

User Manual v1.2

Manual del Usuario v1.2

Codalyzer

Codec Analyzer Toolbox

Codalyzer

Menu

Load Audio File Run Analysis Convert to file Get Encoded File

Codec MP3 Mode CBR Sampling 44.1 kHz

Bit Rate 96 128 160 192 256 320

Waveform

Soundins

Reset

Soundins

www.soundins.com.ar

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What is Codalyzer for?

It's a tool that allows you to analyze the impact on the main parameters of your mastered file (.wav or .flac) when converting it to lossy formats (such as MP3, AAC, Vorbis, or Opus).

Features

Real Clipping Detection: Unlike a simple estimation, our key feature performs a ***real conversion*** and analysis to accurately identify where clipping will occur in the compressed file.

Comprehensive Analysis: You'll obtain critical data such as *Sample and True Peak* levels, *RMS*, *Loudness*, and *LRA*. This gives you full control over your master's compliance with distribution standards.

Waveform Visualization: You'll be able to visualize the clippings and maximums for both the lossless and the encoded signal. You will be able to visualize the position and level of each sample.

Additional Features: The toolbox also includes a converter to compressed formats and a function to analyze files that have already been encoded.

General View

Selection Area

- Select the process to perform
- Select the codec parametrization
- Open waveform window
- Menu options

The screenshot shows the Codalyzer application interface. At the top, there's a header with 'Codec Analyzer Toolbox', the 'Codalyzer' logo, and a 'Menu' button. Below the header, there are four buttons: 'Load Audio File', 'Run Analysis', 'Convert to file', and 'Get Encoded File'. The 'Load Audio File' button is highlighted with a green border, and the text 'Afro.wav' is displayed below it. Below these buttons, there are three dropdown menus: 'Codec' (set to MP3), 'Mode' (set to CBR), and 'Sampling' (set to 44.1 kHz). Below the dropdowns, there are six radio buttons for 'Bit Rate': 96, 128 (selected), 160, 192, 256, and 320. To the right of the radio buttons is a 'Waveform' button. Below the selection area, there's a section titled 'Analysis Results' with an 'Export Results' button and a 'Clear' button. The 'Analysis Results' section contains a table with two columns: 'Afro.wav' and 'Afro.mp3'. The table lists various audio parameters and their values for both files. At the bottom of the interface, there's a status bar with the text 'MP3 Run Analysis Completed', the 'Soundins' logo, and a 'Reset' button.

	Afro.wav	Afro.mp3
File Name	Afro.wav	Afro.mp3
Duration [mm:ss]	03:00	03:00
Sample Rate [Hz]	44100	44100
Codec / Mode	PCM 16 bits	MP3 / CBR
Bit Depth	16	-
Bit Rate [kbps]	1411	128
# Channels	2	2
Peak [dBFS]	-1.0 -1.0	-0.5 -0.4
True Peak [dBTP]	-1.0	-0.3
RMS Average [dBFS]	-9.5 -10.3	-9.9 -10.7
RMS Max [dBFS]	-3.1 -3.3	-3.6 -3.9
Crest Factor [dB]	11.5 12.2	12.4 13.3
I. Loudness [LUFS]	-10.7	-11.1
LRA [LU]	2.9	2.8

Result Area

- Visualize the analysis results
- Visualize the process status
- Export results
- Clear table
- Reset app

Selection Area

Analysis of the selected track with the configured codec

Converts the selected track to the configured codec

Loads .wav, .flac, or .aiff files.
Drag & drop is also available

Menu Options

Loads and analyzes a file from disk

Codec settings:

- Type mp3, aac, vorbis y opus
- Mode: CBR, VBR, CVBR, ABR depending on the selected Type
- Bit rate or Quality (depending in the selected Mode)

Waveform Window

The screenshot shows the 'Codalyzer' application window. At the top, it says 'Codec Analyzer Toolbox' and 'Codalyzer' in large red letters. Below the title bar, there are four buttons: 'Load Audio File', 'Run Analysis', 'Convert to file', and 'Get Encoded File'. Under 'Load Audio File', the file 'Afro.wav' is listed. Below these buttons are three dropdown menus: 'Codec' set to 'MP3', 'Mode' set to 'CBR', and 'Sampling' set to '44.1 kHz'. At the bottom, there is a 'Bit Rate' section with radio buttons for 96, 128 (selected), 160, 192, 256, and 320. A 'Waveform' button is in the bottom right corner. A 'Menu' button is in the top right corner. Annotations with lines pointing to these elements provide further details: 'Analysis of the selected track with the configured codec' points to 'Run Analysis'; 'Converts the selected track to the configured codec' points to 'Convert to file'; 'Loads .wav, .flac, or .aiff files. Drag & drop is also available' points to 'Load Audio File'; 'Menu Options' points to the 'Menu' button; 'Loads and analyzes a file from disk' points to the 'Get Encoded File' button; 'Codec settings:' points to the Codec, Mode, and Bit Rate settings; and 'Waveform Window' points to the 'Waveform' button.

Result Area

Loaded File Result

Encoded File Result

Export the results to html or pdf

Clear the screen and memory results.

Reset all Processes & data

Analysis Results		
File Name	Afro.wav	Afro.mp3
Duration [mm:ss]	03:00	03:00
Sample Rate [Hz]	44100	44100
Codec / Mode	PCM 16 bits	MP3 / CBR
Bit Depth	16	-
Bit Rate [kbps]	1411	128
# Channels	2	2
Peak [dBFS]	-1.0 -1.0	-0.5 -0.4
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Crest Factor [dB]	11.5 12.2	12.4 13.3
I. Loudness [LUFS]	-10.7	-11.1
LRA [LU]	2.9	2.8
MP3 Run Analysis Completed		

Soundins

Reset

Parameters Analyzed

Process Status

Waveform window



Technical Specifications

Parameter	Unit	Values Range / Specs
File Name	text	Name of file name loaded and converted to memory
Duration	time	Length of the track in mm:ss:d
Sample Rate	Hz	Sample Rate of the loaded and converted to memory tracks
Codec / Mode	text	wav , flac, aiff, mp3, aac, vorbis , opus / CBR, VBR, CVBR, ABR (depending of the codec selected)
Bit Depth	bits	pcm 16, pcm 24, pcm 32, pcm 32 fp, pcm 64 fp
# Channels	unit	1 / 2
Peak	dBFS	According to level and bit depth
True Peak	dBTP	ITU-1770-4
RMS Average	dBFS	RMS AES-17
RMS Peak	dBFS	RMS AES-17
Crest Factor	dB	No RMS AES-17
I.Loudness	dB	ITU-1770 -4
LRA	LU	EBU TECH 3341

Codec	Mode	Rate [kbps] / Quality	Sample Rate [kHz]	lib
MP3 ⁽¹⁾	CBR	96 - 128 - 160 - 192 - 256 - 320	44.1 - 48	libmp3lame
	VBR	0 - 9	44.1 - 48	
	ABR	96 - 128 - 160 - 192 - 256 - 320	44.1 - 48	
AAC	VBR	1 - 5	44.1 - 48 - 88.2 - 96	ffmpeg native ⁽²⁾
	ABR	96 - 128 - 160 - 192 - 256	44.1 - 48 - 88.2 - 96	
Vorbis	VBR	0 - 9	44.1 - 48 - 88.2 - 96	libvorbis
Opus	CBR	96 - 128 - 160 - 192 - 256 - 320	48	libopus
	VBR	96 - 128 - 160 - 192 - 256 - 320	48	
	CVBR	96 - 128 - 160 - 192 - 256 - 320	48	

(1) Compression Level = 3 (fixed)

(2) ffmpeg v 7.0.1

Codec Supported	PCM	PCM	PCM	MP3	AAC	AAC	AAC	Vorbis	Opus
Container	WAV	FLAC	AIFF	RAW	RAW	m4a	mp4	OGG	OGG

¿Para qué sirve Codalyzer?

Es una herramienta que te permite analizar el impacto en los parámetros principales de tu archivo masterizado (.wav o .flac) al convertirlo a formatos con pérdida (como MP3, AAC, Vorbis u Opus).

Características

Detección Real de Clipping: A diferencia de una simple estimación, nuestra característica clave realiza una **conversión y análisis real** para identificar con precisión dónde ocurrirá el clipping en el archivo comprimido.

Análisis Exhaustivo: Obtendrás datos críticos como niveles de *Sample y True Peak*, *RMS*, *Loudness* y *LRA*. Esto te da control total sobre el cumplimiento de tu master con los estándares de distribución.

Visualización de la Forma de Onda : Podrás visualizar los clippings y máximos tanto de la señal sin pérdida como la codificada. Podrás visualizar la posición y el nivel de cada muestra.

Otras características: La toolbox también incluye un convertidor a formatos comprimidos y una función para analizar archivos que ya han sido codificados.

Vista General

Área de Selección

- Seleccionar el proceso a ejecutar
- Seleccionar el codec y su parametrización
- Abrir la ventana de forma de onda
- Menú con opciones

Codalyzer

Codec Analyzer Toolbox

Menu

Load Audio File Run Analysis Convert to file Get Encoded File

Afro.wav

Codec MP3 Mode CBR Sampling 44.1 kHz

Bit Rate ☐ 96 ☒ 128 ☐ 160 ☐ 192 ☐ 256 ☐ 320

Waveform

Analysis Results

Export Results Clear

File Name	Afro.wav	Afro.mp3
Duration [mm:ss]	03:00	03:00
Sample Rate [Hz]	44100	44100
Codec / Mode	PCM 16 bits	MP3 / CBR
Bit Depth	16	-
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Crest Factor [dB]	11.5 12.2	12.4 13.3
I. Loudness [LUFS]	-10.7	-11.1
LRA [LU]	2.9	2.8

MP3 Run Analysis Completed

Soundins

Reset

Área de Resultados

- Visualizar el resultado del análisis
- Visualizar el status del proceso
- Exportar los resultados
- Limpiar la tabla
- Reestablecer la app

Área de Selección

Análisis de la pista seleccionada con el codec y su parametrización elegida

Convertir la pista seleccionada a un archivo con el código configurado

Carga del archivo .wav, .flac, or .aiff
Drag & drop está también disponible

Menú

Cargar y analizar un archivo desde el disco

Parámetros del codec:

- Tipo mp3, aac, vorbis y opus
- Modo: CBR, VBR, CVBR, ABR(dependiendo del Tipo seleccionado)
- Bit rate o Quality (dependiendo del Modo seleccionado)

Ventana de Forma de Onda

The screenshot shows the 'Codalyzer' interface, titled 'Codec Analyzer Toolbox'. It features a dark background with red text for the title. The interface includes several buttons: 'Load Audio File', 'Run Analysis', 'Convert to file', and 'Get Encoded File'. Below these buttons, there are dropdown menus for 'Codec' (set to MP3), 'Mode' (set to CBR), and 'Sampling' (set to 44.1 kHz). At the bottom, there are radio buttons for 'Bit Rate' with options 96, 128, 160, 192, 256, and 320. A 'Waveform' button is located in the bottom right corner. The interface also displays 'Afro.wav' as the loaded file. Annotations with lines pointing to specific elements provide additional context: 'Carga del archivo .wav, .flac, or .aiff Drag & drop está también disponible' points to the 'Load Audio File' button; 'Análisis de la pista seleccionada con el codec y su parametrización elegida' points to the 'Run Analysis' button; 'Convertir la pista seleccionada a un archivo con el código configurado' points to the 'Convert to file' button; 'Menú' points to the 'Menu' text in the top right; 'Cargar y analizar un archivo desde el disco' points to the 'Get Encoded File' button; 'Parámetros del codec:' points to the codec settings section, with a list of options below; and 'Ventana de Forma de Onda' points to the 'Waveform' button.

Área de Resultados

Resultados del archivo cargado

Resultados del archivo codificado

Parámetros
Analizados

Analysis Results		
File Name	Afro.wav	Afro.mp3
Duration [mm:ss]	03:00	03:00
Sample Rate [Hz]	44100	44100
Codec / Mode	PCM 16 bits	MP3 / CBR
Bit Depth	16	-
Bit Rate [kbps]	1411	128
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LRA [LU]	2.9	2.8
MP3 Run Analysis Completed		

Export Results

Clear

Exporta los
resultados en
formato html
o pdf

Borra los
datos de la
tabla y de
memoria

Restablecimiento
de todos los
procesos y datos

Reset

Soundins

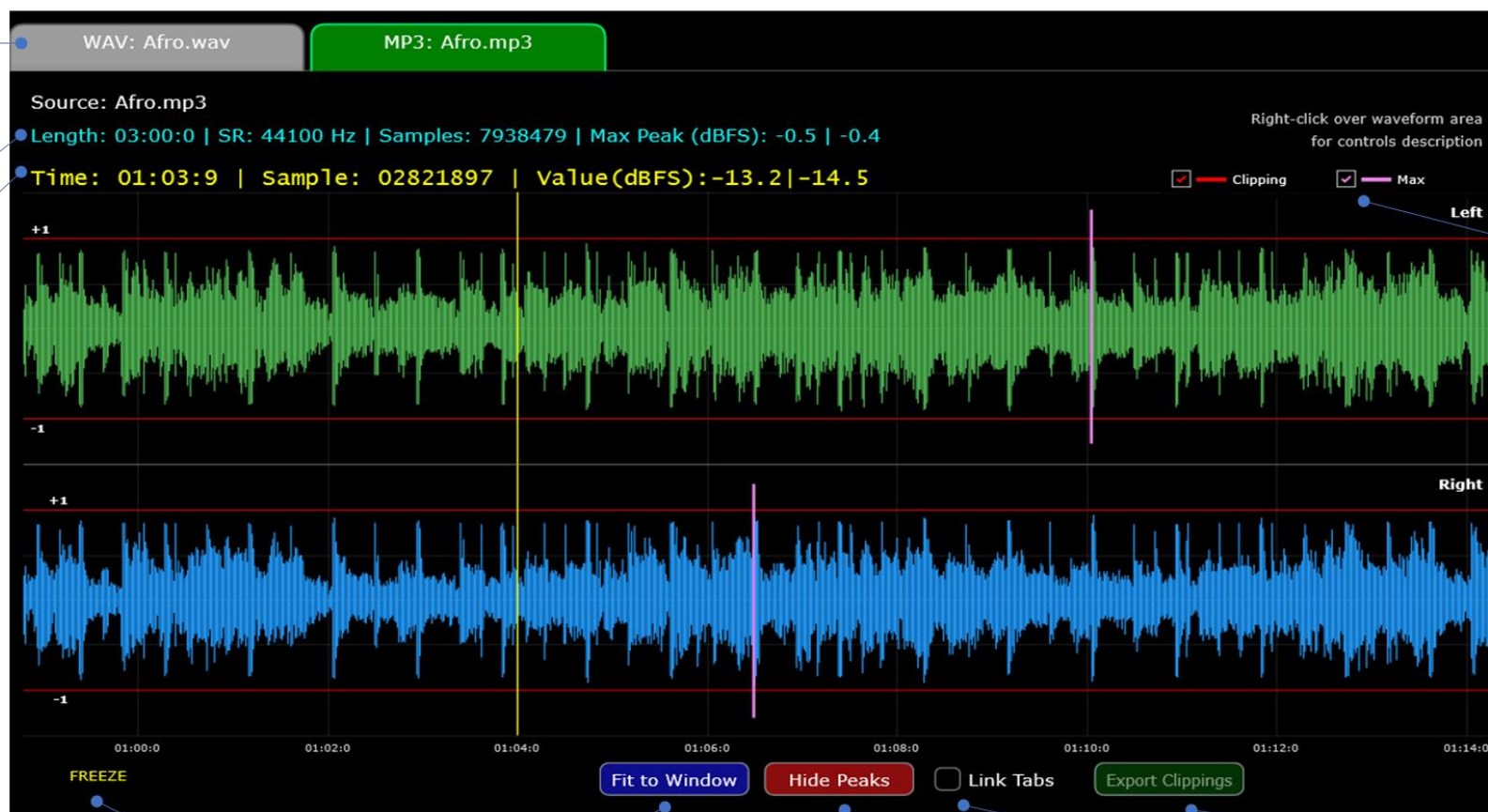
Status del proceso

Ventana de Forma de Onda

Pestañas de selección

Estadística de la señal

Estadística de la muestra en la posición del cursor



Habilitar /
Deshabilitar
visualización
de
Clippings
& Max

Indicador de
congelamiento de paneo

Restablecer
Zoom

Mostrar / Ocultar
Picos

Mantener el zoom
y posición entre
pestañas

Exportar lista de
clipping a .txt

Especificaciones Técnicas

Parameter	Unit	Values Range / Specs
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	ABR	96 - 128 - 160 - 192 - 256 - 320	44.1 - 48	
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	ABR	96 - 128 - 160 - 192 - 256	44.1 - 48 - 88.2 - 96	
Vorbis	VBR	0 - 9	44.1 - 48 - 88.2 - 96	libvorbis
Opus	CBR	96 - 128 - 160 - 192 - 256 - 320	48	libopus
	VBR	96 - 128 - 160 - 192 - 256 - 320	48	
	CVBR	96 - 128 - 160 - 192 - 256 - 320	48	

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Soundins

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