bogus noise

COMPÈRE

User Guide

v1.2.0

Contents

Chapter 1 - Introduction

1.1 - Welcome

Thank you for choosing Compère. This plug has been designed for ease of use, but to get the most out of it, please read through this manual. I hope you find it as useful as I do!

1.2 - Introduction

Compère is an A/B testing plugin and mixdown/mastering assistant, Geared towards fast switching and straightforward visualisation of source and reference input signals. Can't quite put your finger on what's missing from your mix down, or simply want to see what's going on? Compère can help show you.

Simply place an instance Compère on your master channel, send a reference ghost track to the side chain input, adjust the reference input trim to match the levels and enjoy immediate A/B comparison between the two.

Four large visualiser panes show the waveform and spectral content of your signals, and moving the mouse over these display areas brings up crosshairs to show you exactly the frequency, note and amplitude information. Crosshair locations and text are duplicated to the opposite channel's visualiser for convenience.

Compère can be freely resized to match your available space, leaving screen estate for other plugins or to stretch across an entire monitor dedicated to visualisation.

Peak, RMS and Crest meters show you the dynamic range of your input signals, with an adjustable window for taste.

Blind mode A/B testing is possible by clicking the blind button to compare signals using just your ears. This will disable the visualisers, mute the output for a moment (user adjustable) to let your ears reset, and then play one of the input signals at random.

The output is switchable between mono and stereo, and the left and right channels can be swapped to highlight any phasing or stereo image imbalances.

Finally, an optional low-pass filter can be applied to input signals, tuned for bass frequencies so you can focus on what's going on in the low end.

Chapter 2 - Getting Started

2.1 - Installation

Run the installer downloaded from the website. The Installer will ask you which plugin formats you want to install, and you can deselect any you won't use. The installer can be run at a later date if you need a format you didn't initially install. It is recommended to use the suggested destination folders.

2.2 - Activation

Before being activated, Compère runs in demo mode. After 30 minutes of use, the visualisers will no longer display any information and the controls will be disabled.

On loading, a splash screen will appear with a link to purchase the plugin and fields to enter your details and your activation key. This can be reopened by clicking the 'Demo Version' text under the Compère logo at the top left of the window.

After purchasing, your key will be emailed to the address used for your PayPal account. To activate, enter or paste your first name, last name, email address and activation key into the appropriate fields, Next, click the 'Activate' button and the 'Demo Version' message will disappear, and you're ready to go!

2.3 - Setting Up Compère

To use Compère for A/B comparison, it requires two signals. The source signal (A) is sent into the plugin as with other plugins, in this case it will typically be your master output. To receive and analyse the reference signal (B), a ghost track and the plugin's sidechain input are required. A ghost track refers to a track in your host that doesn't reach the master output, and will contain a finished track that you want your mix to stand up against. The procedure for setting this up will vary from host to host, and is explained in more detail for the most popular hosts below.

It is also recommended to match the perceived levels of the two signals, as a mastered track will sound louder than an unmastered one. To do this, head to the B Input Trim knob near the bottom right of the interface, and adjust it to match the perceived volume of your track. By default, the plugin will pass channel B's audio whenever this knob is clicked, to save you from having to go back and forth between the Trim knob and the AB switch. Latency on your mastering chain can be compensated for by adjusting the B Input Delay knob, and by default, this will play both signals simultaneously to aid synchronisation.

For the best results it is recommended to use audio files which have a the kind of sound and style to your project. It can also be useful to cut the reference track into sections and line them up with similar sections on your arrange page.

2.3.1 - Ableton Live

1. Place an instance of Compère on your source track. Typically this will be your master out.

2. Create a new empty track, and load your reference song onto this. Rename the track to 'Reference' for convenience.

3. In this channel's 'Audio To' dropdown list, select your source channel.

4. Finally, ensure that the field below the Audio To dropdown list shows 'aux input-Compère'. If Compère is the only plugin with a sidechain input, this will automatically be selected by Ableton. If you have other plugins with sidechain inputs, this field will be a dropdown list

5. Change Audio To from 'Master' to the audio track or output channel of your source signal. Finally, select 'aux input-Compère' to send the reference to the plugin's sidechain input.
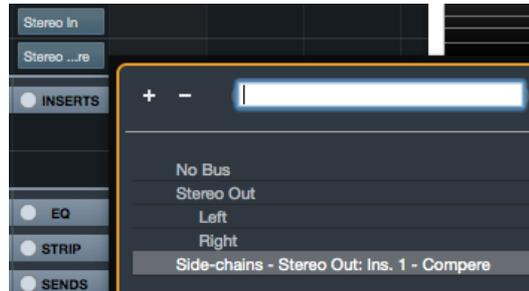
2.3.2 - Logic Pro

1. Place an instance of Compère on your source track

2. Create a new empty track, and load your reference song onto this. Rename the track to 'Reference' for convenience.

3. On the new Reference track's mixer strip, click on 'Stereo Output' to open the dropdown list, and select 'No Output'.

4. In the Compère window, click the Side Chain field in the top right, and select your reference track from the dropdown list.
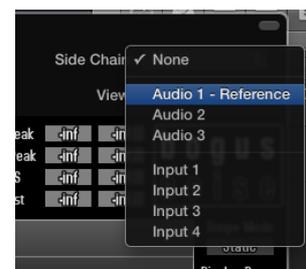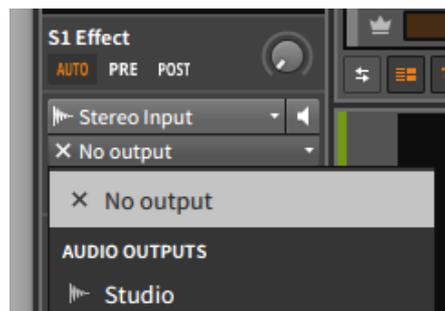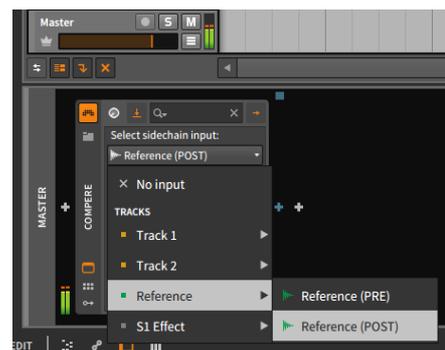
2.3.3 - Cubase

1. Insert Compère onto your source channel. Use the VST3 format as this supports sidechaining natively.

2. Click the rightmost icon to activate sidechain mode.

3. Create a new empty track, and load your reference song onto this. Rename the track to 'Reference' for convenience.

4. Press F3 to access the mixer page, click on the Stereo Out button for the Reference track, and select Compère from the Side-chains list.

2.3.4 - Bitwig

1. Insert Compère onto your source channel. Use the VST3 format as this supports sidechaining natively.

2. Create a new empty track, and load your reference song onto this. Rename the track to 'Reference' for convenience.

3. Select 'No Output' on the new Reference track.

4. Click the third icon at the top left of the Compère insert, and select your reference track from the menu. Select Post if you plan to put effects on the reference track.

2.3.5 - Reaper

Reaper doesn't let you access the sidechain input of plugins placed on the master bus, so one of two workarounds are required. You will either create an interim bus to send all your tracks and groups to instead of the master, and place Compère on this channel, or set up Compère on a normal audio track and then drag the plugin onto the Master channel – this will retain the sidechain settings. To avoid the need to do this for every project, it is recommended to set this up in a template project.

1. Insert Compère onto your source channel, interim bus or a temporary track. Use the VST3 format as this supports sidechaining natively.

2. Create a new empty track, and load your reference song onto this. Rename the track to 'Reference' for convenience. Click on 'Routing' and uncheck 'Master send'.
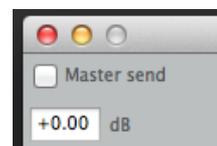
3. In the Compère window, click the '4 in 2 out' button to access the Pin Connector window, and click the + symbol at the bottom left to enable the sidechain inputs.
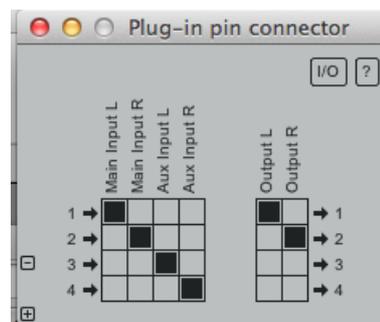
4. Click the Routing button on the channel strip which contains Compère, and under the 'Receives' section, select the Reference track.

5. At this point the Reference track will be sent to the main input of Compère. Select '3/4' to send it to the sidechain inputs instead.
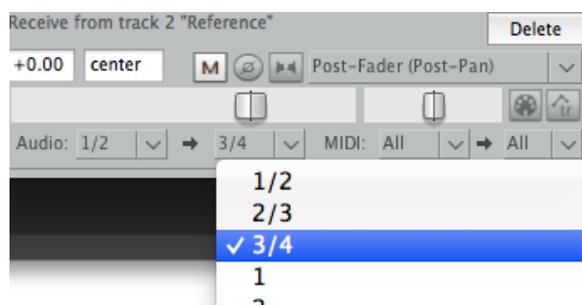
6. If using the Master bus instead of an interim bus, drag Compère to the Master.

Chapter 3 – Interface and Controls

3.1 Interface Overview

The heart of Compère are the oscilloscopes and spectral displays. These show you detailed visual information about the sources and reference signals going into the plugin.

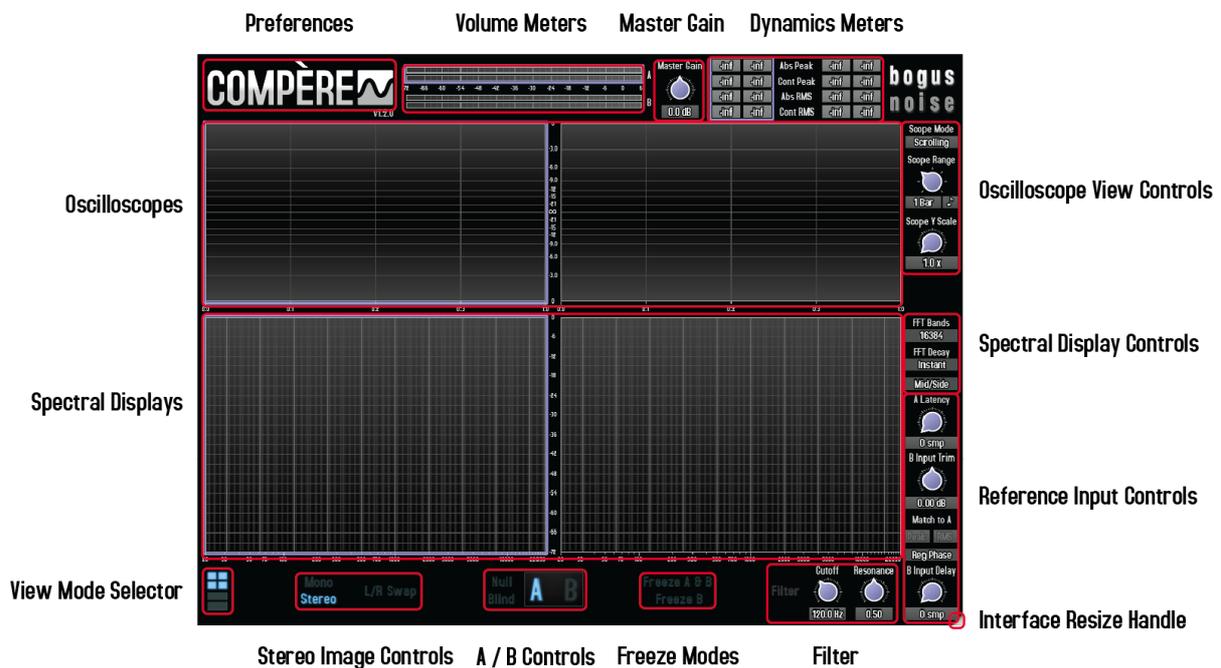Move your mouse over a display, and a pair of crosshairs will appear at the pointer location, with text information about frequency, amplitude and note value. To aid comparison further, in Dual View the crosshairs and text will be duplicated onto the neighbouring displays. Click the mouse to lock the pointers in place, and click again to release them.

To the right of the displays are controls to adjust their behaviour and range, and below the displays are tools to assist in checking your mixdown.

To resize Compère, click and drag the handle at the bottom right of the interface. This setting is saved per-instance, so each project can have several different sized Compères in use, and they won't affect each other or instances in other projects.

The rest of the controls are described in the rest of this section.

3.2 - Master Gain

Nothing fancy, just a Gain knob for your convenience! This will boost or attenuate both audio signals before they pass through the displays, meters and visualisers.

3.3 - Dual / Single View

Compère has two view modes, selectable by the icons at the bottom left corner of the interface. The top and default one is Dual Mode, which shows the waveform and spectral analysis of both source and reference signals simultaneously. The lower button is for Single Mode, which shows only the currently selected signal. All the comparison features of Dual Mode are accessible in Single Mode.
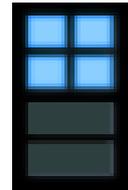
3.4 - Volume Meters

Compère provides two fast acting stereo volume meters, with decibel-ranged colour banding to show you when your signal is peaking. The low dB range of the meter is adjustable in the Preferences window.
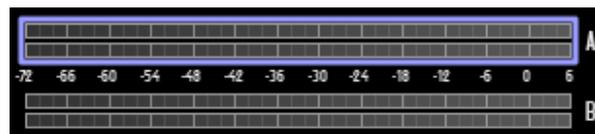
3.5 - Dynamics Meters

These show dynamic information about the source and reference signals. Values here are calculated by taking a short section of the signal passing through called a window, the length of which is adjustable in the preferences, with a default length of once every 300ms.

At any point the meters can be reset by clicking on them.

Absolute Peak is the highest amplitude in the signal since playback was started, and Continuous Peak is the highest amplitude in the current frame. Absolute Peak can be set in the preferences to reset every time host play is pressed, or to remain until one of the readouts is clicked.

The background of the Peak meters changes colour to green when it passes -6dB, yellow when it passes -3db, and red when it breaches the 0dB mark. Your master output should never be allowed to go over 0dB (some people also say -.01 dB), and the red is there to warn if this ever happens!

RMS stands for Root Mean Square, and is the effective value of the waveform. The Absolute RMS is the average value since last reset, so you Continuous RMS shows the RMS value for the most recent window, and so is better for evaluating the dynamics of a small section of audio.

3.6 - Oscilloscope Controls

The oscilloscope display can be adjusted for different tasks, signals and personal preferences.

Click the Scope Mode button to switch the display between Static Mode, where the waveform will remain in place and be overdrawn, and Scrolling Mode, where the waveform will scroll towards the left as time goes.

The Display Range knob adjusts how much time will be shown by the display. This can either be a value in milliseconds, or a beat-synchronised number of beats or bars.

The Y Scale knob vertically zooms the waveform up to a maximum of 24x the amplitude. The amplitude display scale and crosshair readout information will update automatically to reflect the multiplication amount.

3.7 - Spectral Display Controls

These settings adjust the accuracy and decay rate of the Spectral display. Frequency analysis is performed by taking a number of samples (this is the length of the window), and applying a Fourier Transform algorithm to calculate the frequencies present in the signal.

The number of frequency bands is directly related to the window size, so increasing the number of bands will result in more time between updates, however this increase in accuracy comes at the expense of more time between screen updates.

The Decay setting offers four preset rates for the FFT Display's bands to fade away, Instant, Slow, Medium and Fast.

Finally, there's an option to choose how stereo signals are handled. They can either be summed, separate FFT analysis for the left and right channels, or separate analysis for the mid and side signals.

In the Preferences it is possible to select by how much the frames will overlap
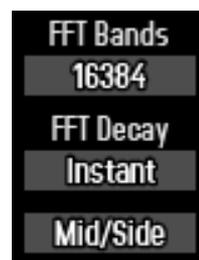
for more frequent visual updates and a smoother display, although at high values the screen updates often enough that the eye cannot discern between them, and this manifests as a non-adjustable decay.

Further settings are available in the Preferences window.

3.8 - Reference Input Controls

A few controls are provided to help you match your signals before comparison. First of all there's a a latency compensation knob, this is for situations where you're using latency inducing plugins in your project but want to use Compere's oscilloscope in beat-synced mode.

Next, it is advised to match the perceived levels of the source and reference signals to get a true comparison between them. To this end a Trim control is provided to adjust the level of the reference input level to match that of your project.

Below this are two buttons to automatically match the reference input to your source level. Use Peak to compare the two sources maximum volumes, and RMS to compare their perceived volume. These match buttons are disabled if there is no audio signal present on both the main and the sidechain input.

The Phase button is used to switch the phase of the reference input. This is most likely to be used when in conjunction with the Null button.

It is also possible to delay the reference input by up to 5 seconds to sync it up with the A input.

By default and to aid level matching, when the Trim and Delay knobs are clicked the output will switch to the reference channel, if it is not currently being monitored via the AB button. Similarly, when the Delay knob is clicked both channels will be monitored simultaneously to aid in lining up the two signals. This can be disabled or customised in the Preferences window.

3.9 - Stereo Testing Controls

Compère provides two buttons for quickly checking your stereo image.

Clicking Mono / Stereo will flick between the two states, with mono summing the left and right channels together. This reveals if phasing problems can arise when your project is played back on a
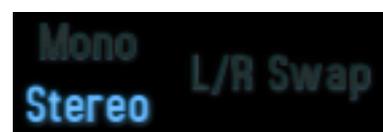
mono system.

Additionally, the L/R Swap button will instantly swap the left and right channels of the output. If your mix is imbalanced but your ears have grown accustomed to the difference, this will become immediately apparent.

3.10 – A / B Comparison Controls

One of the prime features of this plugin is the ability to immediately switch between two signals, and clicking the bottom centre 'A B' button will do this.

Blind testing is possible by clicking 'Blind', which will light up both letters of the button, disable the displays and select one of the signals at random. It will also mute the output for a user-definable gap of up to 5 seconds before passing audio again.

With Blind mode activated, the A B button functions as usual and switches back or forth once per click, but no indication of the currently playing signal is given. Deselecting the Blind button reactivates the displays and leaves the last selected signal playing.

3.11 - Freeze Controls

The visualisers can be frozen to allow for further inspection. Either click Freeze A & B to freeze the displays for both signals at once, or Freeze B to freeze only those for the reference input.
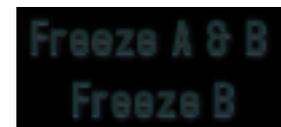
In Single View mode, the Freeze A & B and Freeze B buttons are replaced with a single Freeze button.

The controls continue receiving data while frozen, so when deactivating Freeze it will immediately switch to show the audio that has recently passed through.

3.12 - Filter

The Filter is a 12db lowpass filter to help you check focus in on the low end of your mixdown. With this in mind, the filter cutoff frequency range has been selected to go from 10 Hz to 800 Hz. Resonance is also adjustable to highlight particular frequencies. The filter is applied to both the source and reference inputs, and the filtered signal is sent to the oscilloscope, spectral displays, volume meters and dynamics meters.

Chapter 4 - Global Preferences

Click the Compère logo at the top left to access the Global Preferences pane. Here you can adjust the settings and customisation options which remain the same across all instances of the plugin, and will be recalled when you load a fresh instance. Global preferences are common across all plugin formats and so your settings will be the same in all hosts you use.

The pane is semi-transparent so you can see the effect of any related settings on the visualisation areas.
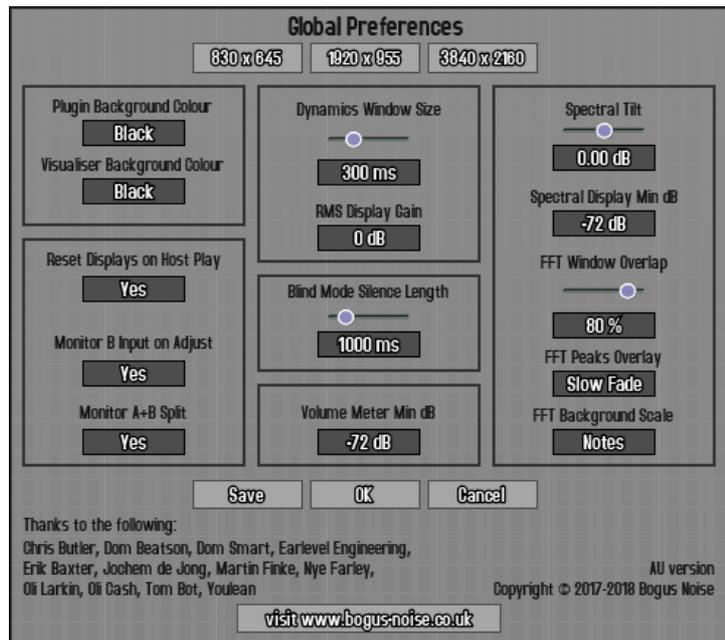
When finished, clicking Save will store your preferences to a config file, clicking OK retains the preferences but does not save them, and clicking Cancel restores the original settings.

4.1 - Interface Colours

To customise your interface a little, you can select the window background and control background from two dropdown lists, to match your personal preference for light or dark coloured interfaces.

The background colour is selectable between Black, Grey and White, and the Visualisers can have a Black or Blue background.

4.2 - Reset Displays on Host Play

Activate this setting to clear all display and readout data whenever the host playback is initiated.

4.3 - Monitor Input on Adjust & Monitor A+B Split

As mentioned in 3.8, adjusting the reference input controls will override the AB button and switch the output to the reference channel or a mix of the two, for the B Input Level and B Input Delay knobs resepectively. Set this to 'No' to disable this feature.
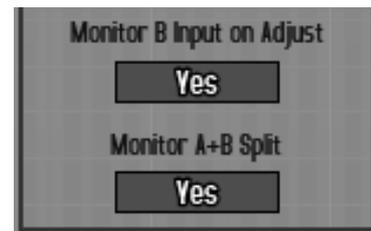
Monitor A+B Split will send the A signal to the left channel and the B signal to the right channel. Both signals are summed to mono before being sent to their respective channels.

4.4 - Volume Meter Minimum dB

Sets the lowest dB value that can be shown by the Volume Meters. Selectable from -48dB, -72dB and -96dB.

4.5 - Blind Mode Silence Length

Used to set how long the output is muted for in between pressing the Blind button and channel A or B becoming active. Ranges from 30ms to 5000ms (5 seconds).

4.6 - Dynamics Settings

The window size defines the time length of the window used to calculate the dynamics statistics.

The Root Mean Square value will be calculated from all the samples in this window only, Continuous Peak will be the highest peak in this frame, and Crest will be calculated from these two values and updated at the same time.
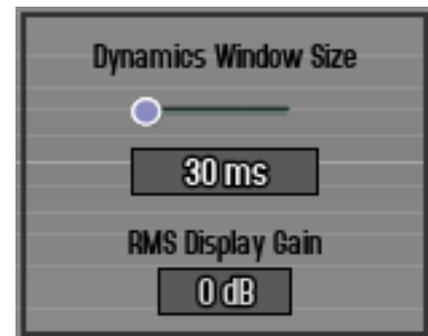
Adjust the RMS window size to choose how often the dynamics meters are updated. Higher values are easier to read, at the expense of accuracy. Lower values mean the displays are updated more frequently but will be harder to read.

RMS Display Gain is an option to add 3db to the RMS readout value. Some meters do and some don't, and this lets you go by your own personal preference.

4.7 - Spectral Display Settings

Human ears are more sensitive to higher frequencies, so the FFT analysis curve of audio that sounds relatively flat and balanced across the frequencies would appear to have more low end content than high.

To account for this, and to visually normalise imbalanced signals, the spectral display can be tilted towards the high or low end, with 1000hz being the central point of rotation. This is set to 0dB by default but +3dB or +4.5 per octave is a good choice when tilting is required.

Minimum dB sets the lowest value that can be shown by the display. This is selectable from -48dB, -72dB, 96dB and -192dB.

At high band rates, visual updates will be less frequent as it takes longer to fill the buffer with enough data to perform the Fourier transform.
To get smoother results, the windows can be overlapped, up to a maximum of 90%. This will increase the number of visual updates and give a smoother display, although at high values the screen updates often enough that the eye cannot discern between them, and this manifests as a non-adjustable decay.

A slower peak analysis can be shown behind the main spectral analysis.
This can be disabled, have each band slowly fade away, or be held to the highest value received.

The background scale can also be changed to show either musical notes or frequency lines.

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Chapter 6 - Credits

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