



DEVINE

MX-4 / MX-6
Compact PA, recording and broadcasting mixer



User manual

Any information and illustrations shown in this user manual are subject to change without further notice.

User manual version: 3.0 Creation date + author initials: 27-08-2013 RV Revision date + author initials: 28-07-2014 RV

Safety instructions



WARNING!



Always keep this device away from moisture and rain! Hazardous electrical shocks may occur!



WARNING!



Only connect this device to a matching power outlet. This device is intended to work on a specified AC currency. Connecting this device to power outlets with other voltages may result in permanent damage and possible hazardous situations, such as fire or electrical shocks!



WARNING!



Be careful with every operation of this device. Touching live wires inside and outside the unit may cause hazardous electrical shocks!

This unit must be operated by, or under the supervision of an adult. This device is not suitable for children.

Every person involved with the installation, operation and maintenance of this device has to:

- Be qualified
- Follow the instructions of this manual
- Make sure there is no damage caused by transport. If the device seems damaged from the outside, do not use it and contact your dealer for more information and consultation.
- To make sure the device maintains in perfect condition and for safe operation, it is necessary for the user to follow the instructions and warning notes of this user manual.
- Damage caused by improper use or modifications to the device are not covered by warranty.
- This device does not have any user-serviceable parts inside. Servicing of this device needs to be done by qualified technicians.

Important notes regarding safety and health:

- Always keep the power cord away from other cables.
- Never remove any warning or informative labels from the unit
- Never leave cables lying around
- Do not open the device and do not modify any hard- or software of this unit.
- Do not insert this object into air vents.
- Do not connect this device to a dimmerpack.
- Do not switch the system on and off frequently as this will reduce the lifespan of the device.
- Do not drive the inputs of the fixture with a signal larger than required to work at full performance.
- This device is designed for indoor use, avoid contact with water, moist or other liquids. Do not place items filled with liquids on top of the unit.
- Avoid nearby flames or heat sources, do not place this device near flammable liquids, gas or flammable items.

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- Always disconnect the device when it is not in use for a longer period of time, when servicing is needed or when the device needs cleaning.
- Only handle the power cord by its connectors. Never pull the cable to remove a connector from its socket, as this could lead to damage and electrical shocks.
- Always operate this device with a stable AC current.
- Never use other types of cables than specified in the manual, do not use defective or bad functioning cables. Contact your dealer when the included or required cables do not work properly with this device.
- When the device has been exposed to large temperature differences (for example, transport from outdoor to indoor), do not connect the device immediately. Do not activate the unit until it has reached room temperature, as moist might build up inside the unit, which may cause short circuits and/or electrical shocks.

Guidelines and types of use:

- This device is intended to be used by professionals on stage, in theaters, clubs and other equal venues.
- This device is not suitable for children and always needs to be operated by an adult.
- Only use the device when the environment is suitable and will not cause any damage. Do not use the product in moist or dusty environments, or where long-term damage may occur such as:
 - indoor swimming pools where chlorine is used.
 - Beaches, where sand and salt are present.
 - Temporarily outdoor setups, without roof protection
 - Indoor areas where intense heat sources are present or where the temperature exceeds levels which are comfortable for humans.
- Only use the included power adapter and only connect the device to a suitable power outlet with the correct output voltage. Connecting the device to a power outlet with the wrong type of voltage or using the product with a wrong type of power supply may cause permanent damage to the device.
- Avoid shocks and collision during use and transport. Do not transport the device while in use. Avoid brute force during the installation and operation of this device.
- Familiarize yourself with the functions of the device before use. Do not allow operation of the device by unskilled or unqualified people.
- Use of the device in other ways than described in this user manual may cause damage and injury. Devine does not take responsibility for any damage or injury caused by improper use.

Storage and transport:

- This device is intended for mobile use. When transported, use the original packaging of the product, or a fitting flightcase, preferably filled with foam.
- This device is not intended for permanent use. Operation breaks will ensure that the lifespan of the device remains unchanged.
- If the device is not used for a longer period of time, disconnect it from its power source and store it in its original packaging, or in a fitting flightcase.
- Store the device indoor, dry and do not expose the device to extreme temperature differences.

Housing:

- Inspect the housing of the device frequently. Severe dents, cracks and missing screws should be avoided at all cost. Do not use the device when the housing is not in optimal condition. Contact your dealer or a skilled technician when in doubt about the state of the device
- Check the fixture and screws for corrosion. Corrosion should not be present on the fixture. Contact your dealer or a skilled technician when corrosion is found on the fixture
- Every power or signal chassis/connector should be mounted tightly. Do not use the device when connectors are loose.
- Do not use the power cord when the cores are visible. Contact your dealer for a replacement if needed.
- Avoid the buildup of dust and dirt. Clean the exterior of the fixture every month with a dry or damp cloth. When using the device intensively, the cleaning frequency needs to be increased.

Introduction

Thank you for purchasing this Devine MX PA-mixer. Before you unpack all the received items, carefully read this manual to become familiar with the functions of the mixer. Also check the contents of the box to make sure all necessary parts are included.

If the mixer fails to operate properly, or if you have any problems while using it, disconnect it from its power source and contact your local dealer for more information and help.

Box contents:

- Devine MX-4 or MX-6 PA-mixer
- Power adapter to Schuko
- Power adapter to UK plug

Warning!

- To avoid electric shocks, do not open the housing. There are no user serviceable parts inside.
- Keep the mixer away from intense sunshine, humidity, dust and liquids.
- Make sure the mixer is placed on a stable surface during use.

Features:

- compact mixer for small PA, recording and broadcasting purposes
- 2 (MX-4) or 4 (MX-6) mono inputs (MIC/Line)
- Insert option for all mono channels
- Common +48V phantom power for all microphone inputs
- Gain control for each input
- 3-band EQ for each input
- L/R PAN sound balancing function for each input
- AUX level control for each input
- FX level control for each input
- PEAK limiter LED for each input
- Stereo input channel
- Built-in USB MP3-player
- Built-in echo effect processor with adjustable level and duration
- Main Mix fader
- Mono AUX output, for monitoring applications (use AUX levels to make a monitor mix)
- Mono FX send, to use an external effects processor
- Headphone output with adjustable volume
- Master LED VU meters with CLIP indicators
- Tape out for recording applications (mixed output)

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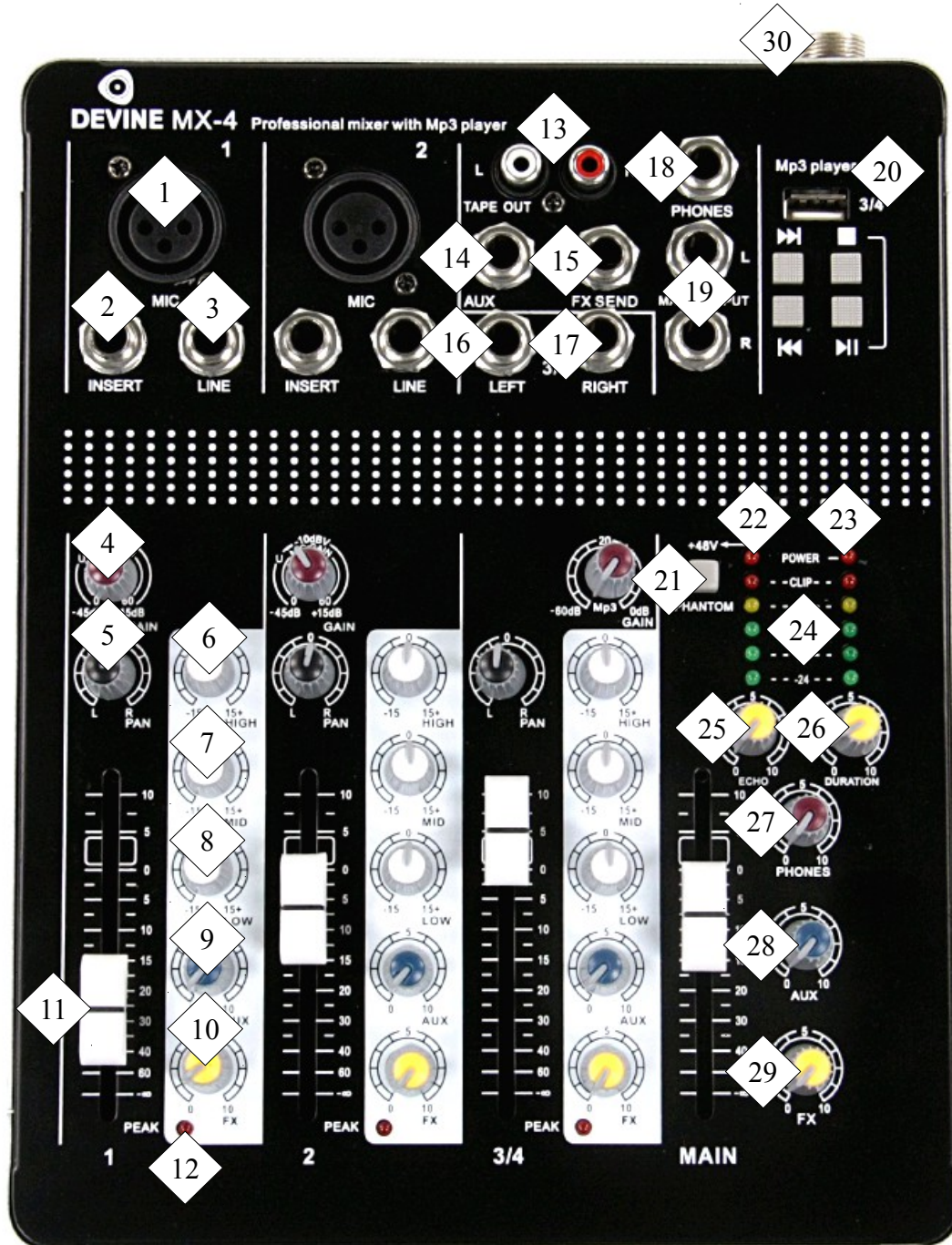
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Preparing the mixer

The Devine MX-4 and MX-6 mixers are developed for solo entertainers, broadcasting purposes and small recording environments. Thanks to the built-in USB MP3-player, it is possible to playback MP3-files. The compact construction of the MX-4 and MX-6 mixers makes it possible to place them on a desk or table during use. The rubber feet on the bottom of the mixer provide stability and sufficient grip. Therefore, the mixer will not move when operating the faders or encoders.

To get familiar with the several functions of the mixer, please examine the illustration below. Every function of the mixer is provided with a number, which refers to the explanations on the next page.

NOTE: The illustration shows the MX-4. The MX-6 is identical, but has two more mono channels.



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1. **Microphone input (XLR connector).** Use this connector to plug in a dynamic or condenser microphone. Carefully read the user manual of your microphone, as it may be possible that your microphone needs Phantom Power (provided by this mixer).
2. **Insert.** Use this 6.35 mm stereo jackplug connector (TRS) to connect peripheral equipment such as compressors, equalizers, feedback destroyers, gates, and so on. This function only works for the microphone input.
Tip = Microphone signal output
Ring = Signal input
3. **Line input.** Use this 6.35 mm mono jackplug connector (TS) to connect audio sources such as keyboards and other equipment which has a mono line output or is able to perform in mono mode. Combine channels 1 and 2 to create a stereo line input if needed. It is not possible to combine the microphone input and the line input at the same time.
4. **Gain.** Every channel input is equipped with a gain, which provides the right amount of amplification before the signal is transferred through the built-in EQ, pan, channel fader and so on. To ensure proper amplification without distortion or other symptoms which might alter the quality of the audio signal, pay close attention to the scales.
Mono inputs are equipped with gains that provide 'unity gain' for the line and microphone signals. Unity gain means that there is no volume difference in incoming or outgoing signals. The gain levels are different for the microphone input and the line input:
Microphone gain: 0 - 60 dB
Line input gain: -45 - +15 dB
Stereo input / MP3 player gain: -60 – 0dB
5. **Pan.** Use the pan encoder to position your audio channel optimal in the stereo sound image. For example, when a vocalist is positioned on the left side of the stage, you may want to pan the audio channel slightly to the left for a more accurate stereo sound image. Panning the mono channel fully to the left will eliminate sound coming from your right speaker.
When using the pan function on the stereo channel (using a left and right input), the encoder changes the effective volume on each side. For example, when panning the signal slightly to the left, the volume of the right side will be slightly reduced.
6. **EQ – High.** The High-encoder boosts or reduces high frequencies in a range between -15 and 15 dB. When positioned in the center, the sound remains unaltered.
7. **EQ – Mid.** The Mid-encoder boosts or reduces mid frequencies in a range between -15 and 15 dB. When positioned in the center, the sound remains unaltered.
8. **EQ – Low.** The Low-encoder boosts or reduces low frequencies in a range between -15 and 15 dB. When positioned in the center, the sound remains unaltered.
9. **AUX.** The AUX-encoder can be used to make a monitor mix, which can be transferred to a stage monitor, in-ear system or headphone amplifier. The AUX on every channel is a pre-fader encoder and with the main AUX (28) it is possible to control the entire monitor mix.
10. **FX.** The FX-encoder of each channel is used to increase the level of the internal or external effects. (I.e.: a copy of the original signal is sent to the internal or external effects processor, which determines the amount of effect that needs to be created. When decreasing the FX volume of any channel, the intensity of the effect will decrease in the total mix as well. It is also possible to adjust the total amount of effect, when operating the volume fader of the return channel. This last part is only possible when using external effects).

11. **Channel fader.** The slider for each channel, also described as channel fader, is a volume controller for the specific channel. When positioned all the way down, no sound will be let through to the main mix. When positioned on the 0-point, all sound will be let through. The channel fader is able to reach a level of '10', but this is not recommended as this amplifies the sound with a certain factor and may cause distortion and/or reduction of audio quality.
12. **Peak LED.** The Peak LED is a clip indicator and will light up about 5dB before the pre-amplifier system of each channel will cause clipping because of an overload signal.
13. **Tape Out.** The Tape Out is a separate output, designed for recording while monitor-speakers (or live PA-speakers) are connected to the main output. Therefore it is possible to increase or decrease the main volume, without altering the volume of the Tape Out signal. This provides a steady signal, which can be used for recordings of live performances, church services, band rehearsals, and so on. The Tape Out uses unbalanced RCA stereo connectors.
14. **AUX.** The AUX output uses the individual AUX settings on each channel plus the main AUX volume control. This signal can be transported to headphone amplifiers, stage monitors or in-ear systems, so that any artist is able to hear a certain mix of all input signals, completely unrelated to the main mix.
15. **FX Send.** The FX Send output is used to send the FX values of each channel collectively to an external effects processor. When the mixer senses that you connect an external effects device, it will automatically disable the internal effects processor.

The return-signal can be connected to the stereo channel (when using stereo effects) or one of the mono channels, on the line inputs. Please note that you are not able to use the USB MP3-player or the stereo channel inputs when you choose to route the FX return on the stereo channel.
16. **Input 3 (3/4) stereo.** This input uses a 6.35mm jackplug (TS) and accepts line level signals.
17. **Input 4 (3/4) stereo.** This input uses a 6.35mm jackplug (TS) and accepts line level signals. When using a mono signal, use this input and position the 'Pan' control in the most right position.
18. **Headphones output.** Use the 6.35mm jackplug (TRS) headphone output for main mix monitoring purposes.
19. **Main mix output.** Use the 6.35mm stereo jackplug (TRS) connectors to hook up the mixer to your PA-speakers or reference monitors.
20. **USB MP3 player.** The built-in USB MP3-player is very basic and gives solo-entertainers and/or artists the possibility to play backing tracks, sound effects or specific music. The USB MP3-player accepts most USB-drives and begins playing at the first track. This way, you are able to number each track on your USB-drive, so they will be played in the right order. Use the |<< and >>| buttons to skip tracks, use the play/pause button to play or pause a track and use the stop-button to stop playback at once. The playback of the USB MP3-player is sent to channel 3 / 4. It is not recommended to use the stereo line input and the MP3-player at the same time, as they share the channel fader, EQ, gain and balance.
21. **Phantom Power switch.** Use the Phantom Power switch to provide +48V voltage for your microphone inputs. Phantom Power is used for condenser (studio) microphones and sometimes for active DI-boxes which run on +48V, provided from a PA-mixer. Please note that Phantom Power is only available for the mono channels and activates for all microphone preamps at the

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same time. Combining dynamic and condenser microphones with active Phantom Power should not cause any harm to your microphones.

22. **Phantom Power LED indicator.** LED-indicator, showing if Phantom Power is active for the mono channels.
23. **Power LED indicator.** LED-indicator, showing the current power status of the mixer. When connecting the included power supply to a suitable wall outlet, the LED should activate directly.
24. **Main Mix LED VU meters.** The Main Mix LED VU-meters show the current output signal to the main outputs. Please pay good attention to these VU-meters, as they show the current output levels. When signals above 0dB are sent to your main outputs, distortion may occur. Therefore, it is important to keep the output levels on 0dB (or lower) as much as possible.
The LED VU-meters are also equipped with CLIP LEDs, which will activate when the current output signal is set too high, with distortion and overload as result. This also affects the sound quality in a negative way.
25. **Echo.** The built-in Echo effect is mostly used to make speech and other vocal sounds more lush and spacious. When using an external effects processor, the built-in Echo effect will be shut off automatically.
26. **Echo Duration.** This encoder defines the total reverb time of the echo effect, which is freely adjustable. Please be cautious, as a very long interval may cause an infinite loop of sound, cluttering your sound and thus affecting your sound quality in a negative way. A short duration and slight Echo setting often provides the best result for vocal applications.
27. **Headphone volume control.** Adjust the headphone monitoring volume with this encoder.
28. **AUX volume control.** Adjust the total mix of all active AUX signals between 0 and 10.
29. **FX volume control.** Adjust the total mix of all active FX signals between 0 and 10.
30. **Power supply connector.** Always use the included dual power supply to connect this device to a sufficient outlet. The power adapter is equipped with a 3-pin locking connector, which makes it impossible to get loose during use. The power connector can only be attached in one specific way to prevent shortcuts or other electrical damage.

NOTE: When not using the internal effects section or any external effects device, it is possible to create a second AUX channel, by using the FX intensity of every channel, the total FX intensity and the FX send output. The signal routing of this system is similar to the AUX signal routing.
Important tips and tricks:

1. Connect all your audio sources by using the right inputs. A microphone signal is not suitable for a line input and vice versa.
2. Make sure that all audio sources (especially microphones) are placed in the correct way. When using line sources such as MP3-players or keyboards, always set the outgoing volume on the right position.
3. Adjust the settings on each channel by using the following tips:
 - Always start off with all channel faders, gains and auxiliaries in the '0' position and keep all EQ bands (Hi, Mid, Low) + Pan in their neutral position. This way you will hear the neutral incoming signal optimal and it makes optimizing the sound quality much easier.
 - During sound check, firstly make sure that the settings for each channel are perfect before you start mixing the several channels.
 - Only use the equalizer as an equalizer for the best audio results. Instead of boosting certain sounds (for

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example the Low EQ), try decreasing the High and Mid EQ's first. This will keep your audio signal in optimal condition without altering or distorting the other frequencies.

- A channel fader is not a gain encoder. The channel fader is only designed to be able to change the volume easily when the gain is set correct. Therefore, always set your gain when the channel fader is in the '0' position. Slightly turn up the gain until the peak LED starts to light up (this is about 5dB before clipping). This gives you the opportunity to turn the channel fader up a little before the signal starts clipping. Especially during live performance, artists often hold microphones in different ways or play louder/softer on their instruments. This way you are able to compensate the difference between the soundcheck and the live performance.

- Wait with your AUX and FX mixes until all your incoming signals have the right gain settings, EQ values etc. Changes in these values may alter the monitor and FX settings in a negative way.

- Pay more attention to the balance of the several channel AUX encoders instead of the total mix volume. Therefore, always start making your monitor mix with a main AUX volume that is set to $\frac{1}{4}$ of its total capacity. This way, you are always able to boost the total AUX main volume without needing to alter the balance of the several channel AUX encoders.



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Troubleshooting

Problem	Possible Cause	Solution
No sound, or very low sound signal from condenser microphones	No phantom power	Connect or activate phantom power supply
	Volume set too low	Increase incoming volume and gain on your mixer, interface or other sound processing device
Loud high frequencies coming from the speakers	Microphone positioned too far away	Place the microphone closer to the sound source
	Microphone positioned too close to the speakers, which causes feedback	Immediately close the channel fader or mute the channel on your mixer or interface. Then move the microphone further away from the speakers, or change the position to prevent the microphone to be aimed directly at the speakers.
Interruption of connected sources	Loose cable or broken cable	Check if the cable is plugged into the microphone correctly. If that does not solve the problem, try to change the cable.
No sound coming from the mixer	Channel fader closed	Slightly increase the channel fader to the '0' position
	Gain set too low	Increase gain until the Peak LED starts flickering slightly
	Master fader closed	Slightly increase the master fader to the '0' position
No sound on monitor (AUX) channel	AUX potentiometer on channel closed	Increase the AUX level on each active channel
	AUX master level potentiometer closed	Increase the AUX level on the AUX master level
	AUX connected wrong	Check if the monitor output signal is connected to the AUX output correctly.
	No signal source	Check if the connected signal sources are sending their signal correctly into the mixer.
Distorted sound coming from the headphones or master output	Gain set too high, clipping inputs	Decrease the gain from the distorting channel to a moderate level
	Channel fader set too high, clipping channel	Decrease the channel fader volume

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Technical specifications

Features:

- compact mixer for small PA, recording and broadcasting purposes
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- Insert option for all mono channels
- Common +48V phantom power for all microphone inputs
- Gain control for each input
- 3-band EQ for each input
- L/R PAN sound balancing function for each input
- AUX level control for each input
- FX level control for each input
- PEAK limiter LED for each input
- Stereo input channel
- Built-in USB MP3-player
- Built-in echo effect processor with adjustable level and duration
- Main Mix fader
- Mono AUX output, for monitoring applications (use AUX levels to make a monitor mix)
- Mono FX send, to use an external effects processor
- Headphone output with adjustable volume
- Master LED VU meters with CLIP indicators
- Tape out for recording applications (mixed output)

Microphone inputs:

- Type connector: XLR
- Frequency response: 10 Hz to 60 kHz
- Gain range: 12 to +60 dB
- Maximum input level: +15 dBu
- Signal/noise ratio: -90dB, A-weighted
- Impedance: Approximately 4.8 kOhm

Line inputs:

- Type connector: 6.35 mm jackplug TRS, electronically balanced
- Impedance: 20 kOhm balanced, 10 kOhm unbalanced
- Gain range: -10 to +40 dB
- Maximum input level: +22 dBu

EQ

- High: 12 kHz +/- 15 dB
- Mid: 2.5 kHz +/- 15 dB
- Low: 60 Hz +/- 15 dB

Stereo inputs:

- Type connector: 6.35 mm jackplug TRS, electronically balanced
- Impedance: 20 kOhm balanced, 10 kOhm unbalanced
- Maximum input level: +22 dBu

Main output:

- Type connector: 6.35 mm jackplug TRS, electronically balanced
- Maximum output level: +18 dBu

Tape output:

- Type connector: Stereo RCA, unbalanced
- Impedance: Approximately 1 kOhm
- Maximum output level: +18 dBu

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Headphones output:

- Type connector: 6.35 mm jackplug TRS
- Maximum output level: +18 dBu (150 Ohm / 316 mW)

Total distortion:

- Total Harmonic Distortion and noise: 0.008%, A-weighted

Technical details:

- Power consumption: 15 Watts
- Power supply: 230V, 50 Hz
- Dual power adapter, 2x 17V AC output
- Locking 3-pin power adapter cable to Schuko
- Locking 3-pin power adapter cable to UK plug

Dimensions MX-4:
245 x 190 x 65 mm

Dimensions MX-6:
276 x 256 x 62 mm



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