

xo 2.4 MK2

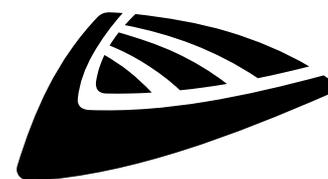


ENGLISH Operation Manual

Other languages can be downloaded from:
WWW.JB-SYSTEMS.EU



Version: 1.0



JBSYSTEMS



EN - DISPOSAL OF THE DEVICE

Dispose of the unit and used batteries in an environment friendly manner according to your country regulations.

FR - DÉCLASSER L'APPAREIL

Débarrassez-vous de l'appareil et des piles usagées de manière écologique conformément aux dispositions légales de votre pays.

NL - VERWIJDEREN VAN HET APPARAAT

Verwijder het toestel en de gebruikte batterijen op een milieuvriendelijke manier conform de in uw land geldende voorschriften.

DU - ENTSORGUNG DES GERÄTS

Entsorgen Sie das Gerät und die Batterien auf umweltfreundliche Art und Weise gemäß den Vorschriften Ihres Landes.

ES - DESHACERSE DEL APARATO

Reciclar el aparato y pilas usadas de forma ecologica conforme a las disposiciones legales de su país.

PT - COMO DESFAZER-SE DA UNIDADE

Tente reciclar a unidade e as pilhas usadas respeitando o ambiente e em conformidade com as normas vigentes no seu país.

OPERATION MANUAL

Thank you for buying this JB Systems® product. To take full advantage of all possibilities, please read these operating instructions very carefully.

FEATURES

- 2-way stereo or 3-way mono crossover
- Full scale frequency selection between 45 to 9600Hz
- 18dB/oct. Butterworth filters
- All inputs and outputs are balanced or unbalanced with XLR connectors
- Subsonic filter (40Hz) with ON/OFF switch
- Gain control on all inputs and outputs
- Phase inverter switch

BEFORE USE

- Before you start using this unit, please check if there's no transportation damage. Should there be any, do not use the device and consult your dealer first.
- **Important:** This device left our factory in perfect condition and well packaged. It is absolutely necessary for the user to strictly follow the safety instructions and warnings in this user manual. Any damage caused by mishandling is not subject to warranty. The dealer will not accept responsibility for any resulting defects or problems caused by disregarding this user manual.
- Keep this booklet in a safe place for future consultation. If you sell the fixture, be sure to add this user manual.
- To protect the environment, please try to recycle the packing material as much as possible.

Check the contents:

Check that the carton contains the following items:

- User manual
- Power Cable
- XO2.4 Mk2 unit

SAFETY INSTRUCTIONS:



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: To reduce the risk of electric shock, do not remove the top cover. No user-serviceable parts inside. Refer servicing to qualified service personnel only.



The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the user or the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



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



This symbol means: indoor use only



This symbol means: Read instructions

- This appliance is intended for use in moderate climates.
- To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

- To avoid condensation to be formed inside, allow the unit to adapt to the surrounding temperatures when bringing it into a warm room after transport. Condense sometimes prevents the unit from working at full performance or may even cause damages.
- This unit is for indoor use only.
- Don't place metal objects or spill liquid inside the unit. No objects filled with liquids, such as vases, shall be placed on this appliance. Electric shock or malfunction may result. If a foreign object enters the unit, immediately disconnect the mains power.
- No naked flame sources, such as lighted candles, should be placed on the appliance.
- Don't cover any ventilation openings as this may result in overheating.
- Prevent use in dusty environments and clean the unit regularly.
- Keep the unit away from children.
- Inexperienced persons should not operate this device.
- Maximum save ambient temperature is 40°C. Don't use this unit at higher ambient temperatures.
- Minimum distances around the apparatus for sufficient ventilation is 5cm.
- Always unplug the unit when it is not used for a longer time or before you start servicing.
- The electrical installation should be carried out by qualified personal only, according to the regulations for electrical and mechanical safety in your country.
- Check that the available voltage is not higher than the one stated on the rear panel of the unit.
- The socket inlet shall remain operable for disconnection from the mains.
- The power cord should always be in perfect condition. Switch the unit immediately off when the power cord is squashed or damaged.
- Never let the power-cord come into contact with other cables!
- When the power switch is in OFF position, this unit is not completely disconnected from the mains!
- This CLASS I appliance must be connected to MAINS socket outlet with a protective earth connection in order comply with safety regulations.
- In order to prevent electric shock, do not open the cover. Apart from the mains fuse there are no user serviceable parts inside.
- **Never** repair a fuse or bypass the fuse holder. **Always** replace a damaged fuse with a fuse of the same type and electrical specifications!
- In the event of serious operating problems, stop using the appliance and contact your dealer immediately.
- Please use the original packing when the device is to be transported.
- Due to safety reasons it is prohibited to make unauthorized modifications to the unit.

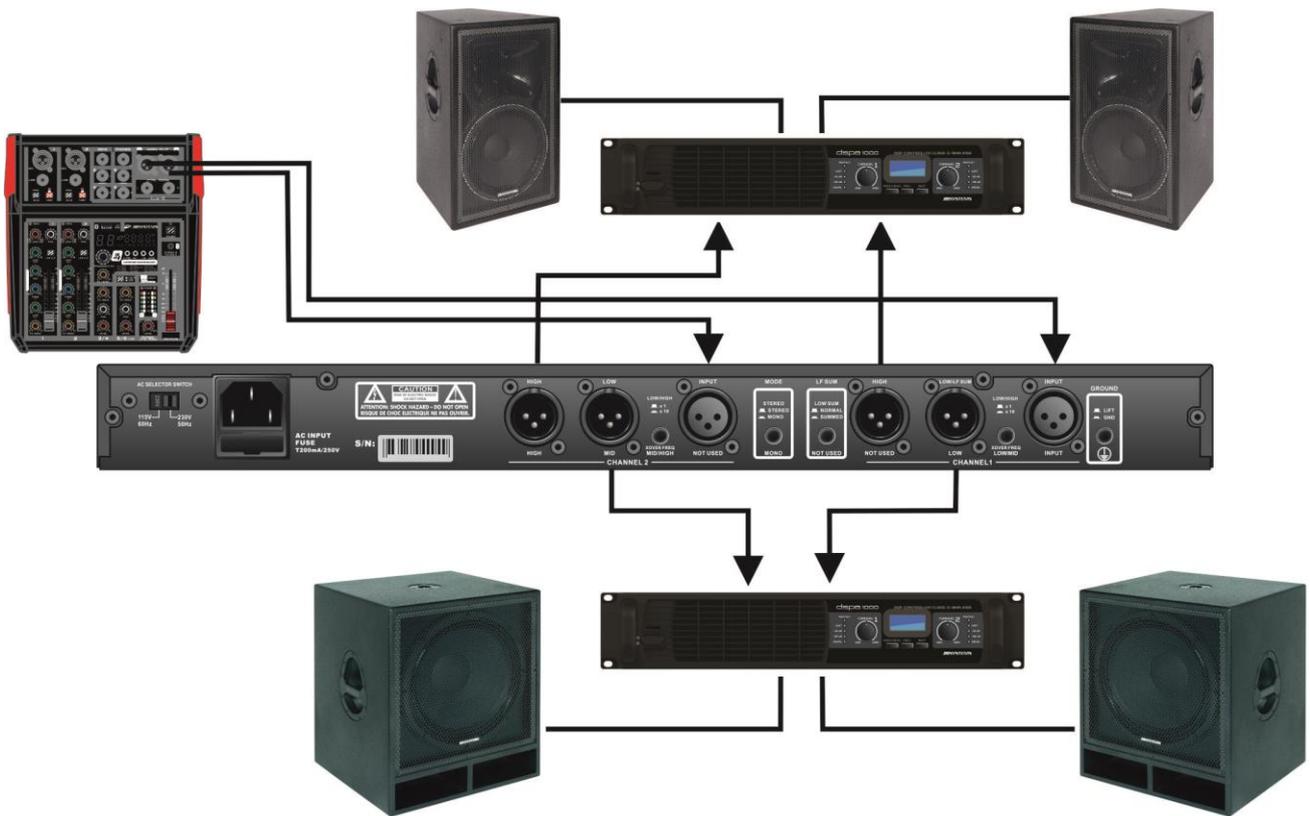
INSTALLATION GUIDELINES:

- Install the unit in a well-ventilated location where it will not be exposed to high temperatures or humidity.
- Placing and using the unit for long periods near heat-generating sources such as amplifiers, spotlights, etc. will affect its performance and may even damage the unit.
- The unit can be mounted in 19-inch racks. Attach the unit using the 4 screw holes on the front panel. Be sure to use screws of the appropriate size. (screws not provided) Take care to minimize shocks and vibrations during transport.
- When installed in a booth or flight case, please make sure to have good ventilation to improve heat evacuation of the unit.
- To avoid condensation to be formed inside, allow the unit to adapt to the surrounding temperatures when bringing it into a warm room after transport. Condense sometimes prevents the unit from working at full performance.

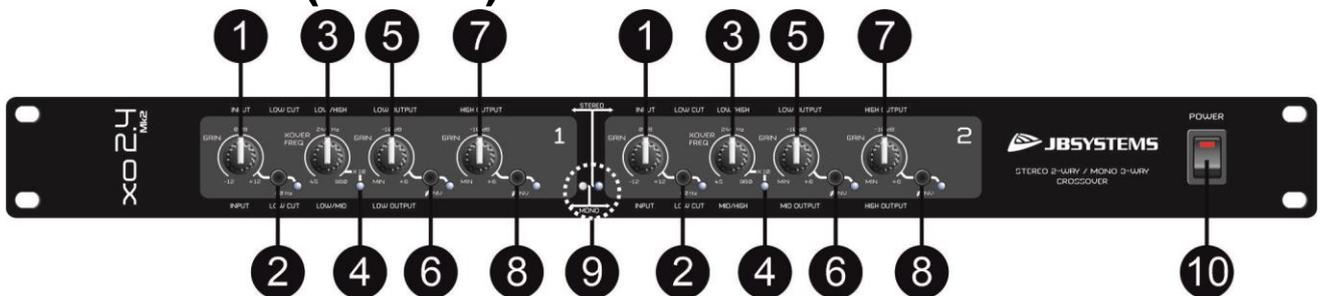
CLEANING THE APPLIANCE:

Clean by wiping with a polished cloth slightly dipped with water. Avoid getting water inside the unit. Do not use volatile liquids such as benzene or thinner which will damage the unit.

CONNECTIONS



FUNCTIONS (FRONT)

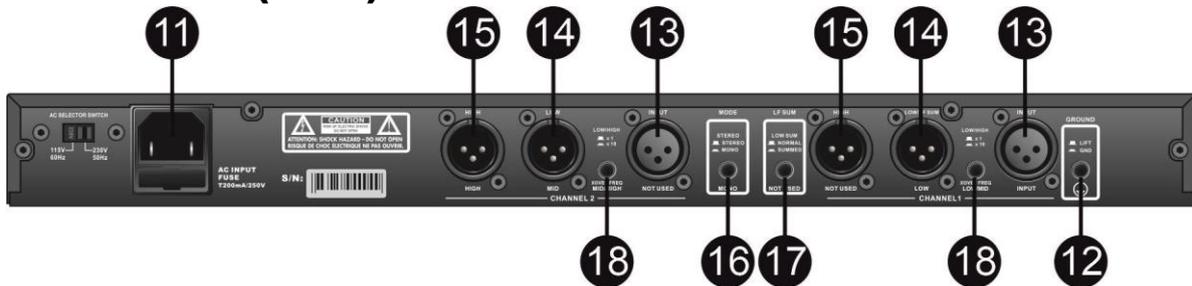


1. **Input Gain:** Controls the INPUT level with +/- 12dB.
2. **Low Cut Switch:** Push this button to select the 40 Hz high pass filter. Use this filter to protect your speakers and amplifier from unwanted subfrequencies that only consume power but don't necessarily add more punch
3. **Crossover Point selection:** Selects the crossover point between:
 - **In Stereo mode:** LOW and HIGH frequencies
 - **In Mono mode:** LOW and MID frequencies on the Channel 1
MID and HIGH frequencies on the Channel 2
4. **X10 LED:** X10 LED off: you can control the x-over frequency from 45Hz to 960Hz
X10 LED on: you can control the x-over frequency from 450Hz to 9.6kHz
5. **LOW/MID Output:** Controls the:
 - **In Stereo mode:** LOW frequency output level from - ∞ to +6dB (both channels)
 - **In Mono mode:**
LOW frequency output level from - ∞ to +6dB on Channel 1
MID frequency output level from - ∞ to +6dB on Channel 2
6. **LOW/MID Phase Invert Switch:** Switch for inverting the polarity. A LED indicates your selection:
 - **In Stereo mode:** you can inverse the polarity on the LOW output
 - **In Mono mode:**
you can inverse the polarity on the LOW output on Channel 1
you can inverse the polarity on the MID output on Channel 2

Remark: Use this switch with care. This switch is most effective on the low frequencies: switch the inverter on/off while listening to the music. Choose the position with the most bass reproduction

7. **HIGH Output:** controls the HIGH frequency output level from - ∞ to +6dB. When you work in Mono mode, you can only use the Channel 2 knob.
8. **HIGH Phase Invert Switch:** Switch for inverting the polarity on the HIGH output. A LED indicates your selection. When you work in Mono mode, you can only use the switch on Channel 2.
Remark: In most cases you don't need to use this switch. When the setting is wrong, it can bring you more bad than good
9. **MONO/STEREO LED:** This LED indicates if you are working in MONO or STEREO Mode:
 - **MONO Mode:** Both channels work together to obtain a 3-way mode crossover
 - **STEREO Mode:** Both channels work independently to obtain an 2x2-way crossover
10. **Power Switch:** Switch for turning the unit ON/OFF

FUNCTIONS (rear)



11. **Mains Input:** with IEC socket and integrated fuse holder, connect the supplied mains cable here
12. **Ground Lift Switch:** In some cases nasty hum noises can occur due to ground loops in your setup. Setting the Ground Lift Switch to the position “lift” breaks the ground loop between the EC102/XO-2.4 and the chassis grounds of various other components in your setup. As a result the hum noises will disappear.
13. **XLR Inputs:** Balanced inputs using XLR cables. When you work in Mono Mode, you only have to connect an XLR cable on Channel one
14. **LOW/MID XLR Output:** Balanced outputs using XLR cables:
 - **In Stereo Mode:** When you work in Normal mode (see number 17 for more information), you have to connect an XLR cable to Channels 1 and 2. When you work in Summed mode, you only have to connect an XLR cable to Channel 1.
 - **In Mono Mode:** Channel 1 operates the LOW output.
Channel 2 operates the MID output.
15. **HIGH XLR Output:** Balanced outputs using XLR cables:
 - **In Stereo Mode:** You have to connect an XLR cable to both channels
 - **In Mono Mode:** Only Channel 2 is used
16. **MONO/STEREO Switch:** With this switch, you can choose between MONO 3-way or STEREO 2x2-way Mode
17. **LF SUM Switch:** With this switch, you can choose if you want your LOW frequencies in normal mode (2 outputs), or summed (uses only channel 1 output) (see number 14 for more information). In summed mode the low frequency from Channels 1&2 are put together so you don't have to use a splitter cable in case you have only 1 subwoofer.
18. **Crossover Frequency Switch:** With this switch, you can choose between x1/x10 frequency range (see number 4 for more information)
19. **AC Voltage Selector:** Before to connect the unit to the mains: always check if the switch is set to the voltage that is used in your area. (115 VAC/60Hz or 230 VAC/50Hz). Using the wrong setting can damage the unit !

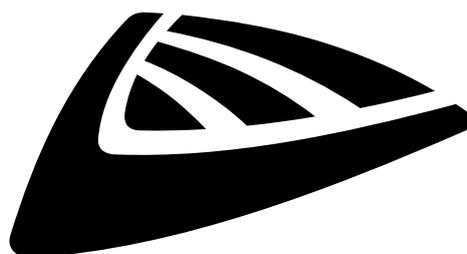
SPECIFICATIONS

This unit is radio-interference suppressed. This appliance meets the requirements of the current European and national guidelines. Conformity has been established and the relevant statements and documents have been deposited by the manufacturer.

Power Supply:	115 VAC/60Hz or 230 VAC/50Hz
Fuse:	20mm glass fuse 250V 500mA slow
Frequency response:	20Hz to 25kHz, +/-1 dB
THD + noise:	<0.006 %
S/N Ratio (IHF-A):	>95dB @ 1kHz.
Crossover Frequencies:	45 – 960 Hz (normal mode) 450 – 9600 Hz (x10 mode)
Filter type:	18dB/Octave
Low Cut Filters:	40Hz
Dimensions:	483(W) x 44(H) x 146(D) mm
Weight:	2kg

Every information is subject to change without prior notice

You can download the latest version of this user manual on our website: www.jb-systems.eu



JB SYSTEMS

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EN: Subscribe today to our mailing list for the latest product news!

FR: Inscrivez-vous à notre liste de distribution si vous souhaitez suivre l'actualité de nos produits!

NL: Abonneer je vandaag nog op onze mailinglijst en ontvang ons laatste product nieuws!

DE: Abonnieren Sie unseren Newsletter und erhalten Sie aktuelle Produktinformationen!

ES: Suscríbete hoy a nuestra lista de correo para recibir las últimas noticias!

PT: Inscreva-se hoje na nossa mailing list para estar a par das últimas notícias!

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