

MIXASSIST™ PLUGIN

MixAssist Plugin

USER GUIDE

SOUND  **DEVICES**

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WEEE Statement

If you wish to discard a Sound Devices product in Europe, contact Sound Devices (Germany) for further information.



Warning! This device can drive headphones to potentially dangerous levels. Do not listen at high volume levels for long periods.

Read and fully understand this manual before operation.

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This table provides the revision history and cross-reference links to "what's new" in this guide.

DATE	DESCRIPTION
11/19	v5.00 Initial release

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MixAssist Overview

MixAssist automatically attenuates redundant microphones to reduce unwanted noise, feedback, and comb filter artifacts in multi-microphone applications. This is ideal for podcasts, scripted or unscripted dialogue, panel discussions, house of worship applications and more. MixAssist auto-mixes post-fade signals to the left and right buses and does not affect the prefade ISO tracks.

MixAssist operates on five principles:

NOISE-ADAPTIVE THRESHOLD (NAT)

For each microphone, an ever-changing and automatic threshold is continuously calculated. This per-channel threshold has a slow-attack and very fast decay. When an incoming microphone's signal is instantaneously above this threshold it can be turned on. Steady-state sounds (air conditioning etc) will not turn on a microphone, only varying speech-like signals.

MAXBUS

The envelope of all microphone signals is logically or'd together to get the instantaneous peak of the loudest microphone. Each microphone envelope is continuously compared to this Maxbus; if the envelope is greater (and it meets the NAT criteria), then it is gated on. If a talker speaks into two or more microphones, it will only gate on one of the microphones, eliminating any comb filtering.

LAST MIC LOCK-ON

The last used microphone remains on, creating a seamless mix.

OFF-ATTENUATION

When a microphone is turned off, it does not turn all of the way off, instead it is attenuated by a certain amount, typically 15dB. This results in a more transparent sound.

NUMBER OF OPEN MIC ATTENUATOR (NOMA)

For each doubling of the number of open microphones, the gain is attenuated by 3dB. This maintains the total gain through the system at 0dB.

MixAssist Mode

To enter MixAssist Mode, navigate to Menu>Inputs>MixAssist.

MIXASSIST ON

Toggles MixAssist On or Off. Depending on the current operation mode, the MixPre may automatically reboot when MixAssist is turned on.

MIXASSIST RING LEDs ON

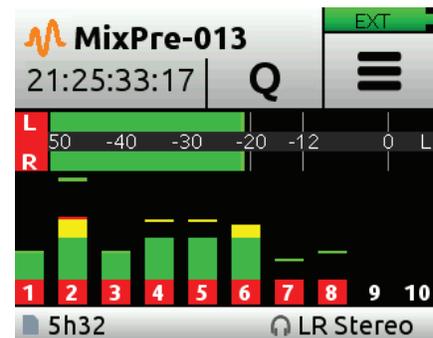
Toggles MixAssist front panel LEDs to show MixAssist channel status. When off, front panel LEDs operate as normal showing signal, clip, and solo/mute status. When a channel is active (not attenuated), its ring LED will illuminate green.

In addition, a narrow green segment is shown at the top of an LCD channel meter when the channel is active.

There are two independent MixAssist processing groups, Bus L and Bus R. Channels 1-3 on the MixPre-3, 1-6 on the MixPre-6 and 1-10 on the MixPre-10 (right) can be routed to Bus L, Bus R, both equally (Center), or both unequally (L or R pan increments) by using a channel's pan control.

MixAssist will only operate at a sample rate of 48 kHz.

MixAssist is disabled while the MixPre is in Musician or Ambisonics modes.



Software License

End-user license agreement for Sound Devices MixPre Series Software / Embedded Firmware

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Two Level Segregated Fit memory allocator, version 3.1. Written by Matthew Conte <http://tlsf.baisoku.org>

Based on the original documentation by Miguel Masmano: <http://www.gii.upv.es/tlsf/main/docs>

This implementation was written to the specification of the document, therefore no GPL restrictions apply.

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FCC & ISED Compliance Statements

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. FCC Part 15.19 (a) (3)

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC & ISED User Statement

This device complies with FCC and ISED RF Exposure SAR limits exposure limits for general population / uncontrolled exposure.

Cet appareil est conforme à la norme FCC et USED RF Exposure SAR limite les limites d’exposition pour la population générale / l’exposition incontrôlée.

This Device complies with Industry Canada License-exempt RSS standard(s). Operation is subject to the following two conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme avec Industrie Canada, exempts de licence standard RSS (s). Son fonctionnement est soumis aux deux conditions suivantes: 1) ce dispositif ne peut pas causer d’interférences, et 2) ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l’appareil.