413 TAPE SATURATOR

User Guide

MIA LABORATORIES

Greetings and Welcome!

Thank you for choosing MIA Laboratories.

Please take the time to read through this user guide in order to get familiar with the components and use of 413 Tape Saturator.

Overview

The 413 Tape Saturator reproduces the non-linear characteristics that would result when overdriving analog tape, as magnetic saturation occurs with increasing amplitude of the 'recorded' signal. It offers 3 different types of Analog Tape, as well as 3 different types of distortion.

For the saturation process, the signal gets dynamically changed, especially high frequency information, in response to its amplitude. The resulting effect simulates the saturation of analog tape, in a controllable environment which can be adjusted according to your preference.

The user can choose among 3 different types of Analog Tape, each corresponding to the noise and saturation characteristics of 3 different well known tape brands.

3 distortion types are also available, enabling the user to produce the harmonic content/distortion one would get by overdriving certain Tube or Transistor circuits.

Features

- Advanced Tape Saturation algorithm
- Tube, Transistor and Soft Clipping Distortion
- Real tape-hiss
- 'IEC on NAB' playback equalization mode

Control functions and specifications

INPUT: Controls the level of input signal to the 413 Tape Saturator. Ranges from -48 to +6 dB.

OUTPUT: Controls the amount of output attenuation. Ranges from 0 to -48 dB.

DISTORTION: Selects the type of distortion produced. Type A and Type B simulate Tube and Transistor circuits, while Type C is based on a soft clipping algorithm.

AMOUNT: Sets the amount of distortion that will be applied to the signal for distortion types A and B, while it acts like a dry/wet control for Type C. Ranges from 0 to 11.

SATURATION: Sets the amount of Tape Saturation applied, ranging from 0 to 100%.
The effect and 'depth' of this adjustment is also affected by Tape Type, Flux Ref. and the nominal level of the signal itself.
So, the more the VU meters are driven into the red, the more saturation takes place.

TAPE: There are three different types to choose from. Each type carries its own Hiss noise and affects the saturation Depth.

HISS: Sets the amount of Hiss that will be introduced to the signal. It's sound changes according to Tape Type.
Also note that the hiss noise is continuous and does <u>not</u> 'start' and 'stop' according to the DAW transport.
It will therefore be also present when signals are being monitored instead of being played-back by chanell tracks, and can be completely turned-off by setting to 0.
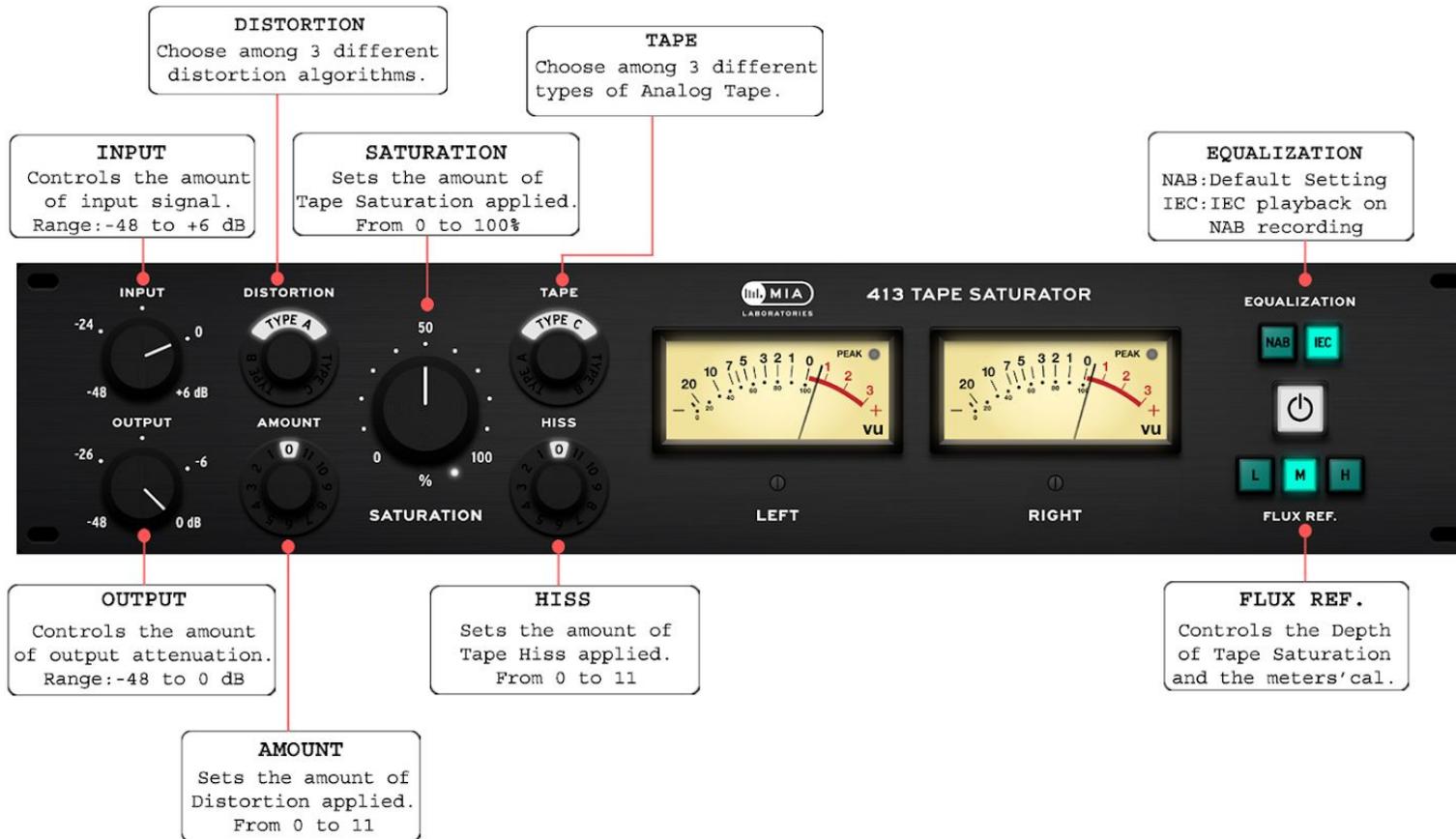
EQUALIZATION:
NAB: No change to the signal since the 413's default state is NAB.
IEC: Applies an approximation of the frequency response that would result if the original material was recorded in NAB and played back with IEC eq.

FLUX REF.: Adjusts the "Flux reference" of the tape, therefore affecting the Depth of Tape Saturation, <u>and</u> the meters' calibration.

__Note__: Keep in mind that you have to drive the VU into the red area to get more saturation effect.
This can be achieved using the Input dial.

The Depth of the process can also be increased by setting the Flux Ref on High, or decreased by setting it to Low.

DISTORTION
Choose among 3 different
distortion algorithms.

TAPE
Choose among 3 different
types of Analog Tape.

INPUT
Controls the amount
of input signal.
Range:-48 to +6 dB

SATURATION
Sets the amount of
Tape Saturation applied.
From 0 to 100%

EQUALIZATION
NAB:Default Setting
IEC:IEC playback on
NAB recording

OUTPUT
Controls the amount
of output attenuation.
Range:-48 to 0 dB

HISS
Sets the amount of
Tape Hiss applied.
From 0 to 11

FLUX REF.
Controls the Depth
of Tape Saturation
and the meters' cal.

AMOUNT
Sets the amount of
Distortion applied.
From 0 to 11

Installation

Installing 413 Tape Saturator is fairly easy, just download and run the appropriate installer for your operating system. The license for this plugin requires the use of iLok license manager software and an iLok account. The license can be deposited on a physical iLok (2nd generation or higher) or on iLok Cloud. For further information regarding the activation process, please refer to the activation guide provided.

If you do not have the iLok License Manager, you can download it for free here: license-manager

Thank you for using MIA Laboratories.

May the sound be with you!