

U73b Compressor

User Manual

Version 3.0

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Introduction

Dear Musician,

Thank you for purchasing the Audified U73b Compressor effect. This plug-in effect is an emulation of a unique old German broadcast compressor/limiter U73b which was often used for mastering between 1960 and 1980. It is an all-tube vary-mu compressor/limiter with adjustable release time option.

We kept the circuit exactly as it was originally designed and only added an input and output gain before and immediately after the compressor circuit to assist with proper adjustment of the compression. The plug-in effect is also equipped with a VU meter and selectable side-chaining.

We've also added a Compression amount parameter since version 3.0.0 allowing users to adjust the compression effect of the vary-mu stage while keeping the rest of the simulation as it is, including its saturation and color behavior.

Software Installation

Get the recent version of the plug-in:

Download: services.audified.com/download

- **Windows**: The downloaded file is packed, unzip it. Run the installer and follow the on-screen instructions. You can select the destination path and the installed plug-in format during the process.
- **Mac**: Mount the downloaded disk image and run the installer. You can select the installed plug-in format by clicking the Customize button. Plug-ins are installed in the standard locations.

iLok protection

This plug-in is protected by iLok (a software machine license or a USB dongle).

- It requires iLok License Manager 5.5 or newer.
- Please make sure you have activated a valid license in your iLok account.
- Please refer to this guide: <u>https://shop.audified.com/pages/how-to-activate-ilok-license</u>

Software Uninstallation

- **Windows**: Navigate to the U73b Compressor program folder in the Start menu and run the uninstaller.
- **Mac**: Open the provided disk image and run the uninstaller.

Opening the plug-in

AUDIFIED U73b Compressor works in all major digital audio workstations (recording applications) as a plug-in.

To open the plug-in, locate the plug-in selection (usually a hierarchic menu). U73b Compressor is listed in the Dynamics group or in the AUDIFIED group when the manufacturer sorting is offered.

Working with U73b Compressor

Control overview

The interface has the following parts:

- 1. Power and calibration module.
- 2. Compressor module.
- 3. Level control module.
- 4. Menu bar area.



Power and calibration module

(On/Off) switch

Toggles between the processing state and the bypassed state

Calibration

The software model works with real voltages, the same as in the circuit of the original device, related to the dBu scale, but the digital signal processing in the DAWs works with the digital full scale known as dBFS.

We have therefore added a calibration parameter to relate the digital scale (dBFS) with the analog scale (dBu) and it is intended that you set the calibration to work in the proper operational range of the compressor effect. Be careful when working with this parameter. We suggest to set this parameter to the headroom you use in your DAW recordings or headroom of your audio interface.

The default setting is –9 dB and it is loaded every time you load the plug-in. However, the calibration value is overwritten by the value from DAW project (when the calibration is changed explicitly and saved with the project). The default value can be changed in the Settings menu (please refer to the section "<u>Services menu</u>" of this manual for more details).

Compressor module

Circuit emulation of the U73b compressor.

Compressor/Limiter switch

The upper U73b knob switches between the Compressor mode, Bypass and Limiter mode. The compressor mode has a lower threshold setting and very gentle increasing ratio, in opposite, the limiter mode provides a higher threshold setting with higher ratio but still with a smooth knee.

Release time

The first three positions offer fixed release time, the other three positions marked with red labels provide adjustable release time dependent on program content.

Compression amount

Standard dry/wet mix over this plug-in would be complicated as far as the device simulation brings phase distortion the same way as the original device. To give user the ability to adjust the compression amount of vary-mu stage without need to mix dry and wet path of the whole processing, Compression amount parameter was added. It affects the amount of gain reduction caused by vary-mu stage without affecting other stages simulation.

Level control module

Input and output gains, metering.

Input gain

Adjusts the input gain before the compressor/limiter circuit.

Output gain

Adjusts the output gain after the compressor/limiter circuit. This parameter can be adjusted automatically when the "Auto output" switch is on. In this case, the output gain is adjusted automatically to keep approximately the same loudness when the input gain parameter is changed.

Meters switch

Switch the meter to show the input or output signal level or the amount of the gain reduction.

Display area

High Pass Filter

There is a high-pass filter connected in the circuit in the compressor mode with around 100 Hz cut-off frequency and 6dB/octave slope. Although this filter helps to create the unique sound of the U73b compressor, the bass roll-off might not be suitable for all instruments when mixing, or for all genres when U73b is used for mastering. We have added an extra control to switch this filter off. In the limiter mode, this filter is permanently turned off regardless of the parameter setting.

Key Input

Selects the signal source used for controlling the gain reduction.



Click to the display item "Key Input" to set the following modes:

- 1. **Individual** each of the stereo channels is controlled by itself.
- 2. **Left** both stereo channels are controlled by the left channel input.
- 3. **Right** both stereo channels are controlled by the right channel input.
- 4. **Left+Right** both stereo channels are controlled by the sum of left and right channel inputs.
- 5. External Sidechain select this option to control the compression of an audio signal in the given track with an audio signal from another track. This can be used, for example, to create a "ducking" effect or to control the compression of a bass guitar with a kick drum recorded in another track. The external track can be both mono and stereo (stereo not supported by the AAX format). In the case of the stereo external side chain, the left external side chain channel controls the compression of the left compressor channel and similarly the right external side chain channel controls the compression of the set for side chaining and must support the side chaining, otherwise this option is disabled. When the DAW side chaining is disabled during plug-in life, the external side chain is switched to the standard plug-in input. Please refer to the user manual of your DAW to set up the side chaining in your DAW.

Preset management

Presets can be loaded and saved on the right side of the menu bar area.

- Browse presets with the left and right arrows.
- The Load button offers a selection from a preset list, structured in several submenus.
- The Store button opens a menu allowing users to save or delete user presets.

Artist presets

The U73b Compressor effect was developed in cooperation with musicians and producers Boris Carloff and Bjorn Thorsrud. Their artist presets are marked BC or BT.

Services menu

A click to Audified logo opens the Services menu. Services menu allows access to:

- user manual,
- product updates,
- feedback form on the Audified web,
- support,
- Audified website,
- product version and other info.

Utility menu

Clicking the wrench symbol opens the utility menu. You can easily copy the state of one plugin instance to the other instance using Copy and Paste functionality. There are also several U73b specific controls:

Set Calibration As Default		
Oversampling >	Off	
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Set Calibration As Default

The calibration value set in the opened instance of U73b may be used in all instances, opened in any host or any project. Click this menu item and the current calibration value will be saved as default and will be used when opening other U73bs.

Oversampling

When this setting is turned on, the internal plug-in processing runs at a higher sample rate than set in the DAW. This helps to reduce the aliasing distortion which is always produced by the nonlinear effect processing and improves the processing of high frequencies. However, the cost of more accurate signal processing is a higher CPU utilization. Tip: turn on this option for the final render of your project and turn off when mixing the project.

Technical info

Specification

- AAX, AU, VST3,
- macOS, Windows plug-ins.

Requirements

- macOS 10.11 and newer (64bit format delivered),
- Windows 7 and newer (32bit and 64bit format delivered),
- 150 MB of disk space required.
- iLok License Manager 5.5 or newer installed.

Conclusion

We are confident that you can now work with U73b Compressor. However, if anything seems unclear or you need assistance, feel free to contact us.

Support: <u>services.audified.com/support</u>

Thanks for using AUDIFIED products.