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- › [Allen & Heath](#) /
- › [Allen & Heath ZED-420 Live Audio Mixer Instruction Manual](#)

## Allen & Heath AH-ZED420

# Allen & Heath ZED-420 Live Audio Mixer Instruction Manual

## INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of your Allen & Heath ZED-420 Live Audio Mixer. The ZED-420 is designed for professional live sound applications, offering a comprehensive feature set for bands, houses of worship, theaters, and AV installations.

Key features include 16 mic/line inputs, 4 stereo inputs, 4-band MusiQ EQ, 4 subgroups, 6 auxiliary sends, a 7x2 matrix, and USB audio connectivity.

## SETUP

### Unpacking and Inspection

Carefully unpack the mixer and inspect it for any signs of damage. Retain all packaging materials for future transport or service.

### Power Connection

Connect the supplied power cable to the mixer's IEC inlet on the rear panel and then to a suitable AC power outlet. Ensure the power switch is in the OFF position before connecting. The ZED-420 uses a standard corded electric power source.



Image: Rear panel of the ZED-420 mixer, highlighting the power input and other rear connections.

## Initial Connections

Before powering on, connect all necessary audio inputs and outputs. The mixer features XLR microphone inputs, 1/4-inch line/instrument inputs, and various output options.

For USB audio, connect a standard USB cable from the mixer's USB port to your computer or compatible mobile device. The ZED-420 is class-compliant and does not require specific drivers for most operating systems.

## OPERATING INSTRUCTIONS

### Input Channels (Mono)

Each of the 16 mono channels features a DuoPre XLR microphone preamp with 48V Phantom power and up to 69dB of gain. These preamps utilize two gain stages for accurate sound across the gain range.



Image: Overhead view of the ZED-420 mixer, displaying the layout of all input channels, faders, and controls.

**High Pass Filter (HPF):** A 100Hz HPF is available on every mono input to remove unwanted low frequencies.

**MusiQ EQ:** Each mono channel includes a 3-band MusiQ EQ with a swept mid-frequency, allowing for musical tone shaping. Adjust high and low frequencies with shelving EQ and precisely control the mid-range.



Image: Detailed view of the ZED-420's channel strip, focusing on the MusiQ EQ section and other channel controls.

**Insert Sockets:** Mono channels, groups, and the main mix feature insert sockets for connecting external processors like compressors or graphic equalizers.

## Auxiliary Sends

The ZED-420 provides six auxiliary sends:

- **Two Pre-Fade Auxiliaries:** Ideal for monitor mixes, independent of the main mix fader.
- **Two Post-Fade Auxiliaries:** Suitable for external effects units, subwoofers, or streaming/recording feeds, where the send level follows the main mix fader.
- **Two Switchable Auxiliaries:** Can be set to either pre-fade or post-fade operation on a per-channel basis.



Image: Close-up of the ZED-420's master section, showing auxiliary send controls, matrix, and USB I/O section.

## USB Audio Interface

The integrated stereo-in stereo-out USB connection allows for easy recording of the main mix or selected channels. It also enables a stereo return from a connected device back into the mixer. This feature is class-compliant, supporting Mac, Windows, and many mobile devices without requiring drivers.

## Groups and Matrix

The mixer includes 4 assignable output buses (subgroups) for routing channels to multitrack recorders or monitors. A 7x2 matrix provides additional routing flexibility.

## MAINTENANCE

To ensure the longevity and optimal performance of your ZED-420 mixer, follow these general maintenance guidelines:

- **Cleaning:** Regularly clean the mixer's surface with a soft, dry cloth. Avoid abrasive cleaners or solvents. For stubborn dirt, a slightly damp cloth can be used, ensuring no liquid enters the controls or openings.
- **Dust Protection:** Keep the mixer covered when not in use to prevent dust accumulation, which can affect faders and potentiometers.
- **Environmental Conditions:** Operate the mixer in a clean, dry environment, away from extreme temperatures, humidity, and direct sunlight.
- **Cable Management:** Ensure all cables are properly routed and secured to prevent strain on connectors and accidental disconnections.

## TROUBLESHOOTING

This section addresses common issues you might encounter with your ZED-420 mixer. For more complex problems, consult the full user manual or contact Allen & Heath support.

- **No Power:** Ensure the power cable is securely connected to both the mixer and a working power outlet. Check the power switch position.
- **No Sound Output:** Verify that all faders (channel, group, main mix) are raised appropriately. Check mute buttons on channels and groups. Ensure output cables are correctly connected to amplifiers or speakers.
- **No Input Signal:** Confirm that input sources are active and connected correctly. Check gain settings on individual channels. For microphones, ensure 48V phantom power is engaged if required.
- **Hum or Noise:** Check for ground loops by ensuring all equipment is properly grounded. Use balanced cables where possible. Disconnect inputs one by one to identify the source of the noise.
- **USB Audio Issues:** Ensure the USB cable is connected securely. Verify that the ZED-420 is selected as the audio input/output device in your computer's sound settings or DAW.

## SPECIFICATIONS

Feature	Detail
Item Weight	31 pounds (14.06 kg)
Product Dimensions	22.1 x 5.1 x 28.2 inches (56.1 x 13.0 x 71.6 cm)
Model Number	AH-ZED420
Brand	Allen & Heath
Number of Channels	22 (16 Mic/Line, 4 Stereo)
Hardware Interface	USB
Power Source	Corded Electric
Connectivity Technology	USB
Color	Gray and Red
First Available	April 13, 2004

## WARRANTY AND SUPPORT

Allen & Heath products are designed for reliability and performance. For specific warranty information, please refer to the documentation included with your product or visit the official Allen & Heath website. Keep your proof of purchase for warranty claims.

For technical support, service, or further inquiries, please contact Allen & Heath customer service or your authorized dealer. You can find contact information on the official Allen & Heath website:

[www.allen-heath.com](http://www.allen-heath.com)