

Acon Digital DeVerberate

User Guide

Acon AS

Acon Digital DeVerberate

© 2015 Acon AS

All rights reserved. No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems - without the written permission of the publisher.

Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks.

While every precaution has been taken in the preparation of this document, the publisher and the author assume no responsibility for errors or omissions, or for damages resulting from the use of information contained in this document or from the use of programs and source code that may accompany it. In no event shall the publisher and the author be liable for any loss of profit or any other commercial damage caused or alleged to have been caused directly or indirectly by this document.

Table of Contents

Part I Introduction	2
1 Purchase and Authorization	2
Part II Accessing the Plug-In	3
1 DeVerberate	3
Index	7

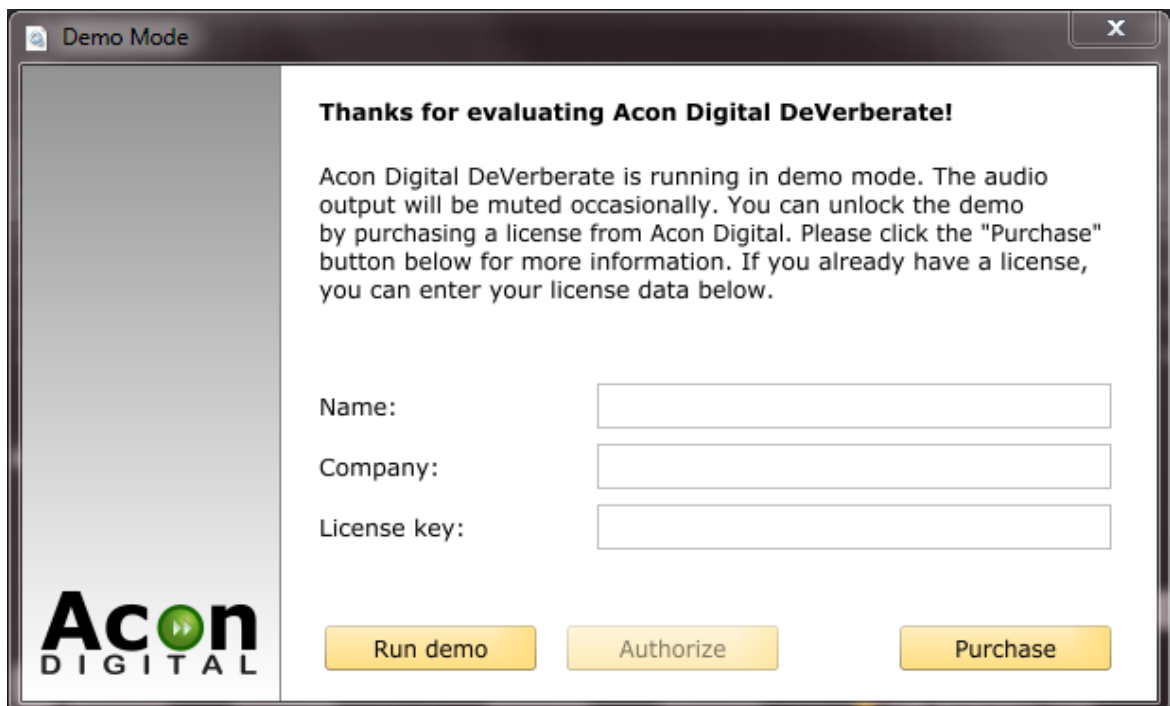
1 Introduction

Thanks for using *Acon Digital DeVerberate*. DeVerberate is a plug-in from Acon Digital that can attenuate or boost the original reverberation present in recorded material. The novel real-time algorithm is not dependant on stereo or multi-channel audio and splits the incoming audio into an estimation of the direct sound and the reverberated sound which can then be recombined freely.

1.1 Purchase and Authorization

Acon Digital DeVerberate will run in demo mode the first time you open it from your audio editor or digital audio workstation (DAW). The demo mode is fully functional with exception of short passages with muted audio output at irregular intervals. The demo version can be unlocked by purchasing a license key from Acon Digital (see Acon Digital online shop). When a plug-in is opened in the demo mode, a dialog box appears where you can choose to continue with the demo version or enter a license key. There is also a purchase button which directs you to the Acon Digital online shop.

If you have purchased a license key from Acon Digital, please enter you name, company name if applicable and the license key you obtained. The *Authorize* button will remain deactivated until the license key has been accepted. After having successfully authorized *Acon Digital DeVerberate*, the demo dialog box will not appear again.



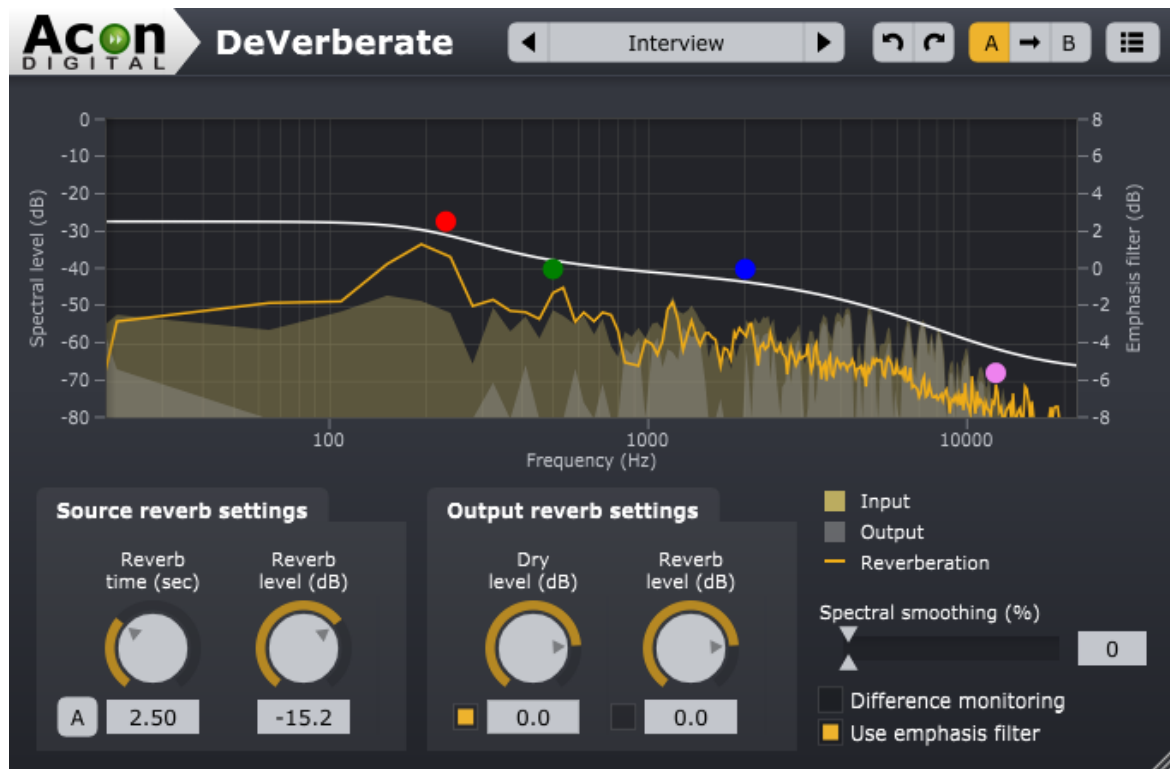
The demo dialog box appears when starting Acon Digital DeVerberate prior to authorization.

2 Accessing the Plug-In

You can access *Acon Digital DeVerberate* from your host application (audio editor or DAW) of choice. The plug-in is available as a 32 or 64 bit VST or AAX plug-in on the Windows platform or as a VST, AU or AAX plug-in on Mac OS X (32 / 64 bit fat binaries). Some host applications will require a rescan and possibly adding the *Acon Digital DeVerberate* installation directory to the list of VST directories. Please consult the manual for your host application for further details.

2.1 DeVerberate

DeVerberate allows independent manipulation of the direct and the reverberated signal levels in existing audio recordings. Advanced algorithms are used to separate the direct and the reflected signals independent of the number of audio channels recorded. The output levels of these two signal components can then be independently adjusted so that you can attenuate or emphasize the reverberated signal. In order to separate the direct from the reverberated signal, an estimate of the reverberation time and the reverberation level in the source recording is required.



The DeVerberate plug-in window. The graph shows the estimated spectrum of the reverberation as well as frequency spectrum of the input and output signal.

The de-reverberation process can be monitored visually using the spectrum display showing the input and output spectra as well as the spectrum of the estimated reverberation signal (the reverb profile).

Source Reverb Settings

It is advisable to reduce the output reverb level to the minimum (-48 dB) and set the output dry level to 0 dB (both settings found in the output reverb settings group box) while adjusting the source reverb settings, so that you can listen how the settings affects the signal.

Reverb time (in seconds)

The reverb input time should be set to an estimate of the reverberation decay time in the input signal. The visual representation of the reverb profile can be very useful monitor that the reverberation time matches the input signal. This works particularly well if there are fragments in the recording containing only the reverberation decay. The reverb profile should then decay with the same rate as the input signal.

Automatic reverb time estimation ("A" button)

DeVerberate can also estimate the reverberation time automatically. The algorithm works best when you have pauses or sharp attacks in the input signal where the reverberation is heard clearly. We recommend you select such a region, click the **A** button to activate the estimation and play the audio through DeVerberate. The reverb time knob will be disabled and moves automatically according to the estimation. Please make sure that you deactivate the estimation prior to the actual processing.

Input reverb level (in dB)

The input reverb level should correspond to the level of reverberation present in the input signal. It is advisable to start with a low level and increase the level until you reach the desired reduction.

Output Reverb Settings

Dry level (dB)

The amount of the estimated dry signal to send to the output. You can use the toggle button to exclude the estimated dry signal completely.

Reverb level (dB)

The amount of the estimated reverberation signal to send to the output. You can use the toggle button to exclude the estimated reverberation completely.

Spectral smoothing

Spectral smoothing is a tool that can be used to mask artifacts after reducing the reverberation tail. In most cases, this should be set to zero, but if short fragments of tonal noise are still present after reverb reduction, you can try to increase the level of spectral smoothing.

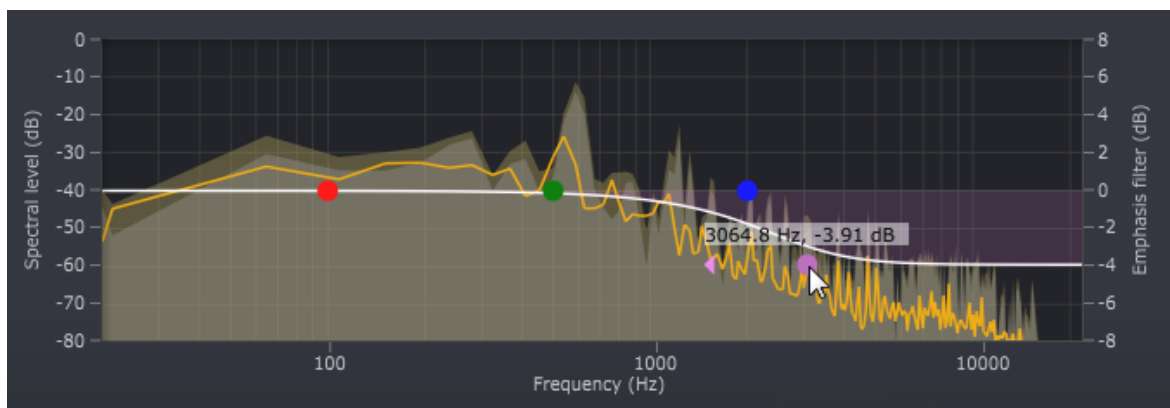
Difference Monitoring

The difference monitoring makes it possible to listen to the signal being removed. When this option is activated, DeVerberate outputs the difference between the incoming and the

processed signals.

Emphasis Filter

The emphasis filter allows you to apply frequency weighting to the reverb profile. This is very useful if you wish to make manual corrections to the estimated reverb profile. The frequency weighting curve consists of a low shelf filter, two peak filters and a high shelf filter, similar to a parametric equalizer. You can modify the filter characteristics by clicking the handles (colored bullets) in the curve and move them around. Press *Ctrl* key on your keyboard to see the current frequency and gain settings of the selected frequency band. You can also change the filter slope of the shelving filters or the bandwidth of the peak filters. Click handle of for the filter you wish to modify. Arrows appear surrounding the handle. Move these to change the bandwidth for peak filters or the filter slope for the shelving filters.



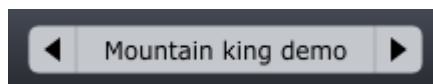
Acon Digital DeVerberate running with the emphasis filter enabled.

The Plug-in Header

The upper region of the DeVerberate plug-in window lets you manage presets, undo or redo changes or quickly compare different settings using the A / B compare tools:

Preset section

DeVerberate is shipped with a set of factory presets that serve as a starting point for further adjustments. You can browse through preset categories and presets as well as create and manage your own presets using the preset management section in DeVerberate:



The preset management section in DeVerberate.

You can browse through the presets using the arrow buttons. Alternatively, you can click the current preset name and a drop-down menu appears. You can also save your own presets by choosing "Save user preset file..." from the menu. A file chooser dialog box appears where you can enter the name of the preset you wish to save. You can create sub folders and place your preset files inside, and these will appear as categories in the user presets.

Undo and redo

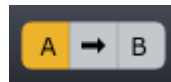
You can undo (or redo) any changes to the parameter settings by clicking the circular arrow back or forward buttons:



Undo and redo buttons

A / B comparisons

It is frequently useful to be able to quickly compare different parameter settings. You can do this using the A / B comparison buttons:



The A / B comparison buttons allows you to quickly compare different settings

You can keep two independent sets of parameter settings, the A and B settings, and switch between them using the corresponding buttons. The arrow button copies the settings from A to B or the other way around depending on which parameter set that is currently active.

The plug-in menu

The last button in the plug-in header displays the plug-in menu:



You can click the plug-in menu button for the plug-in specific menu

From the plug-in menu you can among other choose different visual themes, show this help or information about the plug-in.

Index

- A -

AU	3
Audio editor	3
Authorization	2

- D -

DAW	3
Demo version	2
De-reverberation	3
DeVerberate	3

- E -

Emphasis curve	3
----------------	---

- H -

Host application	3
------------------	---

- O -

Order	2
-------	---

- P -

Purchase	2
----------	---

- R -

Reverb profile	3
Reverb reduction	3

- S -

Scan for plug-ins	3
-------------------	---

- T -

Trial	2
-------	---

- U -

Unlock	2
--------	---

- V -

VST	3
-----	---