

AMM

Automatic Microphone Mixer

Manual



TBProAudio 2020

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1 Introduction

AMM is a 32to2 channel automatic microphone mixer. It offers several mixing modes and extensive controls for each channel.

AMM can be used to mix quickly a discussion round, a dialog with several speakers or even an audio conference with up to 16 microphones to a stereo signal.

2 Features

AMM offers the following features:

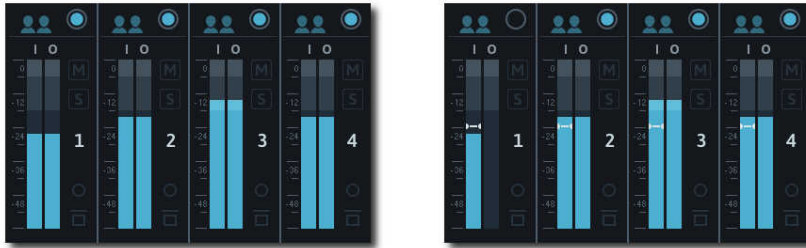
- 16 internal stereo channels
- internal mixing or external mixing with sender/receiver mode
- speech pre filter
- switchable pre-delay
- envelope controlled channel strength
- noise gate
- mix modes: normal, auto, auto balanced, prio
- moderator mode
- extensive channel controls like mono, trim, bypass, weight, mute, solo and pan
- input/output metering
- write channel strength as automation data to DAW
- click-free 64-bit internal processing
- Large and easy to use GUI

3 Design

AMM mixes automatically 16 stereo channels into one stereo out channel, depending on the mixing modes and channel strength. AMM controls the envelope of the channel strength with the parameter Attack, Hold and Release.

Noise gate:

Once a channel is above the noise gate level, it will count into the AMM algorithm.

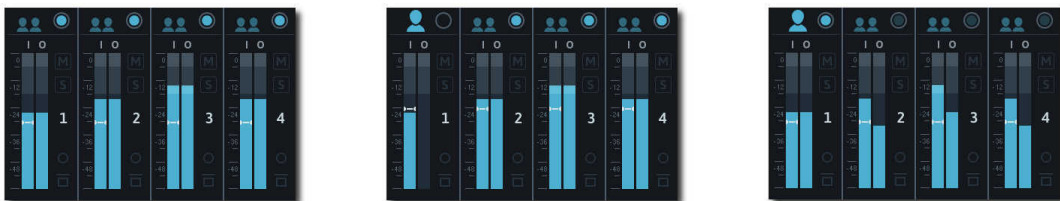


Noise gate off

Noise gate on, CH1 is below

Moderator Mode:

A single channel can be defined as moderator channel. This channel has priority over the other channels. As soon as the moderator channel is active, the other channels are dimmed by the value of the *moderator attenuation*. This function is available in all mixing modes.



No channel flagged as moderator channel

CH1 flagged as moderator channel, CH1 is below noise level

CH1 is above noise level, other channels are dimmed by -12dB

Mix Modes:

Normal Mixing (Mix mode **off**)

AMM is used as normal 32to2 mixer including moderator function.

Auto Mixing (Mix mode **Auto**)

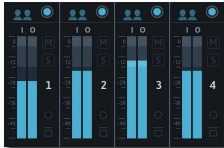
AMM automatically reduces the strength of a channel when it is not being used. It lowers the hiss, rumble, reverberation and other extraneous noise that occur when several microphones operate simultaneously. The strength of suppression is controlled by the parameter *strength*.

Auto Balanced Mixing (Mix mode **Auto Bal.**)

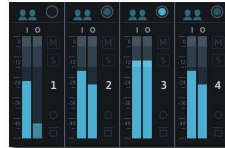
AMM automatically reduces the strength of a channel when it is not being used. The sum of all channels is not louder as the loudest channel. The strength of suppression is controlled by the parameter *strength*.

Prio Mixing (Mix mode **Prio**)

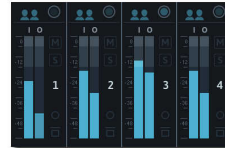
AMM automatically mutes all channels except the loudest channel. It cancels the hiss, rumble, reverberation and other extraneous noise that occur when several microphones operate simultaneously.



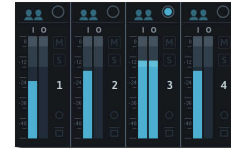
Mix mode off



Mix mode auto, louder channels contribute more



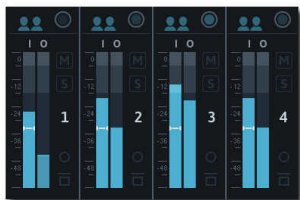
Mix mode auto balanced, louder channels contribute more, but sum is not louder than loudest



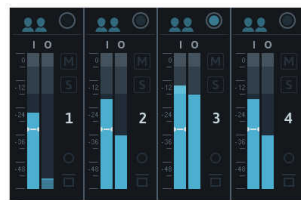
Mix mode prio, loudest channel mutes all other channels.

Channel strength:

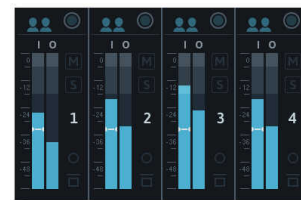
Controls the contribution of each channel to the mixing algorithm. 0.0 means equal contribution, +1.0 means louder channels contribute more, quieter less; -1.0 works the opposite.



Normal channel strength



Positive strength, louder channels contribute more



Negative strength, quieter channels contribute more

4 Minimum System Requirements

- Windows XP SP3 or newer
- Mac OS X 10.9 or newer
- Win: 32/64 Bit VST, 32/64 Bit VST3, 32 Bit RTAS, 32/64 Bit AAX
- OS X: 32/64 Bit VST, 32/64 Bit VST3, 32/64 Bit AU, 32 Bit RTAS, 32/64 Bit AAX
- Tested with: Cockos Reaper, Steinberg Cubase/Nuendo/Wavelab 6/7/8/9/10, FL Studio 12.x/20.x, PT10/12/2018, Reason 9.5/10, Studio One, Ableton Live

5 Plugin Controls

5.1 Plugin Mode

Int. Mixer: mixes all available channels of the track into a stereo signal.

Ext. Mixer: mixes all AMM sender instances into a stereo signal. In this mode additional AMM sender instances are needed on different audio tracks.

Send X: AMM sends to current audio signal to channel 1 of AMM receiver instance. In this mode one additional AMM receiver instance on a different track is required.

5.2 Pre Filter

Toggles speech pre filter for all channels. It helps AMM to focus on speech parts of the audio signal.

5.3 Pre Delay

Adds ca. 10ms look ahead to the internal algorithms and compensates measurement delays.

5.4 Mix Mode

Off: normal 32to2 mixing

Auto: automatic mixing, AMM automatically reduces the strength of a channel when it is not being used

Auto Bal.: AMM automatically reduces the strength of a channel when it is not being used. The sum of all channels is not louder as the loudest channel.

Prio: AMM automatically mutes all channels except the loudest channel.

5.5 Strength

Controls the contribution of each channel to mixing algorithm. 0.0 means equal contribution, +1.0 means loud contributes more, quite less; -1.0 the opposite.

5.6 Noise Floor

Level for noise gate, in dB.

5.7 Moderator Attenuation

Attenuation of non moderator channels if moderator channel is active.

5.8 Attack

Raise time of loudness level, in sec.

5.9 Hold

Hold time of loudness level, in sec.

5.10 Release

Release time of loudness level, in sec.

5.11 Automation

Toggles writing of automation data to DAW. parameter “OUT: CHx Strength”.

5.12 Channel Count.

Number of channels monitored by AMM.

5.13 Channel Group

Toggles display of channel group 1-8 or group 9-16.

5.14 Main Out

Adjust main output gain, dB.

5.15 Main Meter

Displays the main output (left/right) levels, dB.

5.16 Channel Controls

5.16.1 Trim

Adjusts the input gain of the signal, in dB.

5.16.2 Weight

Adjusts the strength of the channel, in dB. It can be used at least on the moderator channel to give it more priority.

5.16.3 Pan

Pans the signal from left to right, balanced panning, -3dB pan law.

5.16.4 Moderator

Flags the channel as moderator channel.

5.16.5 Prio LED

Indicates the channel strength.

5.16.6 Mute

Mutes the channel.

5.16.7 Solo

Solos the channels.

5.16.8 Mono

Forces signal to mono.

5.16.9 Bypass

Passes the channel through the mixing algorithm.

5.16.10 Meter

Input (left) and output (right) level meter and noise gate level.

5.17 Plugin info

Click on the AMM logo to get info about the plugin, open the online manual and change log.

6 DAW Setup

Create e.g. 4 microphone tracks, insert AMM into each track and enable AMM mode “Send x”. Then create the mix track, place AMM there as well, but set AMM mode to “Ext. Mixer”. Route the four AMM sender tracks to the mix track. AMM will now receive the signal from the 4 microphone tracks.

See pictures below:

Reaper:



ProTools (use "Aux Input" as mix track, see below):



Cubase:



7 Demo mode versus Registered mode

In demo mode (without registering) the plugin mutes audio every 90 seconds for a short period. This could be circumvented by clicking on the "TBProAudio" label within 90 seconds.

You can register at <http://www.tb-software.com\tbproaudio>.

8 Registration/Activation

9 Registration/Activation

This plugin must be registered and activated in order to be fully functional. You can purchase the license key here: <http://www.tb-software.com\tbproaudio>.

After purchase, you will receive the license key packed in a zip file by email. Unzip the license file to a suitable location on your PC (e.g. desktop). The license file is called "product name.license". Add the plug-in to any track in your DAW, click on the text "Demo: Click here to activate it" and select the license file. Remove the plug-in in your DAW and add it again. The GUI now says "Registered to your name".

10 Conclusion

So finally if you have any questions, suggestions or issues just let us know.

Visit us here: <http://www.tb-software.com/TBProAudio/index.html>

Your team from TBProAudio