

# AUDIO MIX X

## Audio Mixer

Audio Mix X is a high-performance audio solution for cloud-based live media production. Designed for audio professionals by audio professionals, Audio Mix X comes equipped with gain, full equalizer, compression, aux channels, pre-faders, subgroups and monitoring outputs. Easy mixing, grouping and mix-minus workflows adapt Audio Mix X to multiple kinds of application.

Equipped with an instantly recognizable software UI, soft controls are easy to use with a mouse and fast ramping avoids jarring changes in levels when clicking to a new position on the fader. For users who are more comfortable working with a hardware panel, Audio Mix X can be controlled with multiple MIDI-capable panels. The interaction between hardware and software is immediate, with no perceptible user delay.

Audio Mix X from Grass Valley® has access to any source on the AMPP® network with no recabling. In addition to simple text labeling, AMPP provides video key frames to Audio Mix X for easy identification of each source, along with direct monitoring of muxed video and audio on outputs. The monitor window can be located directly on the audio mixer UI or on a separate, larger monitor.

### Freedom to scale

Like all AMPP solutions, Audio Mix X uses orchestrated microservices to meet the response and accuracy requirements of live streaming media and entertainment. AMPP is Grass Valley's scalable SaaS platform of agile management tools, elastic platform services and intelligent media technologies that are universally deployable.

Unlike traditional hardware systems, AMPP does not require a large upfront infrastructure buildout to begin experimenting with new agile media production models. Spin up as many operator instances as required where and when they are needed.

AMPP may be located on any combination of public and private cloud services. As a result, AMPP can quickly spin up solutions that integrate with existing infrastructures. Any subset of network sources can be shared with the AMPP fabric for use by AMPP-enabled cloud production solutions.

Each instance of an AMPP-enabled solution can select sources on-the-fly from any that are available on the AMPP fabric.

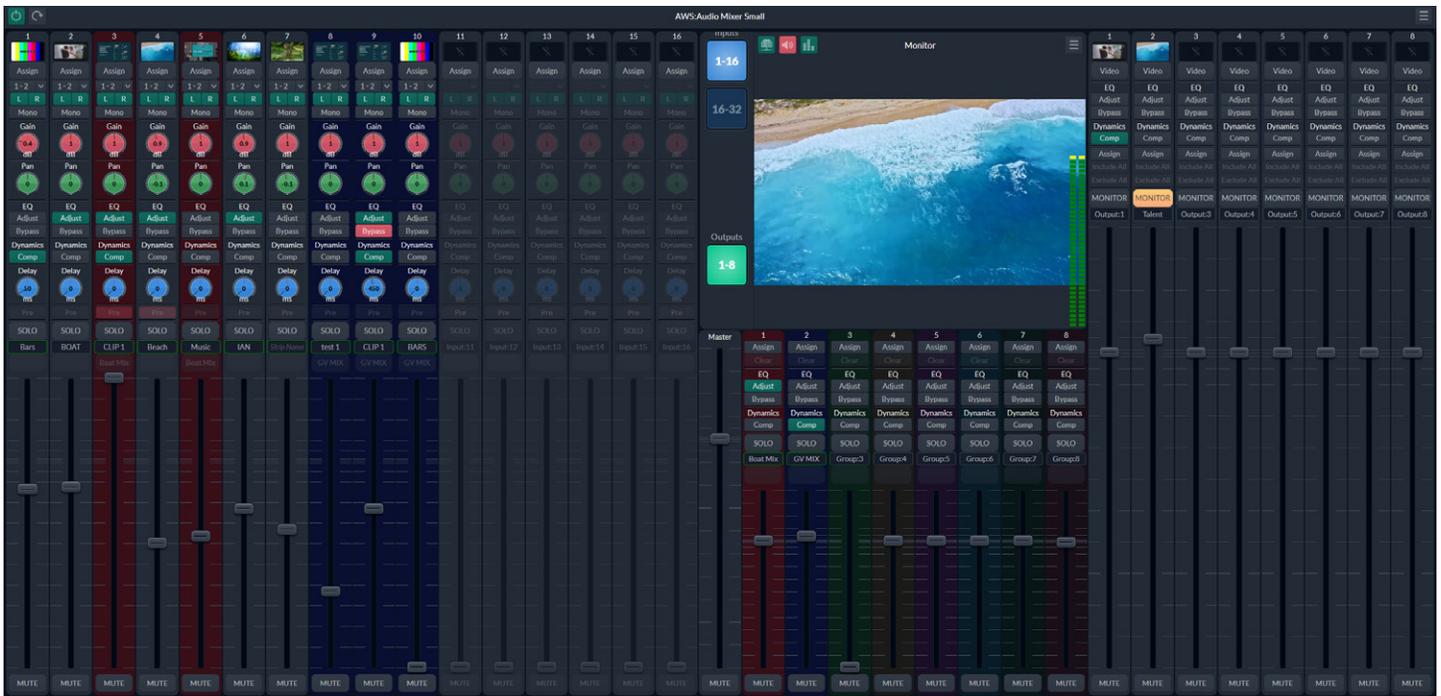
### Freedom to move

Live event environments with reduced on-site production crews frequently want creatives to work remotely. Audio Mix X supports remote production at any distance without compromising the user experience; and regardless of the distance from the live event, system operations are instantly responsive. The system's fully aligned monitoring and control capability makes it easy for operators to work without distracting timing delays.

When at-home production means literally working from home, AMPP is ready to go. Operators can connect to AMPP using typical residential Internet. The high-quality proxy workflow allows operators to make and act on decisions without requiring a high bandwidth connection.

## Key Features

- Controls 64 audio stems
- Create up to 16 unique output mixes
- 8 subgroups
- High-quality EQ and compression
- MIDI panel integration provides simple plug-and-play with a hardware surface
- Keyframes for channels
- Integrated monitor
- Embed audio into video outputs – no separate process required
- Scalable to as many instances as required without upfront buildout
- Flexible, elastic I/O with access to any source on the AMPP fabric
- Cloud-hosted mixing without sacrifice on responsiveness and accuracy
- Frame-accurate for live production
- Fully compatible with connected control surfaces and applications
- Entire configuration is saved with the workload. When the workload is restarted, it resumes with all assignments unchanged from the last configuration



” Kudos to the team on the new audio mixer... This application was a huge help in simplifying our workflow. Thank you! ”

– Current Audio Mix X user

## Security

Rest assured, AMPP is designed with security in mind. Conforming to the best IT practices of a representational state transfer (REST) architecture:

- All REST operations are executed over HTTPS for secure communication.
- All REST operations rely on JSON Web Tokens (JWT) for authorization.

IP streaming in AMPP is encrypted when applicable (SRT (AES), RIST (AES), RTMPS (TLS/SSL), WebRTC (DTLS/SRTP), AMPP Streaming (DTLS/SRTP)).

AMPP authentication is handled through an Identity Service, which can optionally delegate authentication to an Okta server.

To ensure strict security standards are maintained, Grass Valley also regularly conducts third-party penetration testing.



## Specifications

### Up to 64 audio stems

- Assign any available AMPP source to an input channel
- Select stereo pair (if source has multiple stereo pairs)
- Select right or left if it is a mono source or to create a mono source from a stereo source
- Audio pan
- Audio gain
- Volume

### Up to 16 output channels

- Assign any or all available inputs to an output channel
- When an output is selected, all assigned inputs are highlighted for fast configuration reference

### Up to 8 subgroups

- Include multiple related audio inputs such as background music and voiceover in a post-fader submix group that is controlled together as a single source to an output

### Operating modes

- Post-fader mode:
  - Option to assign a user-selected gain level to all inputs assigned to an output channel
- Pre-fader mode:
  - Option to assign a separate mix to each output enables up to 16 unique audio feeds
  - Assign any inputs to up to 8 VCAs
- Solo an input, output or submix group to adjust mix before taking to air

### Signal processing

The following capabilities may be applied to inputs, outputs and subgroups – or bypassed with a single button press:

#### Equalization options

- EQ options are set to defaults that can be adjusted to preference:
  - High and low pass filters
  - High shelf/low shelf
  - Three alternative peaking/bell EQ

#### Compression options

- Gain
- Attack
- Release
- Threshold
- Ratio

This product may be protected by one or more patents. For further information, please visit: [www.grassvalley.com/patents](http://www.grassvalley.com/patents)

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