CMIXER

STANDALONE BROADCASTING DIGITAL MIXER

USER GUIDE
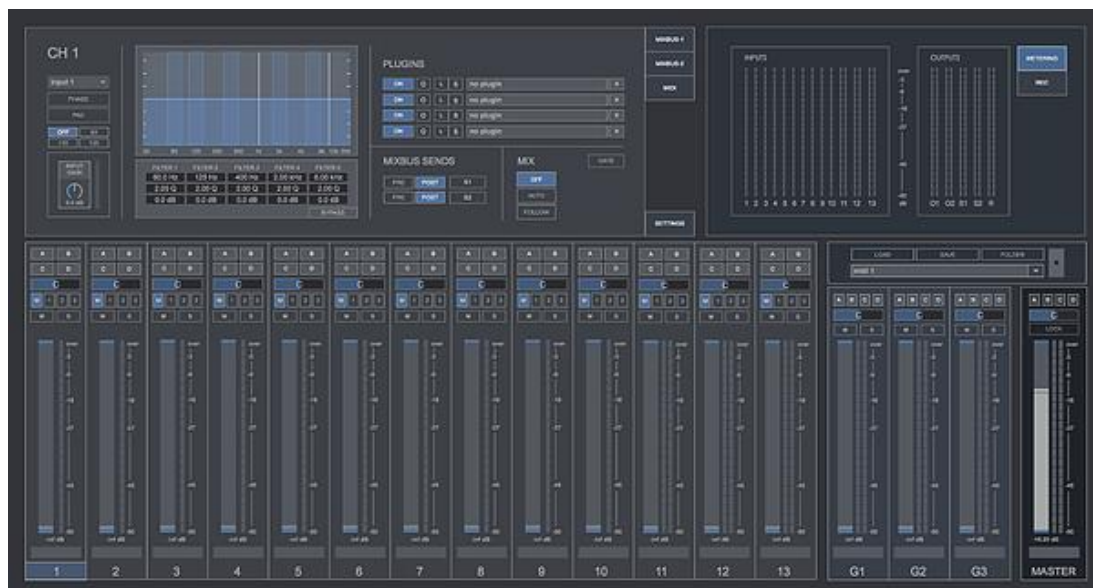
CONTENTS

1 | INTRODUCTION

CMixer is a 64 Bits standalone software conceived for events broadcasting purposes, including online radios, talk shows, dialog recordings, speeches, conferences, meetings, podcasting and for small live concerts.
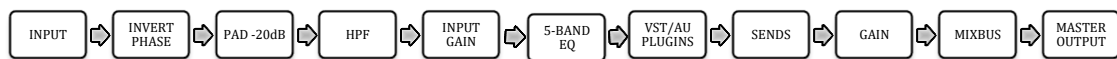
2 | SETUP INSTRUCTIONS

MAC:
Open Cmixer.mpkg and follow installation steps.

Important: Please read "**Important info for Mac users**" pdf before launching this software

WINDOWS:
Open CMixer Setup.msi and follow installation steps.

3 | SIGNAL PATH

INPUT ⇨ INVERT PHASE ⇨ PAD -20dB ⇨ HPF ⇨ INPUT GAIN ⇨ 5-BAND EQ ⇨ VST/AU PLUGINS ⇨ SENDS ⇨ GAIN ⇨ MIXBUS ⇨ MASTER OUTPUT

4 | AUDIO I/O

CMixer provides multiple audio inputs and outputs:

- **10 Mono Input Channels**
- **3 Stereo Input Channels (can be also used in mono configuration)**
- **3 Channel groups**
- **2 Stereo Mix Bus Outputs**
- **2 Stereo Outputs**
- **1 External Recording Output**
- **1 Pink Noise Generator Output**

5 | INPUT CHANNEL SETTINGS

Each input channel allows configuring your own parameters on both Rack and Mixer sections.

Rack section:

- Input selector
- Invert Phase
- Pad -20dB
- Input Gain +/- 15dB
- 5-Band Parametric EQ + Bypass
- 4 vst/au plugins
- 2 Mixbus sends pre/post
- Automix, Follow and Gate modes

Mixer section:

- Direct access to plugins (A,B,C,D)
- Panorama
- Channel Group selector
- Mute/Solo
- Volume
- Track Label

5.1 | PLUGINS

Load up 4 vst/au plugins on each input channel or mix bus.

Controls:
- LOAD – Select your plugin. Drag&drop plugins from any folder. Click over plugin name to view plugin on screen
- L – Load .fxp preset
- S – Save .fxp preset
- X – Remove plugin

5.2 | MIX BUSSES

Up to 2 stereo Mix Buss sends that can be used simultaneously to create secondary mixes.

You can control the volume of each channel bus send and the master mix bus volume on the Mix Bus sections (Mixbus-1 & Mixbus-2). Mix Bus sends can be Pre or Post fader. By default send are post fader.

5.3 | CHANNEL GROUPS (G1,G2,G3)

CMixer features up to 3 channel groups. The audio output from each mixer channel can be send to stereo output or to group channels 1, 2 or 3. Each Group Channel features a 5-band Parametric EQ and 4 vst/au plugins modules.

5.4 | AUTOMIX

CMixer features an automixing engine that helps to achieve the best possible audio performance when working with multiple microphones in real-time, by controlling the output gains automatically and reducing feedback, comb filtering from nearby microphones and any background noise.

The gain management is made without using any kind of compression or noise gate; instead of this an audio signal comparison algorithm is used to achieve this purpose. Automixing engine can also handle a simultaneous multiple speakers scenario by controlling the output gains to meet the same master output gain that if only one speaker is talking. This way you don`t need to worry about momentary output gain increments if more that one speaker is talking at same time.

For best Automix performance, we recommend to balance all the channel input gains so that the input meters display equal input levels when no one is speaking and when speakers are talking. Output meters from each mixer channel should be also equal, so set all the channel volume faders at the same volume and then adjust one by one if needed before activating Automix.

Adjust the channel volume faders only when someone is talking too low or too loud in comparison with other speakers (the selected output master level). It means that you only need to adjust the volume fader one time for each different speaker at the beginning of his appearance, once the level is set correctly you don`t need to do anything else, Automix will do all the work internally.

When Automix mode is activated "A" green led will appear on the selected mixer channel.

Automix sensitivity (%) set the side-chain level for all channels into the Automix engine. This value sets the ratio sensitivity of the automatic mix for all the channels in use. It does not change the mix levels. When the automix have the right settings (sensitivity and equal output levels), each microphone has the same chance to take over the stereo master output. Automix sensitivity control can be found at Master rack section.

Automix is especially useful on broadcasting events where if not possible to know who`s the next speaker and there is not a specific order, an unpredictable dialogue scenario like a panel discussion, talk shows, meetings and any other multiple participant broadcasting events.

The following graphic shows how Automix mode works:
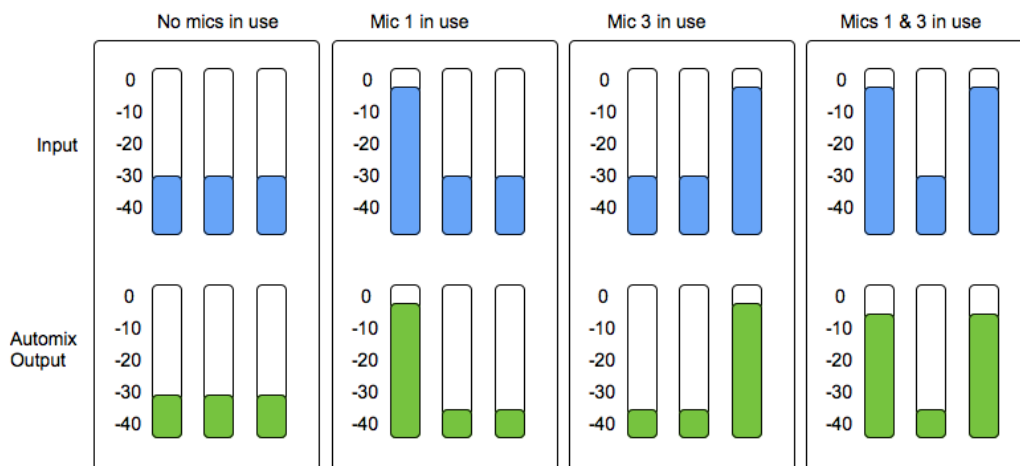
When no mics in use all the channel output levels are turn down some dbs to reduce background noise, when 1 mic is in use its gain is processed at original output level (so no output gain changes) while the rest of the channels are lowered to avoid feedback. In case of 2 or 3 mics in use at same time, the output gain of all of them is lowered to maintain the same output level like if were only one mic in use.

5.5 | FOLLOW MODE

This mode allows automatically following the main speaker within a broadcasting session. When activated only the highest input channel will be activated, the rest of the channels will be muted.

Follow engine will work only over the "Follow activated" channels. To activate Follow mode on any channel click on "FOLLOW" selector within the Mix section of the selected channel rack.

When Follow mode is activated a "F" led will appear on the selected mixer channel. Blue Led indicates the main activated channel and red led indicates muted channels.

The following graphic shows how Follow mode works:
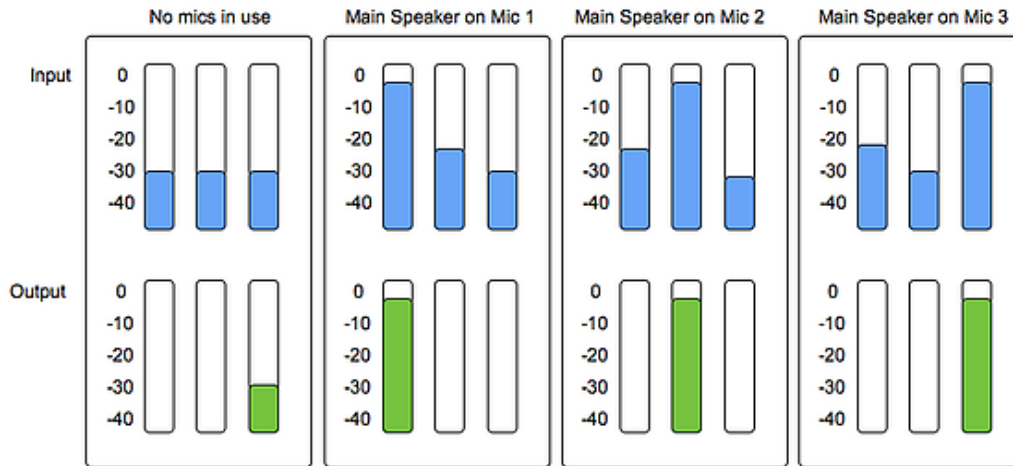
5.6 | GATE

This processing mode allows activating or deactivating automatically any channel output depending the output level. This way you can get a clear audio signal from the microphones in use by removing any background noise or feedback coming from other open microphones that are not in use. You don`t need to turn down any channel fader, CMixer does this task internally.

Set your threshold from -70dB to 0dB. Output channels with audio signals below the selected threshold level will be automatically muted.

When GATE mode is activated a "G" led will appear on the selected mixer channel. Blue Led indicates the main activated channel and red led indicates muted channels.

The following graphic shows how Gate mode works:
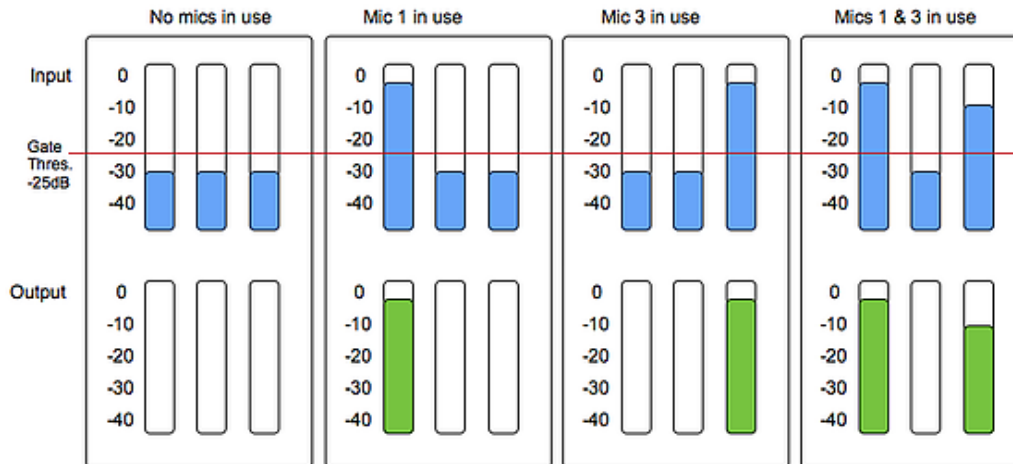
5.8 | MASTER RACK
The master output rack features a 5-Band Parametric Eq and 4 vst/au plugins.

5.8.1. OUTPUT 2
Out 2 – Activate or deactivate master output 2.
Out 2 Selector – Select which audio signal is sent to Out 2: Stereo Out, Mix Bus 1, Mix Bus 2 or Recording.

5.8.2. AUTOMIX
Set the Automix sensitivity for all channels at same time. You need to find the right sensitivity for your mixing session.

0% When working with lower channel output levels (-50/-40dB approx.)
100% When working with higher channeloutput levels (-10/-5dB approx.)

5.8.3. GATE (Master)
Set the Gate threshold for all channels at same time. -70/0 dB

5.8.4. SIDECHAIN
Side-chain volume control over the stereo tracks Ch11, Ch12 and Ch13. This is a useful feature when playing some music through the stereo channels and want to lower its volume automatically each time that some one is talking, so you don`t need to lower the stereo tracks volume before each speaker talk.

Set the input level threshold to trigger the side-chain (-70/0 dB). Red led will turn blue each time that the side-chain is applied. Set the amount of dB reduction applied to the stereo tracks (-30/0 dB) when a microphone input is detected.

5.8.5. NOISE
Activate a pink noise signal that goes directly to the stereo output. This is a useful feature for testing speakers and for room calibrating.

7 | RECORDING (keyboard shortcut "R")
CMixer allows audio output recording in WAV or AIFF (16/24/32Bits). Up to 192kHz (depending your soundcard)

Controls:
- **Stereo/Mono.** Select to export Stereo or Mono files.
- **Destination.** Select the destination folder. Repeat this step for each recording take.
- **Rec/Stop.** Start/Stop recording.
- **Volume.** Set the recording volume
- **Master/Multi.** Master mode allows recording stereo output, while Multi mode allows recording only the selected mixer channels.

8 | PRESET MANAGER

Save and Recall the whole session data.

Controls:
- **Load.** Load a preset from your computer.
- **Save.** Save a preset in your computer
- **Folder.** Select your preset folder to be shown in the menu. It makes quicker to change between presets.
- **R.** Reset CMixer to default setup.

9 | MIDI MATRIX

Control CMixer parameters via your midi device.

- **Scan.** Scan midi controllers in your computer. Click the selected controller.
- **Play/Learn modes.** Click on the selected CMixer parameter to activate midi learn mode (red), touch the controller in your midi device that you want to associate to the selected CMixer parameter. You can also manually select the midi channel assigned to each parameter control. Click again to change to Play mode (grey).

Midi configuration is also stored when you save a preset. Midi mapping will not change if you load another preset.

10 | KEYBOARD SHORTCUTS

For better and faster user experience.

- **X** – Midi Matrix on screen
- **M** – Metering section on screen
- **R** – Recording section on screen
- **S** – Settings
- **Cursor Keys Left/Right** – Shows on screen the selected channel rack..
- **CMD (mac)/CRTL (windows)** – Holding this key allows changing values more accurately when tweaking a numerical display or controller.
- **CTRL + Q** (windows) / **CMD + Q** (Mac) - Close Voxpat

11 | AUDIO SETTINGS

In this section you can select your audio settings. Set up your own input/output configuration depending your soundcard and needs at anytime. Click on **SETTINGS**.

Click on **IO MAPPINGS** (bottom right) to edit the CMixer input/output configuration associated to your soundcard inputs/outputs.

Default cMixer Input configuration:

Ch1 – Soundcard input 1

Ch2 – Soundcard input 2

…..

Ch11 – Soundcard Inputs 11 & 12

Ch12 – Soundcard Inputs 13 & 14

Ch13 – Soundcard Inputs 15 & 16

Default cMixer Output configuration:

CMixer	Soundcard
Stereo Out | Ch1(L)+ Ch2(R)	**Output 1(L) + Output 2(R)**
Stereo Out 2 | Ch3(L)+Ch4(R)	**Output 3(L) + Output 4(R)**
Mix Bus 1 | Ch 5(L)+Ch6(R)	**Output 5(L) + Output 6(R)**
Mix Bus 2 | Ch7(L)+Ch8(R)	**Output 7(L) + Output 8(R)**
External Rec Out | Ch9(L)+Ch10(R)	**Output 9(L) + Output 10(R)**

12 | SYSTEM REQUIREMENTS

Mac

- Mac Intel machine running OS X 10.11.6 or later. 64 Bits. 4GB Ram or more recommended.

- Apple Silicon ARM machine running OS 11.0 or later. 64 Bits. 4GB Ram or more recommended.

Windows

- Windows 8 or later, multicore processor. 64 Bits. 4GB Ram or more recommended.

13 | TROUBLESHOOTING

CMixer may require significant *CPU* resources depending the amount of plugins used. Make sure to use zero-latency 64 Bits plugins within Cmixer.

If you have problems with the sound (clicks/distortion/latency) try changing IO Vector Size and Signal Vector Size to lower values.

THANKS FOR YOUR SUPPORT!

Technical support at
support@digitalbrain-instruments.com

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