

M-AUDIO

Studiophile DX4

User's Guide



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.



AFIN DEVIETER UN CHOC ELECTRIQUE ET LES CONSEQUENCES GRAVES QUI POURRAIENT EN RESULTER, TENTEZ PAS D'OUVRIR L'APPAREIL ET DE TOUCHER AUX COMPOSANTS INTERNES SANS LA PRESENCE D'UNE PERSONNE QUALIFIEE.



PARA REDUCIR EL RIESGO DE SACUDIDAS ELECTRICAS, NO D'EBERA QUITARSE LA TAPA (NI PARTE POSTERIOR), CONSULTESE AL PERSONAL CAPACITADO PARA LAS REPARACIONES INTERNAS.

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

ADVERTENCIA: PARA EVITAR EL RIESGO DE INCENDIO O SACUDIDA ELECTRICA, NO DEBERA EXPONERSE ESTE APARATO A LA LLUVIA O HUMEDAD.

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARISED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

PRECAUCION: PARA EVITAR SACUDIDAS ELECTRICAS, NO DEBERA UTILIZARSE ESTA CLAVIJA POLARIZADA CON UN CORDON DE PROLONGACION, RECEPTACULO U OTRO TIPO DE SALIDA A MENOS QUE SE HAYAN INSERTADO COMPLETAMENTE LAS LENGÜETAS PARA EVITAR SU EXPOSICION.

NOTE: Some products are equipped with dual or multi-voltage transformers (which is indicated on the back panel). If you wish to change the voltage, please bring your unit to an authorised service technician for internal conversion.

ATTENTION: Quelques pièces sont munies de transformateurs à double ou à multi-voltage (indiqué au panneau arrière). Si vous voulez changer le voltage, veuillez apporter votre appareil au fournisseur de pour le transformer.

ZUR BEACHTUNG: Einige Geräte sind mit Umschaltern für unterschiedliche Netzspannungern ausgerüstet (Ein Vermerk auf der Rückseite weist darauf hin).

Die Anpassung, wenn notwendig, muß von einem qualifizieren Techniker in einer Servicestation vorgenommen werden.

NOTA: Ciertos componentes de están dotados de transformadores de doble tensión o de varias tensiones (lo que se indica en el panel posterior). Si se desea cambiar la tensión, sírvanse llevar el aparato a un técnico autorizado por para su conversión interna.

NOTE TO CATV systems installer: This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

NOTA PARA EL INSTALADOR DE ANTENAS DE TELEVISION COLECTIVAS: La presente advertencia se provee para llamar la atención del instalador al Artículo 820-22 de NEC (Código Eléctrico Nacional) donde se facilitan las directrices para la pertinente puesta a tierra y que especifica en particular que el conductor a tierra del cable debe conectarse al sistema de conexión a tierra del edificio, lo más proximo posible al punto de entrada del cable.



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of "uninsulated" "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Warning: This speaker shall not be placed in the close area during the operation so that the mains switch can be easily accessed by the user.

Introduction

Thank you for choosing the Studiophile DX4 professional desktop audio monitoring system. Top recording engineers and producers in studios around the world use M-Audio's Studiophile Series monitors. With the Studiophile DX4s, you can enjoy the same professional standard of audio quality right on your desktop.

The Studiophile DX4 has been designed and tested by veteran audio engineers to meet your needs in a desktop audio monitoring environment. It is focused on the functional goal of delivering pure, original sound without any additional coloration. The DX4 monitor is self-powered, directly accepting a line level signal from a variety of sources.

The Studiophile DX4 is designed to overcome all the limitations of conventional desktop monitors within the digital audio environment. The DX4s match a custom tuned cabinet design, optimized drivers and an advanced crossover technology with plenty of power, insuring the highest-fidelity sound available from audio monitors of their size. And M-Audio's proprietary OptImage wave guide technology assures improved and defined stereo imaging. Studiophile DX4s bring your computer-based music, games and DVDs to life.

What's in the Box?

Your Studiophile DX4 box contains:

- Two DX4 speakers (Left and Right)
- One speaker wire
- One 1/8 inch mini jack to RCA audio cable
- One detachable AC power cord
- User Manual
- Actual test results of the DX4s you purchased

Studiophile DX4 Features

Woofers - The woofer unit is 4 inches in diameter with a magnetically shielded, curved cone, high-temperature voice coil and closed cell foam damping. It is designed to deliver balanced mid- and low- frequency response. The design is used to react against the input signals accurately and to deliver even minimal input precisely while minimizing distortion.

Tweeters - By employing a specially developed 1-inch mylar dome with magnetic shielding, the tweeter can deliver distortion-free original sound and offer an extremely natural response. It minimizes reaction time by using the specially shaped mylar dome for excellent delivery, and also minimizes resonance by adapting a unique internal damping technology. Also, incorporated into the tweeter is the OptImage wave guide technology that improves stereo imaging.

Sub-Frequency Port - The hole in the rear panel is called a Sub-Frequency Port and is designed to discharge extreme low frequencies.

Enclosure - Just as the other components do, the DX4's enclosure plays an important role. In order to provide more stable performance, the DX4's enclosure employs a special high-density MDF and unique interior reinforcement designed to absorb vibration and impact generated under extreme conditions.

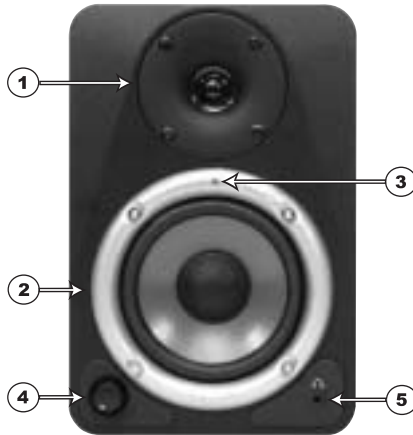
Network and Power Amplifiers - The active equalization, crossover networks and power amplifiers for the DX4 are specially designed for this woofer and tweeter. The network properly distributes low, mid, and high frequencies to the components in order to reduce distortion and loss of sound, thus achieving a naturally balanced sound.

Mid-Boost Control - The back panel Mid-Boost control on the DX4s gives you compensation for room EQs. It offers a great deal of control over the sound and presence of the DX4 and make the DX4s very versatile for different spaces.

Front and Rear Panel Features

Front

Note: This image shows the Front panel of the Left Speaker. While this panel contains the LF and HF Drivers (Woofer and Tweeter), Power LED, Volume Control and Headphone Output Jack, the Right Speaker's Front panel contains only LF and HF Drivers (Woofer and Tweeter).

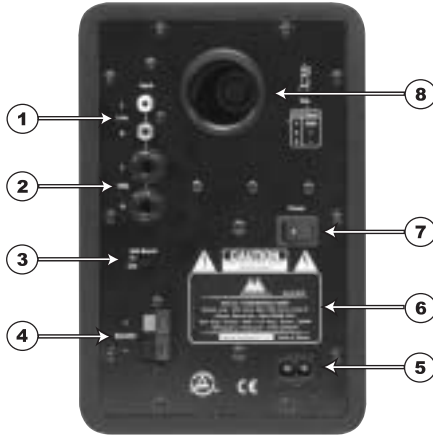


1. **HIGH-FREQUENCY DRIVER (TWEETER)**
2. **LOW-FREQUENCY DRIVER (WOOFER)**
3. **POWER INDICATOR LED:** This blue LED lights lights the DX4's power is turned on.
4. **VOLUME CONTROL:** This control determines the output volume level of the DX4 speakers.

5. **HEADPHONE OUTPUT JACK:** This 1/8" jack outputs a stereo signal identical to the DX4's speaker output. When headphones are plugged into this jack, the DX4 speakers are muted and headphone volume is controlled using the volume control.

Rear

Note: This image shows the Rear panel of the Left Speaker. The Right Speaker's Rear panel contains only a single Speaker Terminal, for connection to the Speaker Terminal of this (Left) Speaker.



1. **RCA Line INPUTS (L & R)** - There are two RCA Line Inputs, marked as follows:

- "L" - Left Channel Input (white jack) &
- "R" - Right Channel Input (red jack).

These jacks accept standard RCA input connections with unbalanced wiring. The included 1/8-inch mini jack-to-RCA audio cable allows users to connect the DX4s to other equipment accepting 1/8-inch mini jack connections.

2. **TRS INPUTS (L & R)** - There are two TRS Line Inputs, marked as follows:

- "L" - Left Channel Input &
- "R" - Right Channel Input

These jacks accept a 1/4" connection with either balanced or unbalanced wiring.

Unbalanced 1/4" wiring can be done with either a two- or three-conductor (TS or TRS) plug. A two-conductor (TS) plug automatically grounds the signal's negative input. A three-conductor (TRS) plug, wired unbalanced, provides the option of leaving the negative input open or grounded. We recommend grounding the unused negative input, which can be done by wiring the ring and sleeve of the TRS plug together.

For balanced wiring, a three-conductor TRS plug is necessary.

The input wiring of the TRS input connector is as follows:

- TRS TIP Signal positive (+)
- TRS RING Signal negative (-)
- TRS SLEEVE Signal ground (Shield)

Note: Input from the TRS and RCA connectors is summed together, allowing both inputs to be used simultaneously.

3. **MID-BOOST SELECTOR SWITCH:** This 2-position switch selects the Mid-Boost mode setting. The “Out” position setting produces a flat frequency response curve, while the “In” position provides an added boost in the mid-range frequencies.
4. **SPEAKER TERMINALS:** The rear panel of both Left and Right Speaker enclosures contains a spring-action speaker terminal. The included speaker wire should be used to connect the terminal on the left speaker to the terminal on the right speaker.
5. **POWER RECEPTACLE:** Accepts a detachable 2-circuit line cord in order to power the DX4 system.
6. **PRODUCT LABEL:** Contains your DX4’s model and serial number information.
7. **POWER SWITCH:** This switch turns the DX4 system on and off. The On position is indicated by the white dot on the switch.
8. **SUB FREQUENCY PORT:** This port aids in the reproduction of very low frequencies by discharging the frequencies below 60Hz.

Installation

In order to ensure optimal performance your DX4 system, please read carefully the following instructions before beginning installation.

Precautions

Handling: The DX4 speakers are packaged tightly within the box, so your attention is required when removing them. To avoid possible damage to the speaker, hold both sides of the unit (not the front or the back) in order to pull it out of the box. The speaker cones (the Woofer and the Tweeter) should not be touched in order to avoid damage even after they are removed from the box. Please do not touch the speaker cones (the Woofer or the Tweeter).

Connections: Connect the RCA or TRS inputs of your DX4 unit to the corresponding computer sound card or game console outputs. We recommend that you use high-quality cables for input connections. Be sure the power of the DX4 is off and turn the volume of the DX4 down to a minimum before making the necessary connections.

Correct Power Operation: Since the DX4 contains amplifiers; it must be connected to a power outlet using the detachable AC cable that is provided. Before connecting power, please make sure that the voltage of the DX4 corresponds with the voltage you are going to plug the power cord in.

WARNING! - Use of improper voltage may result in hazardous conditions and/or damage to speaker components not covered by speaker warranty.

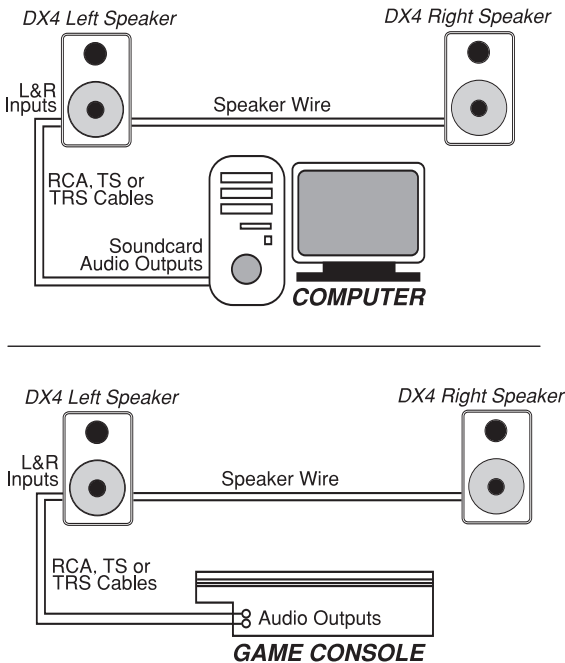
Speaker Wire Connection

Use the speaker wires included in the DX4 package to connect the Right and Left Speakers via the spring terminals.

Connecting to a Computer Sound Card or Game Console

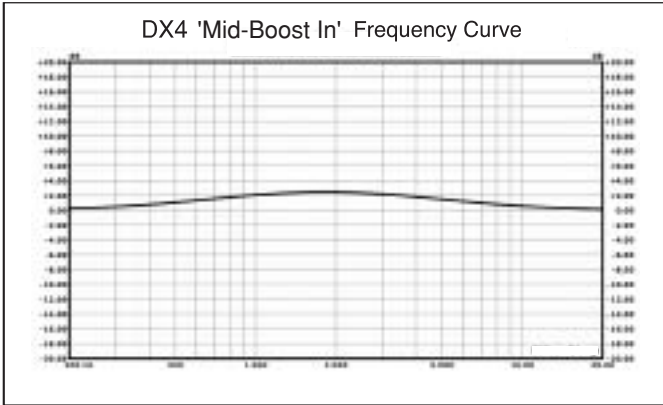
Before connecting the DX4s, make sure that the device to be connected to the DX4, and to the DX4 system itself has been powered off.

Plug the appropriate RCA, TRS or TS cable to the corresponding output connectors of the computer sound card or game console.



Setting the Mid-Boost EQ Switch

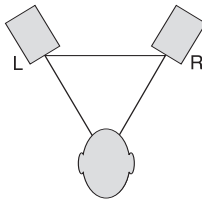
This 2-position switch allows you to select either the "In" or "Out" Mid-Boost mode. The Out mode produces a flat midrange response for normal monitoring and listening conditions. The In mode will move the sound stage forward toward your listening position.



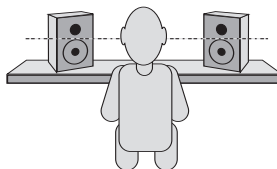
Placing the DX4

Placing the speakers is one of the most important considerations in accurately monitoring sound. To monitor with the DX4s performing at their maximum capacity, an appropriate listening environment and correct placement are required. Please refer to the following for DX4 placement.

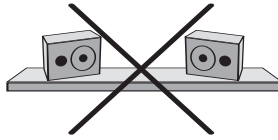
1. The two units and the listener should align to form a regular triangle. Refer to the following diagram:



2. Position the monitors so that the tops of the woofers are level with your ears in a normal listening environment. Refer to the following diagram:



3. Place the Left and Right DX4 units vertically and right side up. Placing the DX4 monitors horizontally is not recommended.



Important: DO NOT place any obstacles that may block the flow of air in front of or between the DX4 monitors. Also, remove reflective materials such as glass, mirrors or metal from the monitoring environment and place those materials away from the path of the sound from the DX4s.

Technical Support & Contact Information

For additional help, contact M-Audio Technical Support by telephone, fax or e-mail. If you have any questions, comments or suggestions about this or any M-Audio product, we invite you to contact us at:

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 Fax: 81 52 218 0875
 Technical Support: 0820 00 731
 Email: info@m-audio.co.jp

Internet Home Page: <http://www.m-audio.co.jp>

Warranty Information

Warranty Terms

M-Audio warrants products to be free from defects in materials and workmanship, under normal use and provided that the product is owned by the original, registered user. Visit www.m-audio.com/warranty for terms and limitations applying to your specific product.

Warranty Registration

Thank you for registering your new M-Audio product. Doing so immediately both entitles you to full warranty coverage and helps M-Audio develop and manufacture the finest quality products available. Register online at www.m-audio.com/register to receive FREE product updates and for the chance to win FREE M-Audio gear.

Appendix A - Technical Specifications

Type: Two-way studio reference

LF Driver: 4-inch dia., magnetically-shielded with curved cone, high temperature voice coil and Cellulose impregnated fabric roll surround.

HF Driver: 1-inch dia., magnetically-shielded with specially shaped Mylar dome

Frequency Response: 70Hz - 20kHz

Crossover Frequencies: 2.6kHz

RMS SPL: 101.5dB @ 1 meter

Dynamic Range: >95dB

S/N Ratio: >90dB (typical, A-weighted)

Input Connectors: Left and Right RCA Line Input connectors, Left and Right TRS balanced/unbalanced input connectors.

Polarity: Positive signal at + input produces outward low-frequency cone displacement

Dynamic Power: 18 watts/ 4 ohms with 2 channels connected

Input Impedance: 20k ohms balanced, 10k ohms unbalanced

Input Sensitivity: 100 mV pink noise input produces 90dBA output SPL at 1 meter with volume control at maximum

Protection: RF interference, output current limiting, over temperature, turn on/off transient, subsonic filter

Indicator: Blue power LED on front panel

Power Requirements: 120V/~60Hz, 230V/~50Hz or 100V/50Hz/60Hz; powered via detachable 2-circuit line cord

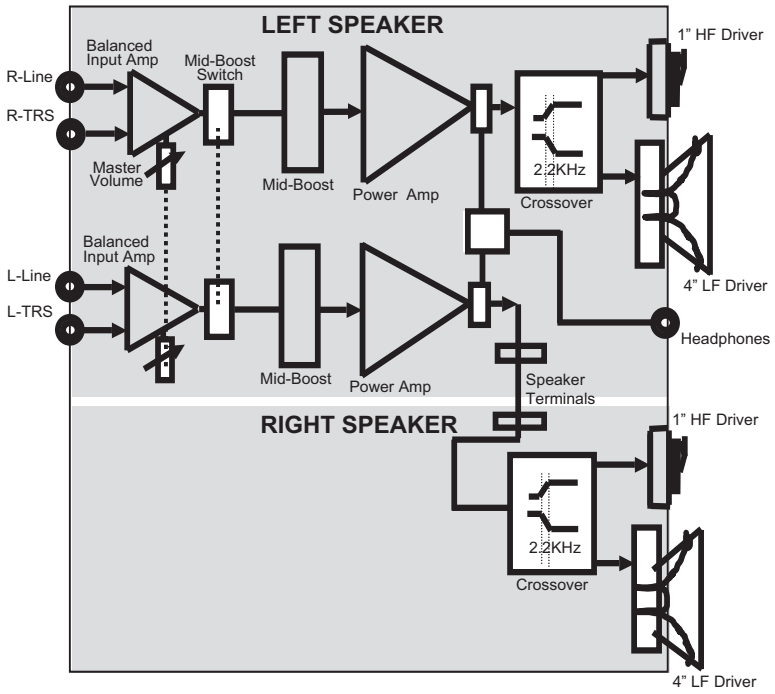
Cabinet: vinyl-laminated MDF

Dimensions: 8.5 inch (H) x 5.75 inch (W) x 6.25 inch (D)

Weight: 12 lbs./pair (approx., without packing)

* Above specifications subject to change without notice

Appendix B - Block Diagram



IMPORTANT SAFETY INSTRUCTION

1. READ INSTRUCTIONS

All the safety and operating instructions should be read before the appliance is operated.

2. RETAIN INSTRUCTIONS

The safety and operating instructions should be retained for future reference.

3. HEED WARNINGS

All warnings on the appliance and in the operating instructions should be adhered to.

4. FOLLOW INSTRUCTIONS

All operating and use instructions should be followed.

5. WATER AND MOISTURE

The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

6. CARTS AND STANDS

The appliance should be used only with a cart or stand that is recommended by the manufacturer.

- 6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



7. WALL OR CEILING MOUNTING

This equipment is not designed for use mounted on a wall or a ceiling.

8. VENTILATION

The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation, such as bookcase or cabinet that may impede the flow of air through the ventilation openings.

At least 30cm free space around the unit for normal ventilation is required.

9. HEAT

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

10. CLEANING

The appliance should be cleaned only with dry cloth.

11. POWER SOURCES

The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

12. POWER CORD PROTECTION

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

13. POLARIZED PLUG

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

14. UNPLUG POWER CORD

Unplug this apparatus during lightning storms or when unused for long periods of time.

15. OBJECT AND LIQUID ENTRY

No object filled with liquids, such as vases, etc. shall be placed on the apparatus.

16. ACCESSORIES

Only use attachments/accessories specified by the manufacturer.

17. SERVICING

The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

18. DAMAGE REQUIRING SERVICE

The appliance should be serviced by qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped, or the enclosure is damaged.