

DEVINE

MixPad PA mixers 502 / 602 / 802 / 1002 / 1202 (-FX-USB)



User manual

The information in this user manual is subject to change at any time without notice.

Version: 1.0 Date of creation and author's initials:04-12-2018 RV Revision date and author's initials: -

Introduction

Thank you for purchasing this Devine PA mixer. We advise that you read this user manual in its entirety before unpacking the contents of the box, so that you are familiar with all of the functionality that this product has to offer. Please be sure to check that all of the parts and accessories listed below under 'box contents' are included in the package. In the event that the product does not function properly, or if you have any issues while operating it, please remove the plug from the power socket and contact your dealer for assistance.

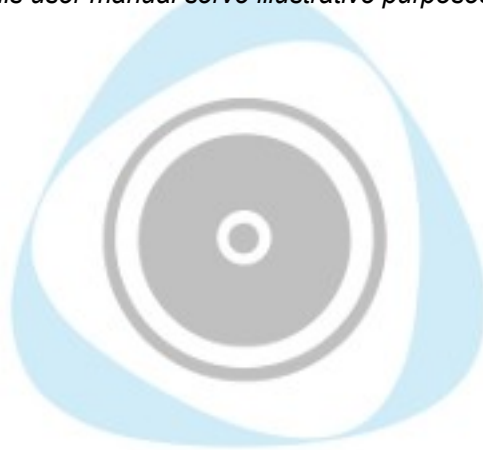
Box contents:

- Devine MixPad mixer (502 / 602 / 802 / 1002 / 1202 (-FX-USB))
- power adapter

Please inspect the device and the included accessories.

Should you discover that either the device or one or more of the included parts have been damaged or rendered defective while in transit, please contact your dealer directly.

Please note that the pictures in this user manual serve illustrative purposes only and may differ slightly from the product you receive.



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Contact:

Devine Pro Audio Products
Verrijn Stuartweg 18
4462 GE Goes
The Netherlands

*Please do not send any products to this correspondence address.
Should you wish to send in a product for repair or for a refund, please contact your dealer for an RMA
(Return Merchandise Authorisation).*

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Safety instructions



WARNING!



Keep this device away from moisture, water and rain to avoid the chance of electric shocks.

Everyone involved with the installation, operation and maintenance of this device must:

- Be qualified
- Be skilled
- Have read the instructions in this user manual
- Be sure that neither the device nor the included accessories are damaged. Should the device or the included accessories be damaged, please contact your dealer for more information.
- Ensure that the device is in good working condition and is safe to operate. Please follow the advice and instructions as they are described in this user manual.

Damage caused by misuse and/or modifications made to the device are not covered by the warranty. This device does not contain any parts that need to be repaired or replaced by the user. Should maintenance or repairs be necessary, they must be handled by a qualified technician.

Important information regarding health and safety:

- Do not remove any labels or stickers from this device.
- Do not leave any cables lying around.
- The device should not be opened up, and any hardware or software that may be present should not be modified.
- To achieve optimal performance, inputs on this device should not be fed with a signal higher than necessary.
- The device should only be used indoors; contact with water, rain and moisture should always be avoided. Do not place any objects containing liquids on top of the device.
- Remove the device from any nearby flames or heat sources; do not place it near flammable fluids, gasses or objects.
- Disconnect this device from the power supply if it will not be used for a longer period of time, if maintenance is necessary, or if the device needs to be cleaned.
- Do not pull on the cable to remove a connector, as this could cause damage.
- Do not use any cables other than the ones described in this manual. Do not use defective cables. Please contact your dealer if the included or necessary cables do not function properly with this device.
- In the event that the device is exposed to extreme temperature changes (e.g. transported through a cold outside environment into a warm indoor environment), it should not be turned on until it has reached room temperature. This is necessary to prevent moisture from forming in the device, which could lead to electric shocks.
- Ensure there is sufficient space around the mixer and power adapter for cooling purposes.

Guidelines and operation of this device:

- This device is intended for indoor use by adults.
- This device is not suitable for use by children, and should always be operated by an adult.
- This device may only be used in a suitable environment where no damage to the device can occur. Do not use the device in moist or dusty environments such as:
 - indoor swimming pools where chlorine is used
 - beaches where there is sand and salt
 - outdoors
 - indoors in spaces where intense heat sources are present, or where it reaches temperature levels that would be considered uncomfortable for a person
- Avoid impacts and collisions during use and transport. Do not transport the device while it is in use. Avoid using excessive force when installing and operating the device.

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- The user should become familiar with the functions of this device before using it.
- The user should be able to stop the device's power supply in case of emergencies. At least one of the following should therefore be accessible at all times:
 - the AC/DC adapter attached to the mixer
 - a all-pole power socket switch or all-pole extension cable switch
- Should the device not be used in the manner described in this user manual, damages or even injuries could occur. Devine cannot be held responsible for any injuries or damages that occur as a result of improper use of this product.

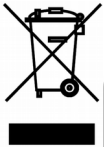


Storage and transport:

- This product is designed for mobile use. It can be transported separately as long as it's well-protected against shocks and collisions.
- This device is not designed for permanent (24/7) use. The expected lifespan of the device will not be affected by occasionally turning the device off. Disconnect the device or turn off the power when it is not actively in use.
- If the device will not be used for a longer period of time, it should be disconnected and stored in a dust-free environment.
- Do not expose the device to extreme temperature differences.

Housing

- Inspect the device's housing frequently, and always just before use. Avoid operating the device if there are large dents or cracks, or if screws are missing. Do not use the device if the housing is not in good condition. Contact your dealer or a qualified technician if you are unsure about the state of the device.
 - Check the device and the screws for corrosion. Corrosion must not be present on this device. Contact your dealer or a qualified technician if you find any corrosion on the screws.
- Every power and signal connector should be securely mounted. Do not use the device if the connectors are not secure.
- Avoid dust and dirt build-up. Clean the device once a month by disconnecting it from the power supply and wiping it down with a dry or slightly moist cloth. If the device is used frequently, the cleaning intervals should increase.

Symbol explanation:

	<p>WEEE: Ensure that this device is disposed of properly. This product falls under the WEEE (Waste Electrical and Electronic Equipment) directive. The requirements of this directive apply to all manufacturers and producers of electronic devices in the EU. Do not throw this product away with regular rubbish. Please contact your local authority for more information about how to recycle and dispose of these products in your region. By recycling this product in the proper manner, we can work together to ensure that we can continue to enjoy these kinds of products and still protect the environment as much as possible from pollution.</p>
	<p>CE: The CE logo indicates that this product meets the European norms and requirements to which it must legally conform.</p>
	<p>Only suitable for indoor use: this product was only designed for indoor use. The maximum environmental temperature must not exceed 40 degrees Celsius (104 degrees Fahrenheit).</p>

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Guidelines and operation of this device

While the various MixPad mixers are similar to use and built in much the same way, some of the following information and images may not apply to your model. Be sure to check whether certain features are present on your model by comparing it to the information shown in this user manual for best results.

Mono channel

A mono channel on a PA mixer is normally used for standard microphone signals. They're occasionally used for mono line signals too, but stereo line signals are normally used unless this is not possible for some reason.

A complete mono channel with all its controls is called a channel strip. Depending on the model of your mixer, you'll have multiple mono channels available with the following functions:

Mic: microphone input with a 3-pin XLR connector.

Line in: to connect a line signal to a mono channel use the TRS jack connector. A balanced or unbalanced signal can be used.

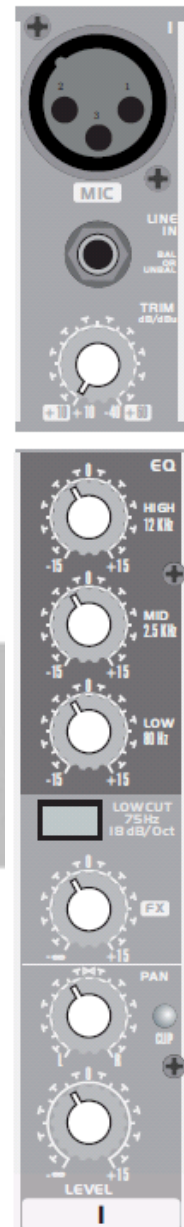
Trim: with the trim knob, the amplification of the channel's input signal can be adjusted. When connecting to an input, the trim knob should be turned all the way down (as far to the left as possible). Once connected, the input signal can be amplified by slowly turning the knob up again (to the right) until the clip level is reached. This is the point that the signal has its fullest dynamic range without distortion. If this level is surpassed, the signal will start to clip and distortion will occur. This will also be seen on the CLIP LED indicator (see 'CLIP LED') and when this occurs, the trim knob should be turned down again until the signal is no longer clipping. It's best turn the knob down a little further too to allow some extra space for any dynamic differences in the signal that may occur. This extra space is known as headroom. With practice you will become more familiar with the best settings for certain situations. The signal level from microphones used by novice speakers or vocalists may fluctuate widely and you should consider turning down the trim knob a little more to compensate for any peaks that may occur in order to avoid potential problems with clipping.

EQ: the mono channels all have a 3-band EQ giving you control over the balance between the low (80 Hz), mid (2.5 kHz) and treble (12 kHz) frequencies. Each one can be cut or boosted with values between -15 and +15 dB. This can be handy for accentuating the high tones in vocals, for instance.

Low cut: for certain signal sources, such as vocal microphones, it can be undesirable for frequencies below 75 Hz to be processed. By activating the Low Cut function, all frequencies below 75 Hz received from the signal source will be dampened by 18 dB. In visual terms, this would be seen as a descending line with less and less of the signal remaining the lower the frequencies go.

Please note: Low cut is not available on all models.

FX: some mixers have a built-in effects module and all the mixers have the possibility to connect external effects. With the FX knob, the effect level on the channel can be adjusted. This can be handy for adding a touch of reverb to a vocalist's performance, for instance. More information about the effects function can be found later on in this manual. The more the FX knob is turned up (to the right), the more of the channel's sound will be sent to the effects module or output. When it's set to 0 dB, it will be sent optimally, but without any amplification. Turning it up (to the right) will amplify it by up to a maximum 15 dB. Note that this may cause distortion in the signal. When the knob is turned all the way down (to the left), nothing will be sent from the channel to the effects module.



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External effects can also be mixed with the MixPad mixer by using the Send FX output. More information about this can be found in the 'Signal Outputs' section.

Please note: the FX pad is activated post fader. If the level knob of the channel is turned all the way down so that no sound is sent to the Master signal, no signal will be sent to the effects section either.

Pan: the Pan knob makes it possible to direct the mono channel's output signal towards the left or right side. This means you could direct the sound towards the left side for a vocalist standing on the left side of the stage, for instance. Experiment with this feature to find the best balance.

Level: once the trim and EQ settings have been optimised, the level knob can be used to adjust the signal. When the knob is set to 0 dB, the sound level is determined by the setting of the trim knob. It's not recommended to boost the signal by more than 0 dB as this can have negative consequences for the sound. The trim knob lets you get the full dynamic potential out of the input signal and the faders allow you to determine a good level for the final mix.

CLIP LED: there's a Clip LED on each channel that indicates when the input signal from a certain signal source is too loud. The signal is measured at line level which means the EQ settings will also have an impact. If you add lots of bass to a signal that's coming in at 0 dB, for instance, this could cause the Clip LED to light up which indicates distortion in the signal. The more the indicator is lit up, the more distortion in the signal there is which will have a detrimental effect on the signal quality. For this reason, it's best to prevent the Clip LED from lighting up whenever possible.

Stereo channels

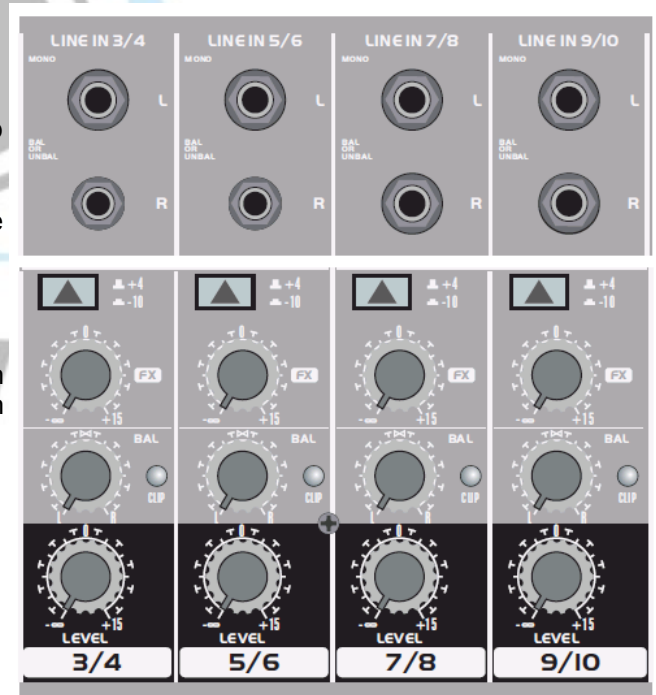
A stereo channel on a mixer is designed to handle a stereo signal that consists of individual left and right sides that are sent to separate left and right master channels. This is very different from a mono signal that sends the same centralised signal to both sides unless the pan knob is used to adjust the balance.

A stereo channel doesn't have a trim function because the input signal is already optimised or can be optimised on the source device like the volume control on a keyboard, for instance.

Line in: the stereo channels have two jack inputs that can be used for balanced or unbalanced signals depending on the signal source. The signal will only be balanced if both devices have balanced connectors and the cables used support signals with +, - and GND (ground/earth). A balanced audio signal is more stable because it's less susceptible to external influences that can cause unwanted interference. Over short distances, an unbalanced signal doesn't normally suffer from problems either.

The Line in connectors are marked L and R for left and right. For a mono signal, the left connector needs to be used, but you should consider using a mono channel instead.

+4 / -10 dB pad (not all on models): this button lets you boost or attenuate the signal. +4 dB can be used with unbalanced signals, while -10 dB can be used for balanced signals. This will optimise the signals per channel.



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FX: see the mono channel section for more information. For the stereo channels, the FX work the same way, but left and right signals are sent to the effects processor or external equipment. Bear in mind that the effects signal will become mono if one of the chains in the circuit is switched to mono.

Please note: the FX pad is activated post fader. If the level knob of the channel is turned all the way down so that no sound is sent to the Master signal, no signal will be sent to the effects section either.

Balance knob: the balance knob on the stereo channels is similar to the Pan knob on the mono channels, but it determines the balance between the left and right signals rather than the position of the mono signal. If the knob is turned towards the left, the right signal will be dampened appropriately and vice versa.

Level: see the mono channel section for more information.

CLIP LED: see the mono channel section for more information.

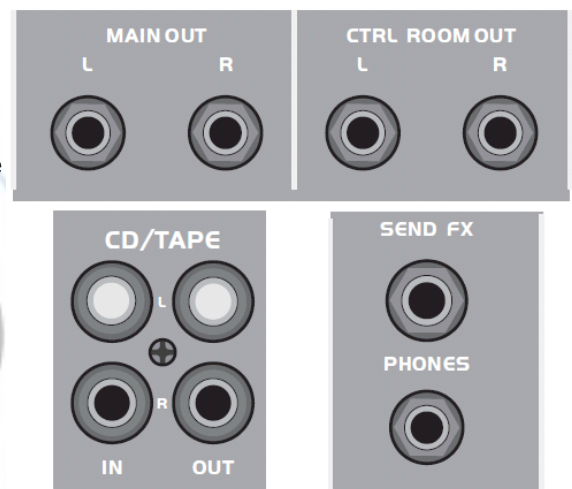
Signal outputs

There are different ways to send the mixed signals from the MixPad mixers to recording equipment, speakers or external effects, for instance, that can then be returned to the mixer again.

Phones/CR out: the Phones and Control Room output use the same signal. This is actually the same as the master signal before it reaches the master fader. Changing the level of the master signal will not affect the level of the Phones or Control Room signal, therefore. This can be adjusted using the CR & Phones volume knob.

This setup can be handy for situations like the following:

- (internet) radio broadcasting where the Main Out signal is sent to speakers in the room and the Control Room signal is sent to recording equipment, for instance.
- recording live performances where the Control Room output is sent to recording equipment and the Main Out signal needs to be adjusted before it reaches the audience.



There are separate left and right Control Room connectors that support balanced signals when TRS jacks are used. The headphone socket also accepts a TRS jack, but if your headphones have a mini jack connector, you can always use a mini jack to jack adapter plug (not included).

Main Out: the Main Out connectors are designed to send the master signal (after it's passed through the fader) to external equipment. Depending on the purpose, this could be a PA speaker system or recording equipment. These connectors are TRS jacks that support balanced audio signals.

The master fader is used to accurately adjust the overall volume. When it's turned all the way down, no sound will get through. When it's set to the zero point, the full signal will get through without any attenuation or amplification. It's possible to amplify the signal by up to +10 dB, but this is not recommended unless it's absolutely necessary because it can have a detrimental effect on the overall sound quality.

Send FX/FX Send: this output can be used to send a signal to external effects equipment. The FX knob on each channel allows you to determine the level at which the channel's output signal is sent out. The effects can then be adjusted on your external equipment and returned to the mixer via a stereo channel.

CD/Tape in: this input can be used to connect CD players and line signals from similar devices like smartphones, laptops, tablets and MP3 players.

This input has unbalanced stereo RCA connectors.

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CD/Tape out: this output is connected to the Main Out and can be used with recording devices, for instance. It can also be used to connect a set of speakers for monitoring purposes, while the main signal goes to main speakers or other equipment.

Main mix section

The Mix section doesn't just consist of the Main Mix fader and associated LED indicators, but also some knobs for extra control over other signals.

Phantom power: this is used to provide condenser microphones with +48V of power. Phantom power only works with condenser microphones and does not normally affect dynamic microphones. Turning on phantom power activates it on all of the mono channels. An LED indicator will light up above the LED VU meters whenever phantom power is activated.

PLEASE NOTE: bear in mind that certain equipment like special ribbon microphones, for instance, absolutely cannot handle phantom power! Never attempt to use phantom power in combination with ribbon microphones or make use of a phantom blocker. For more information, please consult the manual that came with your microphone.

PLEASE NOTE: when using phantom power, no unbalanced XLR signals should be connected where pins 1 and 3 are transferred. This can cause permanent damage to the mixer and connected equipment.

PLEASE NOTE: it's recommended to only switch on phantom power once all of the necessary equipment has been connected to the mono channels. Connecting microphones and other equipment while phantom power is already switched on can cause permanent damage in exceptional cases.

Phones: see Phones/Control room.

Power LED: this blue LED shows that the mixer is powered on and ready for use.

Level indicators: these LED VU meters show the output level or strength of the left and right signals that are going to the Main out. Ideally, you want to prevent the CLIP LEDs from coming on by keeping the sound level to a maximum of 0 dB because anything above this can cause distortion and have a negative impact on the sound quality.

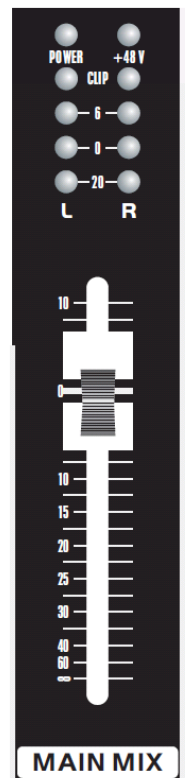
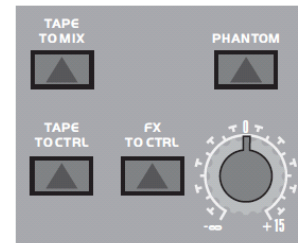
CD/Tape to mix button: when this button is pressed in it sends the input signal from the CD/Tape input to the master signal where it can be used in the mix. When the button is not pressed in, the signal is not sent.

CD/Tape to CTRL: this function sends the CD/Tape input to the CTRL Room outputs (also headphones) for monitoring purposes.

Listening to the recording signal on TAPE IN: if you're using the TAPE OUT to send a signal to a recorder and you want to monitor it without disrupting the signal, you can do so using the TAPE IN. Beforehand, make sure that TAPE IN to MIX is turned off to prevent an endless loop from occurring. With TAPE to CTRL, the signal can then be sent to the headphone or CTRL Room outputs.

FX to CTRL: pressing this button sends the FX signal to the CTRL outputs allowing you to listen to it on your headphones, for instance, to hear what it sounds like.

Main mix fader/knob: Some MixPad mixers have a main mix fader and others have a knob. Both allow you to adjust the level of the main mix. Again, it's recommended to keep the level to a maximum of 0 dB because



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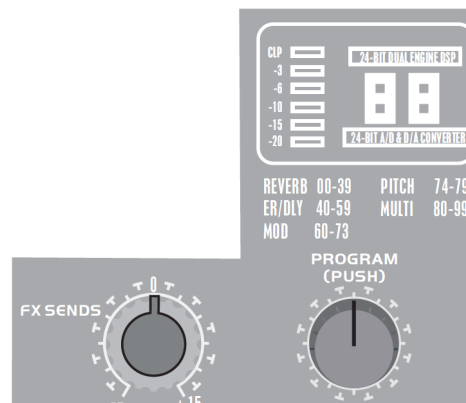
anything above this can cause distortion and have a negative impact on the sound quality. Keep an eye on the level indicators which will help you identify any peaks in the sound.

Effects processor (not applicable to all models)

Some MixPad mixers have a built-in, 24-bit digital effects module with various effects that can be selected using the Program knob. A 2 character display shows the number of the effect selected and pushing the knob activates it.

The knob push activation function is extremely handy when an effect is currently being used and you already want to set up the next one. There are 100 built-in effects including reverb, pitch, delay and modulation and they can be used on any mono or stereo channel.

The effects module has its own Signal and Clip LEDs that indicate when it's receiving a signal and when the signal starts to distort. Bear in mind that the FX knob on each channel can amplify the signal by up to 15 dB, but 0 dB is the recommended level.



FX to Main: this knob determines the level of all the effects signals that are sent to the Main signal. The complete FX signal is a combination of all the channels where any signal via the FX knobs go to the FX channel. If the impact of all the effects is too great on the overall mix, this can be rectified with a single knob. The intensity of the effects will remain the same, but their overall volume will be lower. If the knob is turned all the way down (to the left), no effects will be heard in the main out signal.

Back of mixer

There are various connection options on the back of the mixer as well as the lockable power adapter.

AC power input: this lockable connector is used to provide the mixer with the correct voltage of power when connected to a mains socket via the 3-pin power adapter. It can only be connected one way and should always be locked with the ring to prevent accidental disconnections. Don't leave the power adapter connected to an active socket when it's not connected to the mixer. Avoid contact with metal parts which could cause short circuits.

USB: the 2-in, 2-out USB interface on the mixer can be connected to almost any computer. This makes it possible to play music or record the Main Out signal for internet radio or podcasting purposes, for instance. This can be done with separately available software like the free program Audacity.

Please note: the USB connector is not available on all models.

How to connect products

It's possible to connect lots of different products to the MixPad mixers. The table below shows some examples of products that can be connected and ways to connect them. This list is by no means exhaustive and there are plenty of other possibilities. You'll also need to make sure you use the right cables for the products you're connecting. If in doubt, consult your product manuals or contact your dealer.

Product type	Which inputs and outputs
Laptop, smartphone, MP3 player, tablet	Stereo channel if a lot of control is desired Tape in if a lot of control is desired
Dynamic vocal microphone	Mono channel, phantom power not required
Ribbon microphone	Mono channel, don't activate phantom power!
Condenser vocal or instrument microphone	Mono channel, activate phantom power
Keyboard, DJ set, DJ controller,	Stereo channel

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media player, etc.	
Active speakers	Main out
Passive speakers	Via main out and a separately available amplifier
PA power amplifier	Main out
Monitor speakers for the sound engineer	CTR out
Effects equipment	Sent out via the Send FX and returned on a mono or stereo channel with the FX turned off to prevent effects loops.



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Mixer troubleshooting guide

If you have a problem with your mixer, please consult this troubleshooting section for possible solutions. If, after consulting this section, the problem remains unresolved, please contact your dealer for more information and/or help.

This troubleshooting section contains information on how to solve the most common problems that occur with PA mixers and equipment regularly used with them, but it does not and cannot cover every eventuality. It is possible that you won't find your problem, cause and solution in this section due to differences between products.

Problem	Possible cause	Solution
Mixer does not turn on with mains power	Power adapter not connected properly.	Check that the power adapter is connected to the mixer properly (locked connection) and plugged into an active mains socket.
	Power adapter is defective.	If the power adapter is correctly connected to the mixer and an active power socket, but the Power LED is not lit up and the mixer has no power, there could be a problem with the mixer or the power adapter itself. Disconnect the power adapter and contact your dealer.
No sound via one of the inputs	Cable not connected properly	Make sure that the cable is properly connected to both the source and the mixer.
	Gain not set correctly	Check the trim settings by first lowering the fader and then slowly turning up the trim control until the CLIP LED lights up.
	Fader (channel or Main) turned down	Check that the faders that should be turned up are actually turned up to the required level.
No sound from the master output	FX Mix fader turned down	Turn up the Main Mix fader to raise the volume level.
Red Clip Limiter LED lights up often or continually	Volume is too high	Lower the volume on the source that's causing the Clip Limiter LED to light up. Continuous clipping can cause permanent damage to your equipment.
Distorted, clipping or crackling sound	Connected device is transferring a distorted signal	Check if any of the connected source devices are transferring a distorted signal and turn down the volume on the offending device if necessary.
	Volume control is too loud	Turn the volume down
	The tone controls for treble and/or bass are too high or too low.	Turn the tone controls back to 12 o'clock and listen to hear if clipping is still audible.

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	Woofers or tweeters are defective	If a speaker is exposed to a loud, distorted, or clipped signal for a longer period of time, this can cause permanent damage to its internal components. If you suspect that the woofer or tweeter is damaged, contact your local dealer for assistance.
Insufficient volume through microphone	Phantom power is not on	Check whether your microphone requires phantom power. If it does, check that phantom power is turned on for the microphone channel and if not, turn it on.



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Specifications

General specifications for all models:

- practical and compact PA mixers
- desktop design with clear layout
- suitable for mixing various audio sources
- various inputs and outputs for microphone and line signals
- various options for connecting equipment
- optimal control over all inputs
- robust metal housing with synthetic side panels
- lockable power connector for power adapter unit
- models with and without built-in effects module
- models with and without built-in 2-in, 2-out USB audio interface

Channel strip:

Mono channel strip:

- microphone input via balanced 3-pin XLR
- mono line output via balanced TRS jack or unbalanced TS jack
- trim control
- 3-band EQ with low, mid and high tone controls (80 Hz, 2.5 kHz, 12 kHz, range from -15 to +15 dB with zero point)
- FX intensity control (-infinite to +15 dB with zero point)
- pan control (far left to far right mix positioning)
- Clip LED indicator
- channel volume control (-infinite to +150 dB with zero point)

Stereo channel strip:

- mono (L) or stereo input (L+R)
- suitable for balanced TRS jack and unbalanced TS jack
- 3-band EQ with low, mid and high tone controls (80 Hz, 2.5 kHz, 12 kHz, range from -15 to +15 dB with zero point. Please note: not available on all models.
- FX intensity control (-infinite to +15 dB with zero point)
- balance control (far left to far right mix positioning)
- Clip LED indicator
- channel volume control (-infinite to +150 dB with zero point)

Technical specifications per model:

Model	502	602	602-FX-USB	802	802-FX-USB	1002	1002-FX-USB	1202	1202-FX-USB
Number of mono channels	1	2		4		2		4	
Number of stereo channels	2				4				
Dimensions (l x b x h)	195 x 120 x 42/32 mm	240 x 184 x 42/32 mm	240 x 184 x 47/37.5 mm	240 x 237 x 42/32 mm	240 x 237 x 47/37.5 mm	240 x 208 x 42/32 mm	240 x 208 x 47/37.5 mm	240 x 260 x 42/32 mm	240 x 260 x 47/37.5 mm
Weight	0.7 kg	1.2 kg		1.5 kg		1.3 kg		1.7 kg	
Power consumption	13 W	15 W		17 W		18 W		23 W	

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