Bit 768kHz; DSD 11.2MHz (DoP); DSD 22.4MHz (Native)	XMOS XU216: PCM 16-24Bit 768kHz; DSD 11.2MHz (DoP); DSD 22.4MHz (Native)	XMOS XU216: PCM 16-24Bit 768kHz; DSD 11.2MHz (DoP); DSD 22.4MHz (Native)	XMOS XU208: PCM 16-24Bit 384kHz; DSD 5.6MHz (DoP); DSD 11.2MHz (Native)
<b>Clock</b>	Crystek CCHD-950 Ultra Low Phase Noise Femto-second Clock	Crystek CCHD-950 Ultra Low Phase Noise Femto-second Clock	SiTime Low Phase Noise Clock	SiTime Low Phase Noise Clock
<b>Digital Input</b>	Optical (x2); Coaxial (x2); IIS LVDS (x1); USB (x1)	Optical (x2); Coaxial (x2); IIS LVDS (x1); USB (x1)	Optical (x1); Coaxial (x1); IIS LVDS (x1); USB (x1)	Optical (x1); Coaxial (x1); IIS LVDS (x1); USB (x1)
<b>Line Out</b>	RCA (x1); XLR (x1)	N/A	RCA (x1); XLR (x1)	RCA (x1); XLR (x1)
<b>Headphone Out</b>	4-pin XLR; Dual 3-pin XLR; 1/4" TRS (6.25mm)	(Speaker Out): x2 (230W@4ohm)	1/4" TRS (6.25mm)	1/4" TRS (6.25mm)
<b>Output Level</b>	1/4-in: 1150mW @33ohm, 308mW @300ohm, 152mW @600ohm; XLR: 1700mW @33ohm, 1180mW @300ohm, 650mW @600ohm	N/A	1320mW @33ohm; 248mW @300ohm, 124mW @600ohm	1320mW @33ohm; 248mW @300ohm, 124mW @600ohm
<b>Network</b>	LAN: 10BASE-T/100BASE-TX; WLAN: 2.4GHz/5GHz, IEEE 802.11 a/b/g/n/ac standard	LAN: 10BASE-T/100BASE-TX; WLAN: 2.4GHz/5GHz, IEEE 802.11 a/b/g/n/ac standard	LAN: 10BASE-T/100BASE-TX; WLAN: 2.4GHz/5GHz, IEEE 802.11 a/b/g/n/ac standard	LAN: 10BASE-T/100BASE-TX; WLAN: 2.4GHz, IEEE 802.11 a/b/g/n standard
<b>Sampling Rate Support</b>	PCM up to 768kHz; DSD up to 22.4MHz. MA Player: PCM 768kHz/DSD512; Roon: PCM 768kHz/DSD256*; DLNA: PCM 768kHz/DSD512	PCM up to 768kHz; DSD up to 22.4MHz. MA Player: PCM 768kHz/DSD512; Roon: PCM 768kHz/DSD256*; DLNA: PCM 768kHz/DSD512	PCM up to 768kHz; DSD up to 22.4MHz. MA Player: PCM 768kHz/DSD512; Roon: PCM 768kHz/DSD256*; DLNA: PCM 768kHz/DSD512	PCM up to 384kHz; DSD up to 11.2MHz. MA Player: PCM 384kHz/DSD256; Roon: PCM 384kHz/DSD128; DLNA: PCM 384kHz/DSD256
<b>Volume Control Mode</b>	Hyper-Control Relays Array, Digital Volume	MUSES 72320 Resistor Divider	Digital Volume	Digital Volume
<b>USB Storage</b>	TF Card Slot (x1), USB Host (x2)	TF Card Slot (x1), USB Host (x2)	TF Card Slot (x1), USB Host (x2)	USB Host (x2)
<b>Supported Formats</b>	MP3, WMA, WAV, AIF, AIFC, AIFF, AAC, FLAC, OGG, APE, ALAC, M4A, DSF, DFF; MA Player, AirPlay/DLNA, Roon Ready, Full MQA Support, IR Remote	MP3, WMA, WAV, AIF, AIFC, AIFF, AAC, FLAC, OGG, APE, ALAC, M4A, DSF, DFF; MA Player, AirPlay/DLNA, Roon Ready, Full MQA Support, IR Remote	MP3, WMA, WAV, AIF, AIFC, AIFF, AAC, FLAC, OGG, APE, ALAC, M4A, DSF, DFF; MA Player, AirPlay/DLNA, Roon Ready, Full MQA Support, IR Remote	MP3, WMA, WAV, AIF, AIFC, AIFF, AAC, FLAC, OGG, APE, ALAC, M4A, DSF, DFF; MA Player, AirPlay/DLNA, Roon Ready, IR Remote
<b>Power Supply</b>	Noratel Linear 40W	Noratel Linear 25W	Linear 30W	20W AC Adapter
<b>Dimensions</b>	13.4" x 11.1" x 2.4" (340x281x60mm)	13.4" x 11.1" x 2.4" (340x281x60mm)	10.9" x 11.1" x 2.4" (275x281x60mm)	9.5" x 8.7" x 2.2" (240x220x55mm)
<b>Weight</b>	9.3 lb (4.2kg)	10.4 lb (4.7kg)	8.1 lb (3.7kg)	3.3 lb (1.5kg)

## Additional Element Series Features

- AirPlay and DLNA (Element X, P, M, I)
- MQA Decoding and Rendering (Element X, P, M, I)
- New USB Interface (Element X, P, M)
- Built-in Pre-amplifier (Element X)
- ICEpower Digital Amplifier Module (Element P)
- High Performance Power Supply System (Element X)
- Double Shell Structure (Element X, P, M)
- Hybrid Digital Volume Control (Element X)
- Digital Volume Control (Element P, M, I)
- Room Ready (Element X, P, M, I)
- MA Remote Compatible (Element X, P, M, I)

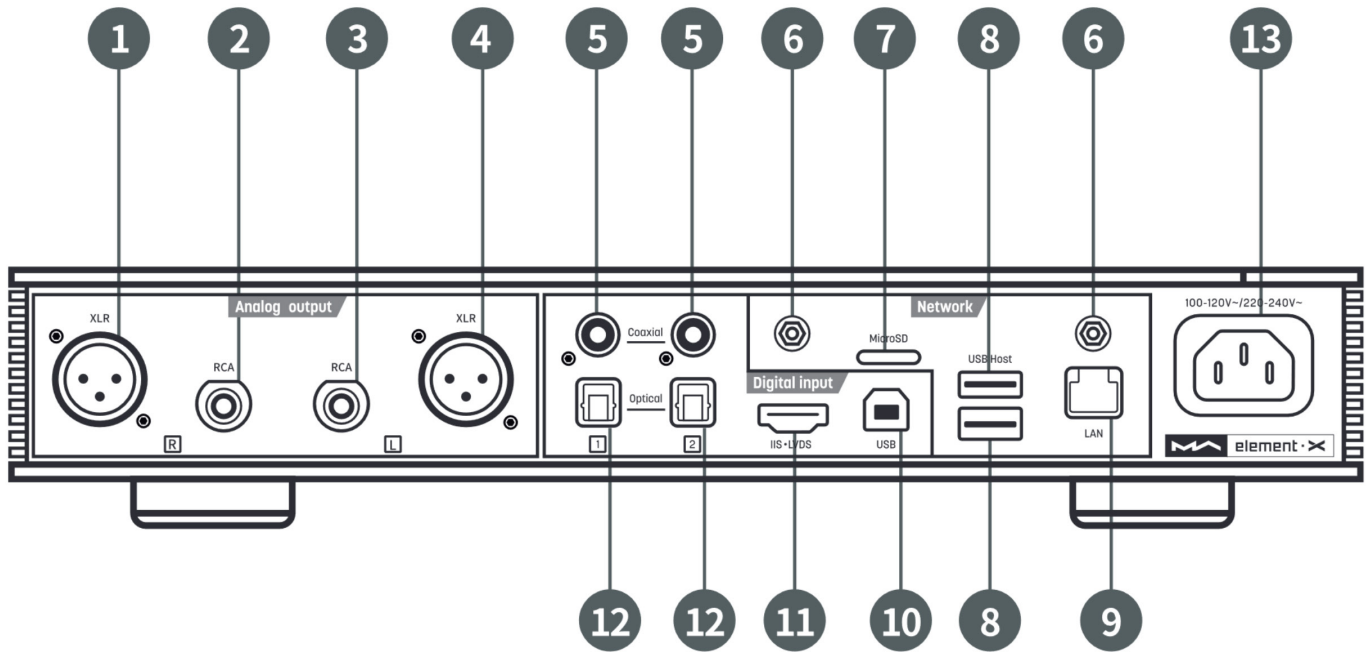
## Main Set Up

A few things to touch on before we go further with set-up.



- The X, P and M devices come with two possible voltage options. When your unit arrives it might come set to 220VAC.
- Look at the bottom of your device and look for a red switch. This can show either “230” for 220 to 240VAC or “115” for 110 to 120VAC.
- If using this device in North America this switch should show “115” Option before you power it on.

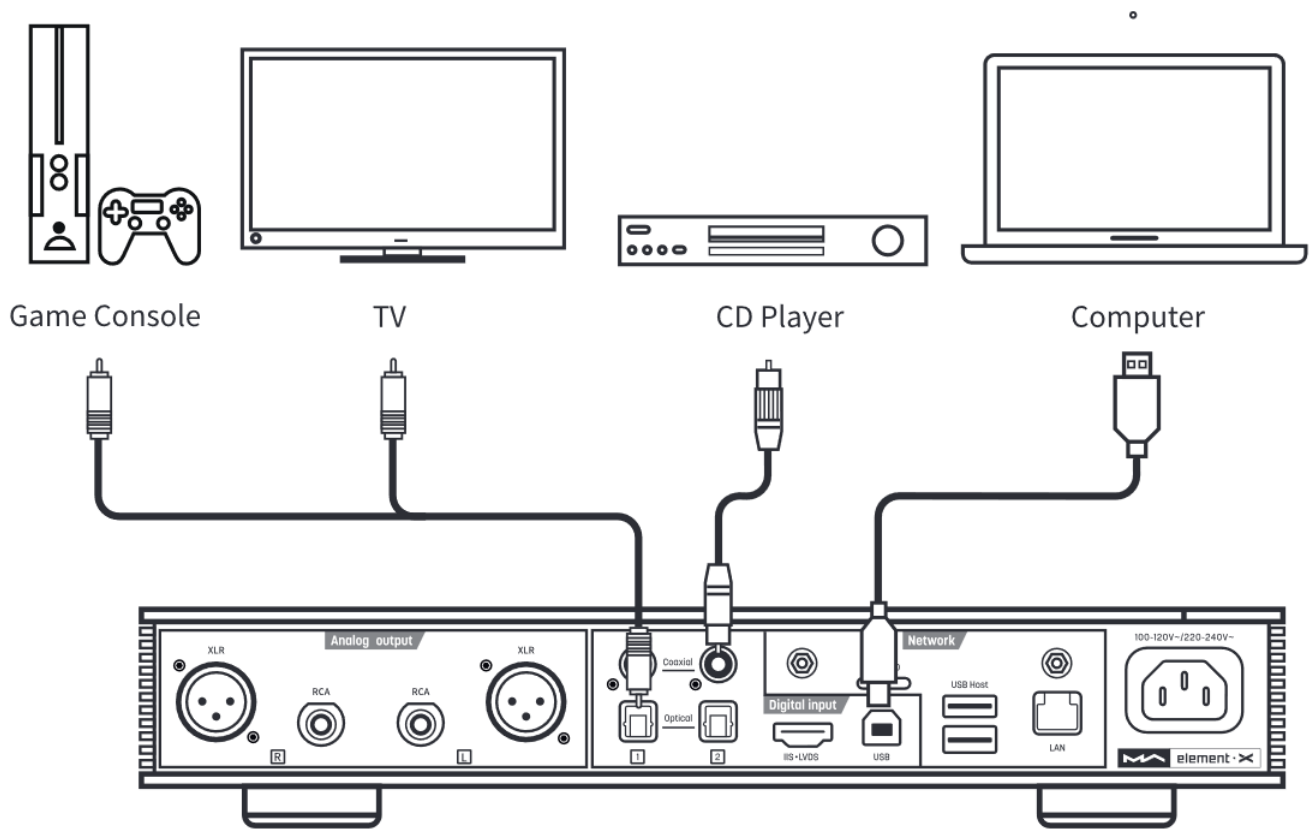
*(The Element 1 converts to DC in the wall wart, so it does not have this switch)*



## Input Options

- **If you plan on using this device with your network**, we strongly recommend using the direct LAN(9) connection for the best experience possible. If you do need to use Wifi, attach the included antennas to the antenna ports(6) and make sure you are as close as you can get to the main router.
- Mesh Networks and Signal Repeaters can have issues with any streaming devices (including the Matrix Audio Element series), so you do have a Mesh Network set up or if you need to use a Network repeater, you should check if using a direct Ethernet cable will be possible!
- Additionally there are some drivers, found at [Matrix-digi.com](http://Matrix-digi.com), under the downloads page. Here you can not only download the drivers, but you can also download your device's latest firmware, and access a PDF version of your manual.
- There is also a Matrix Audio app found on both Apple I devices and Android devices. This app can control settings for your device and update the firmware for your unit.





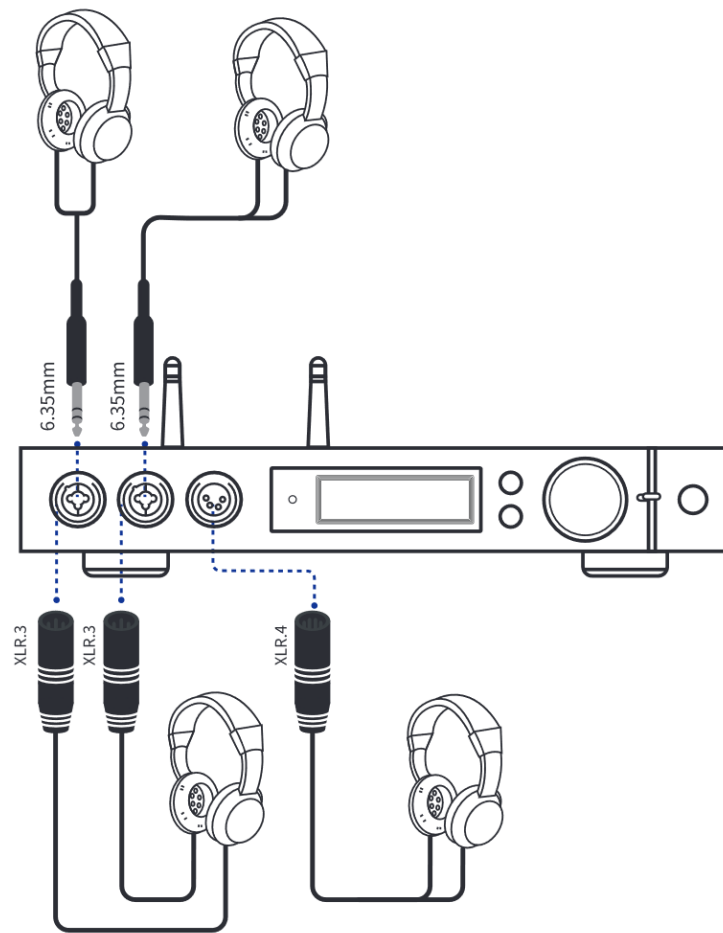
If you are using any Element Series device with digital source such as a CD Transport, PC, MC, or Game Console there are the following connections available:

Coaxial (5), Optical(12), and USB(10) as well as an IIS(“eye-Squared-ess”) Low-Voltage Differential Signaling Input(11). This looks very similar to an HDMI port, however this is for IIS data stream sources only. (For Example the Matrix Audio X-SPIDF 2 or

The PS Audio SACD Transport.) It will NOT WORK with any standard HDMI audio source.

You can also store your music files directly to this device via the Micro SD(7) and USB (8)data connections on these devices. Just plug in your music drive!

## Selecting your listening device:



## Output Options

If you have the Element X it is strongly recommended to use the Balanced Output as it provides a great listening experience. It is also one of the major factors that separates the X from the P, M, and I.

If you don't have a balanced audio cable for your headphones, you can purchase one from the [moon-audio.com](http://moon-audio.com) website. There are also Unbalanced and Speaker Preouts on the Element X, so you can use whichever best matches your set-up.

### The Element P

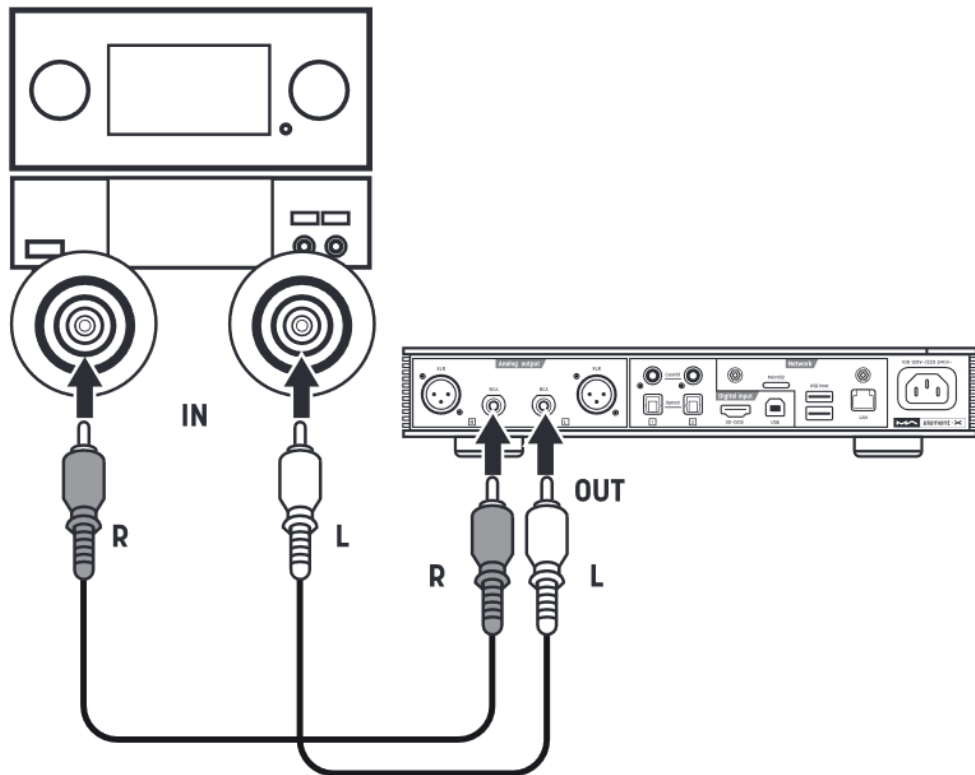
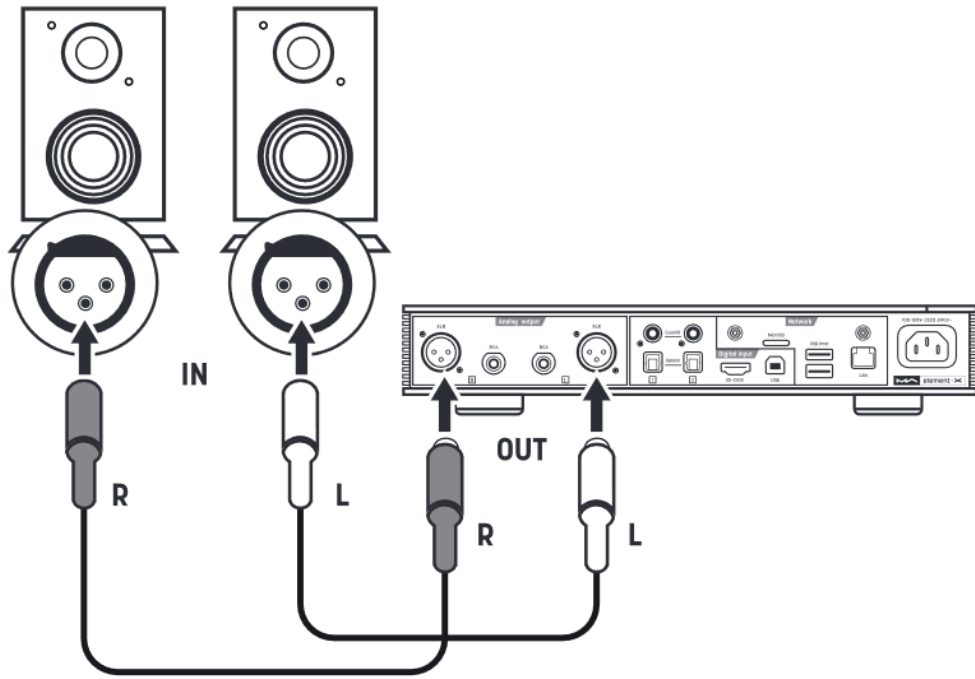
- Just has speaker outs.

### The Element M

- Similar to X but no balanced headphone out and only one unbalanced headphone port.

### The Element I

- Has the speaker pre outs and just a quarter inch jack on the front.

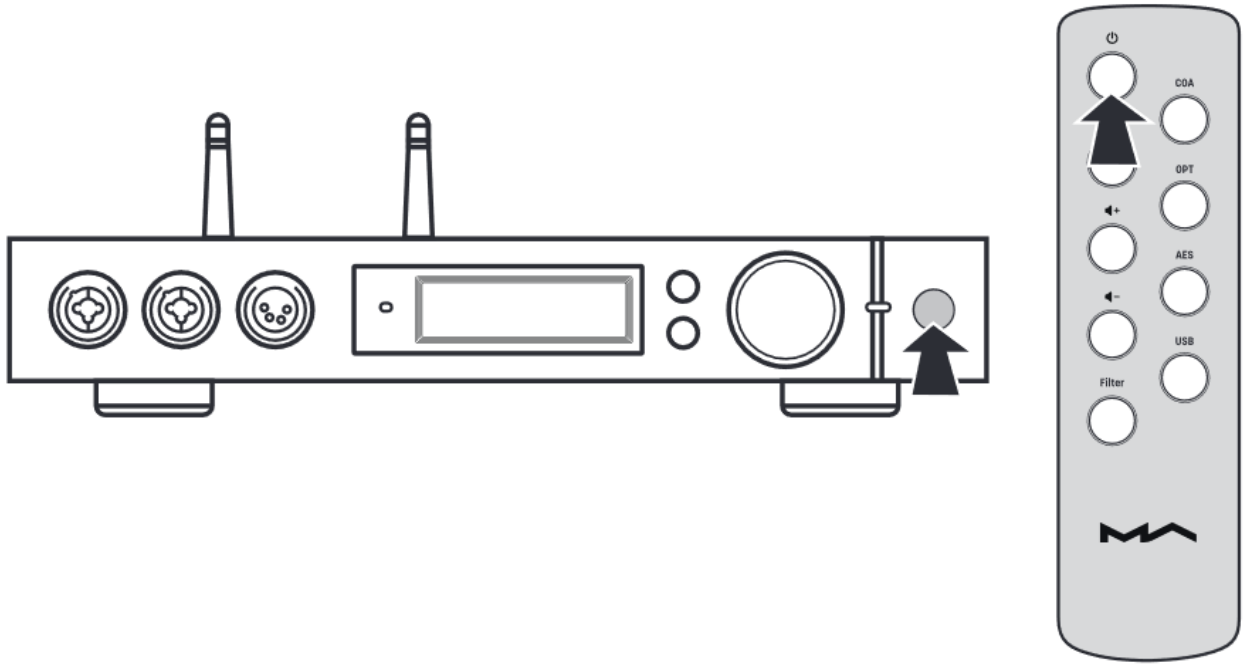


If listening to speakers via the PreOuts you can either connect directly to active (powered) speakers or to a separate amplifier.

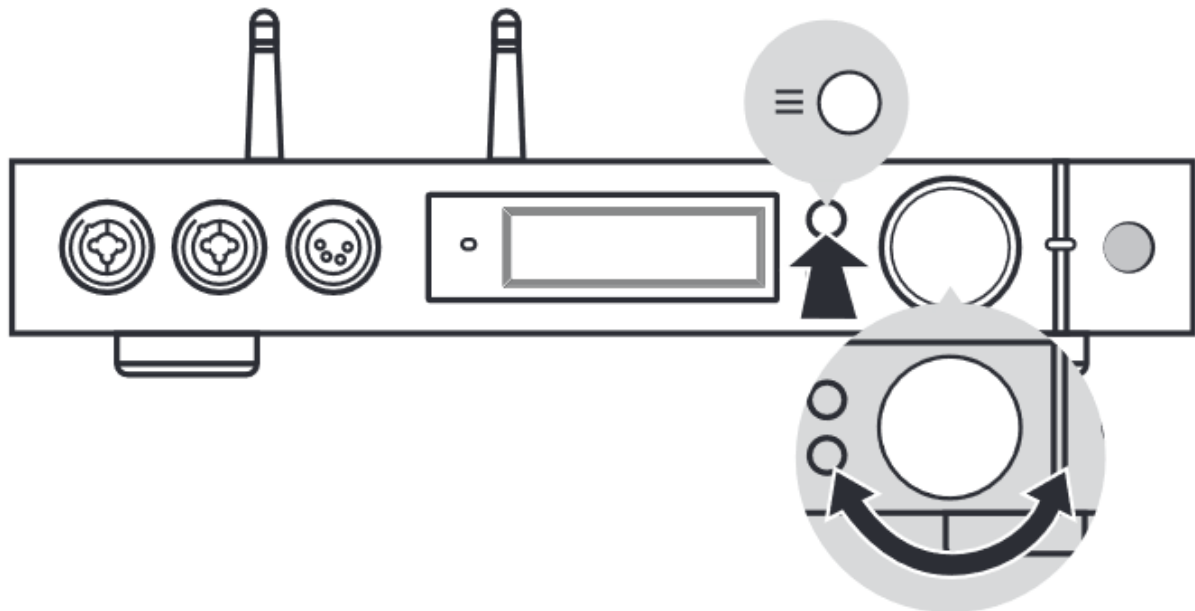
# Settings Menu

Now let's go through the settings of your device. The way you navigate the Menu System for your Matrix Audio Element series is the same process across all of them.

## Using the Menu Button on the Device



First you power on your device by pressing the power button. Then you press the “menu” button found to the top left of the knob.



Pressing in the Menu button once takes you to the “Inputs Menu” From here you will select your audio source. If using Ethernet/Wifi this option is “Network”

Turn the knob until you see the option you want and then press the knob in to select.

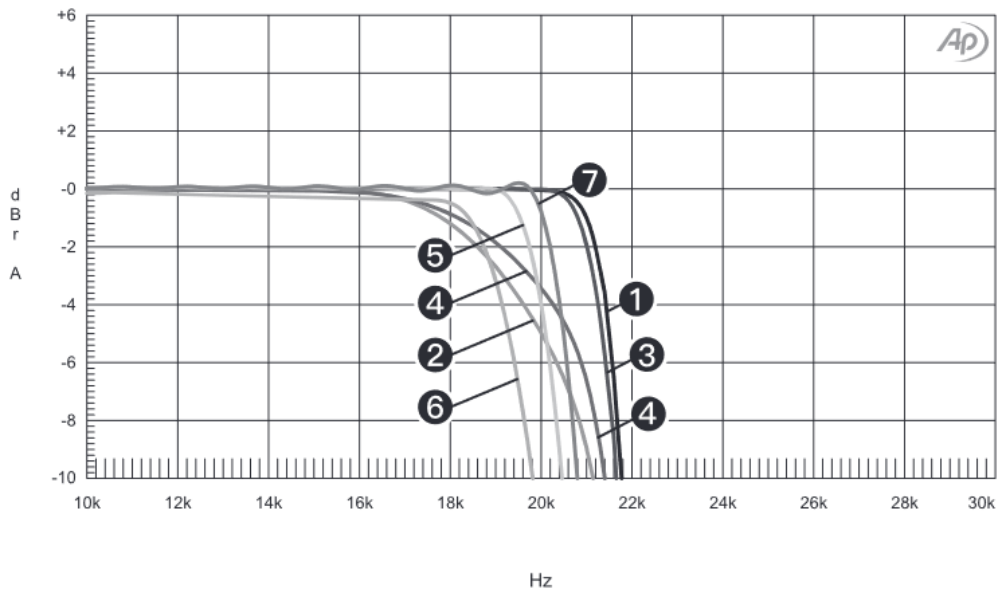
The option that is currently selected will show a circle filled in compared to the open circle icon for the options not selected.

From the main screen, Press the menu button twice to get to the outputs menu. Here is where you will select between “XLR and RCA” for the preouts, “Unbalanced” for Headphones, and “Balanced” for Headphones if you own the Element X.

That is all you need to listen to music on your Matrix Audio Element Series device.

# Advanced Setting Functions

To further customize your device let's go through the rest of your device settings.



Sweep	Trace	Line Style	Thick	Data	Axis	Comment
1	1	Solid	1	DSP Anr.Level A	Left	mod1_fast roll-off,minimum ①
2	1	Solid	1	DSP Anr.Level A	Left	mod2_solw roll-off,minimum ②
3	1	Solid	1	DSP Anr.Level A	Left	mod3_fast roll-off,linear ③
4	1	Solid	1	DSP Anr.Level A	Left	mod4_slow roll-off,linear ④
5	1	Solid	1	DSP Anr.Level A	Left	mod5_brickwall ⑤
6	1	Solid	1	DSP Anr.Level A	Left	mod6_hybrid ⑥
7	1	Solid	1	DSP Anr.Level A	Left	mod7_apodizing ⑦

(Tested at 1kHz)

- Pressing in Menu 3 times from the main screen will get you to the PCM Filter Selection. These Options affect the roll off of your audio, essentially this will mostly effect how the top end sounds to you.
- There is a Graph found in the manual to show you the roll off curve of each, or you could put on a song you like and try listening to it with the different PCM options to find which one you like the best.
- Pressing in the menu button 4 times from the main screen gets you to the DSD BW options. Just set this to Auto.
- Pressing in menu 5 times from the main screen gets you to the more in depth menu. This screen says press the "Knob" in to enter an additional settings menu.
- Quick note- I am using the Element X's menu for reference, the P, M, and I will not necessarily have all of these options!

Here is each option in order:

1. Line out Mode- Gives you an options of 0db or 10dB adjustments. Just use 0 unless using very quiet active speakers.
2. PCM Filer- covered previously, can be accessed here as well.
3. DSD- Same as PCM
4. Headphone Gain, 2 options Low (the Default) and High. Low for Low Impedance headphones, high for high impedance headphones.
5. Dither turn and leave on (improves sound)
6. Jitter Eliminator- Improves audio quality (Leave on)
7. DPLL Bandwidth- leave on normal
8. I squared S - LVDS Port Definition- if using with Matrix Audio or PS Audio source make sure this is set on Type A (the default). Other sources might use options B-D
9. Dimmer- changes if the screen will dim after not using for awhile. Change to your own preference.
10. Auto sleep- Turns unit off after more than 5 minutes of not using the unit. Turn it off if you want the unit to stay on when not in use.
11. User Defined Button. Changes what button below the menu button does. You can set it to change through inputs, outputs, filters, and show device info.
12. Network Type- Change between Wifi and LAN
13. Remote Control- Use to set up more than one remote with your unit
14. Load Default- Return everything to system defaults.
15. Product Information- Press the knob in on the option to scroll through hardware and software details.

If you need any more information you can check out the Matrix Audio manuals found on [Matrix-Digi.com](http://Matrix-Digi.com) or the contact us page on [moon-audio.com](http://moon-audio.com)