DVR2

DIGITAL VINTAGE REVERB

FROM THE LEGENDARY SYSTEM 6000

MANUAL

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ULTIMATE SOUND MACHINES

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DVR2 DIGITAL VINTAGE REVERB

Congratulations with the purchase of your new TDM Vintage Reverb plug-in. DVR2 offers a pristine Generic Reverb with true vintage flavor.

The term "Generic Reverb" is used to describe a flattering sustain effect, which can be added to many sources of a mix. It produces little character but also does no harm, because the effect is blurred or washed out. Instead, it adds a good sense of spaciousness and more or less pronounced modulation.

Recreation of a Classic

The development of DVR2 has been a process extending several years, with the goal of recreating the most shining Generic Reverb of all times, the EMT250. A particularly well sounding machine was refurbished, and in the making of DVR2 many design disciplines were involved...

Hardware technical: What was the precision of converters and how where they implemented in the eighties with emphasis, block scaling, linearity, filters etc? How much processing and RAM was available, what was the sample rate etc?

Software technical: Which kind of processing was done in discrete circuitry, what type of truncation and noise floor artifacts would result, how could the low sample rate be mimicked precisely, and how could all of this be transferred to a modern DSP platform.

Perceptual: Making sure the qualities of the original processor was preserved. Sweet modulation, spectral characteristics, spaciousness, distortion, saturation etc. Hundreds of hours spent listening and measuring.

User: The four basic parameters of the EMT250 were carefully laid out, offering a remarkably simple user interface with complex, yet optimized interactions under the hood. DVR2 is a resemblance of that including range and coarseness of parameters.

Better than the Classic?

While DVR2 in Normal mode is very close to the sound of a perfectly aligned 250, having used much DSP power to mimic artifacts of old hardware, the algorithm can also be put in a High Resolution mode. Using this function, the noise floor is much lower – but use your own ears to determine if this is actually a plus for a specific situation.

Please note: Many of the constraints and criteria listed above produce non-linear audio behavior, making it impossible to obtain more than a static and crude result if trying to sample an original processor. A minute emulation does more justice to the original from an audio point of view, and can also still be adjusted.

SYSTEM REQUIREMENTS

• Mac OS X (10.4 or higher) / Windows XP
• Pro Tools TDM 7.2.1 software (or higher)
• Pro Tools HD or HD Accel hardware
• iLok USB key
• iLok.com account and internet access required for product authorization
• System must meet Digidesign's system requirements for Pro Tools TDM systems!

Global Plug-In Controls
KEYBOARD COMMANDS

The TDM version of DVR2 supports keyboard commands for certain functions.
The following key commands are available for all plug-in parameters:

Key Commands in Mac OS X:
Fine Adjust = Apple key + mouse movement
Reset To Default = Option + mouse click

Key Commands in Windows:
Fine Adjust = Ctrl + mouse movement
Reset To Default = Alt + Control + mouse click

AUTOMATION

Please be aware that automation of certain parameters, can cause audible artifacts.
In case you need to automate these parameters, you should take care that
changes only take place in parts where no audio is sent to the plug-in.

FOCUS FIELDS

You can place your own set of parameters in the 6 focus fields at the bottom of the
plug-in. Making use of the focus fields can give you a better workflow, since you will
not have to switch pages all the time to find the parameters that you work with. You
can assign any parameter to the focus fields, and the focus fields are stored with the
session as well as when you save your presets.

Assign	Input Level	Dry Level	Wet Level	Decay	Pre Delay	Hi Cut
	0.0 dB	Off	0.0 dB	4.2 s	125 ms	13.0 kHz

To change the assignment:
• Press the Assign button. The Assign button as well as one of the Focus Fields
  will be highlighted.
• Select the Focus Field you wish to link a parameter to, by clicking on that field.

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- Click on the parameter you wish to link to the selected Focus Field.
- To get an unassigned (empty) Focus Field, click again on the selected parameter.
- Once you have finished the assignments, click again on the Assign button
  to leave the assign mode.

OVERLOAD INDICATION (O/L)
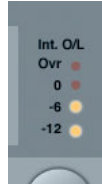
The O/L-LED in the metering section, on the left side of the input meters, will light up in case internal DSP overloads are detected. You should lower the input level to avoid these overloads. To reset the indication, click on the O/L LED.

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THE PLUG-IN PARAMETERS

MAIN PAGE

On the DVR2 Main page, you can find all controls of DVR2 as well as the plug-in's preset handling. More about the preset handling can be found in the section "Preset Handling" later in this manual.
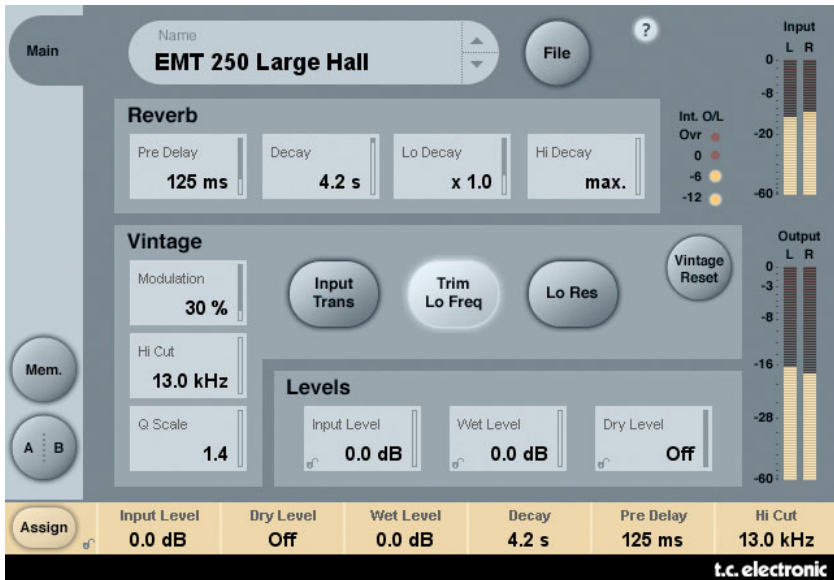
REVERB

Decay
Range: 0.4 – 4.5s
Adjusts the Master Decay time.

Lo Decay
Range: 0.5 to 2.0
Decay multiplier for low frequencies. For a x1.0 setting, low frequency decay will equal the Decay setting.

Hi Decay
Range: 0.25 to Max.
Decay multiplier for hi frequencies. For a x1.0 setting, high frequency decay will equal the Decay setting.

Pre Delay

Range: 0-500ms (Vintage values: 0, 20, 40 and 60ms)

Pre delay is the amount of time from an input is received until reverb starts building up at the output.

VINTAGE

Modulation

Range: 0% – 200% (default: 100%)

Sets the Depth of the modulation. Normal set to 100%. Increase if you like a more liquid, chorus like sound.

Hi Cut

Range: 8kHz – 13kHz (default: 11kHz)

This is DVR2´s HiCut and can be used to limit or extend the overall frequency spectrum.

Q Scale

Range: 0.3 – 1.4 (default: 1.2)

Corresponds the small potmeters inside older reverbs used to equalize sound differences caused by electric component-tolerances. Use the Q-scale in combination with the HiCut Frequency to shape the treble to your personal flavor.

Input Trans

Range: on/off (default: off)

Emulates the sound of Input transformers typically used in vintage Reverbs. Use it to create a warm vintage like sound. Especially good for short Decay times.

Trim Lo Freq

Range: on/off (default: on)

A subtle damping of selected frequencies in the lower end.

Lo Res

Range: on/off (default: on)

Switches the DVR2 to a lower bit-resolution. This adds an older and more grainy sound and also noise giving a simulation of various vintage reverbs.

Vintage Reset

Clicking on this button will reset the controls in the "Vintage" section back to the values as they are found on the vintage original.

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LEVELS

Input Level

Range: Off to 0dB

Sets the Input level for the plug-in. It may be necessary to lower the input level if signals close to full scale are fed to the plug-in. Reduce the input level in case you experience overloads (O/L).

Wet Level

Range: Off – 0dB

Adjusts the reverb (wet) level of the output channels.

Dry Level

Range: Off to 0dB

Adjusts the dry signal level of the output channels. For a typical send/return configuration, leave dry level off.

Preset Management

TC's comprehensive file based preset architecture makes archiving presets a simple process. This allows you to organize your presets the way you find most comfortable for your workflow, and to exchange presets with other users, no matter the platform or application. Presets are saved as discrete files on your hard drive. Once a preset is saved into the default location, it will automatically appear in the 'File' menu every time you use the plug-in. The files can then be organized into sub-folders, where you can delete, rearrange or create your own sub-folders to accommodate your needs.

NOTE: A folder will appear in the Preset File Menu if it contains at least one preset.

NEXT/PREVIOUS PRESETS

From the plug-in's Main page, you can directly jump from one preset to the next (or previous) by clicking on the UP/DOWN arrows to the right of the preset name.

All presets available at the default plug-in preset location will be considered, so you could in theory reach every preset this way. Direct access to specific presets is done via the "File" button:

PRESET FILE MENU

Pressing the 'File' button will open the plug-in's File menu. The following options are available from the File menu.

Loading a Preset
By selecting 'Load', you can navigate to any folder on the system that you have read access to, including any shared folder. By default, these will be loaded from the default location for DVR2 presets. Only presets located in the default file location will appear in the DVR2 pop-up preset menu.

Naming a Preset
• Double click on the name field
• Type in the new name
• Press Enter

Saving a Preset
By selecting 'Save', you can save your preset to any folder on the system that you have write access to, including any shared folder. By default, presets are saved to the default location for the DVR2 presets.

DEFAULT PRESET LOCATIONS

The following locations will describe where you can find the DVR2 presets. The presets are stored in a folder that is unique to each plug-in:

The plug-in's own preset handling is storing the presets in the following locations:

Mac OS
Factory Presets:
/Library/Application Support/TC Electronic/DVR2/Presets/

User Presets:
~/Library/Application Support/TC Electronic/DVR2/Presets/

Windows
Factory Presets:
{System Drive}/Program Files/TC Electronic/DVR2/Presets/

User Presets:
My Documents/TC Electronic/DVR2/Presets/

- To delete a file, simply move it to the 'Trash' or 'Recycle bin'.
- To create a new sub-folder that appears in the plug-in menu, simply create a new folder in the plug-in folder that resides in the PRESETS folder of the DVR2 default preset location.

NOTE: A folder will not appear in the Preset File Menu unless it has at least one preset inside.

CONVERTING DVR2 PRESETS FROM SYSTEM 6000 AND REVERB 4000

In case you are the happy owner of the DVR2 algorithm for System 6000 or the Reverb 4000, here is something to get you in an even better mood: The DVR2 plug-in is able to read your System 6000/Reverb 4000 presets.

In order to convert presets from System 6000/Reverb 4000 to DVR2, you need to store the System 6000/Reverb 4000 presets in a preset file. The file extension has to be either ".syx" (for example: MyPresets.syx) or .mid for a MIDI file.

The easiest way to export System 6000/Reverb 4000 presets is to use the "export to file" function from the Icon Editor for Mac/Windows (requires version 3.5 or higher). Alternatively, you can save a bank to a floppy disk (System 6000 only) or do a SysEx-Dump to a MIDI file in your sequencer.

Note: *For details regarding the export of presets from System 6000 or Reverb 4000, please refer to your System 6000/Reverb 4000 and Icon Editor documentation.*

The generated SysEx/MIDI preset file needs to be placed in the default DVR2 Preset folder (at the root level; subfolders are not considered). The file needs to have either the extension ".syx" (for example: MyPresets.syx) or .mid for a MIDI file.

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Note: In case you are running the Icon Editor on the same computer as the DVR2 plug-in, the DVR2 will automatically search for preset files in the default locations for Reverb 4000 and System 6000 files. You do not need to copy the files!

Once your preset file has been placed in the default DVR2 Preset folder, it will show up the next time you click the "File" button. At the top of the pop-up list you'll find a section called "Convert", and the name of your preset file will be listed here.

To convert your preset file to DVR2 presets, simply select the name of the preset file. The conversion will only take a few seconds and only needs to be done once.

When the conversion is done, all presets from your preset file will be available in a subfolder that has the same name as the preset file had. The presets will show up in the same bank structure as on the System 6000, and presets that are not based on the DVR2 algorithm will not be converted.

The preset file will disappear from the Convert section of the file menu.

Note: As the plug-in implementation of the DVR2 is stereo only, the surround settings from the System 6000 version will be ignored during preset conversion!

COMPARE SETTINGS WITH A/B MEM.

With the A/B compare function you can easily compare different parameter settings when you work with your music. You have two buttons: the "Mem" and the "A/B" button.

When you start working with your preset, the A/B button is grayed out. This state indicates that the settings in both memory locations A and B are identical – so there is actually nothing to compare. As soon as you touch one of the parameters, the memory location "A" will get active, and the "A"-part of the A/B button will light up. All parameter changes will be applied to memory location "A". If you switch to memory location "B", you get back to your starting point, and all further changes will now be applied to memory location "B". Every time you press the A/B button, you will toggle between these two memory locations.

Note: *The A/B memory locations are temporary settings only! Saving a preset (e.g. via the File button or with your session) will only save the currently selected memory location. The setting of the other (hidden) memory location will not be saved!*
The "Mem" button will reset the A/B memory locations to the current setting.

LOCKING PARAMETER VALUES – USING THE PARAMETER LOCK

The parameter lock function allows you to lock the parameters In Level, Out Level, Dry Level, Wet Level and the assignment of the Focus fields from changing when you change preset.

By using the parameter lock, you can easily browse through the extensive set of presets that comes with the DVR2, without having to change back the locked parameter with each preset change.

To lock a parameter, simply click on the small lock in the parameter field. To unlock it, click again.

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The parameter lock only affects parameter changes made with the mouse. The parameter lock does not affect automation data or preset changes initialized from the host application. These changes will always pass.

An example: You have inserted the DVR2 on a channel. When you use the DVR2 as an insert effect, you would probably like the dry part of the signal to go trough the DVR2, and therefore you'd probably turn up the "Dry Level".

Dry Level
 - 4.2 dB

Now, if you browse through a couple of presets, using the up and down arrows on the right side of the preset name, you will see that most of the presets have the Dry Level set to "Off". In other words, the Dry Level goes to "Off" all the time – which can become quite annoying.
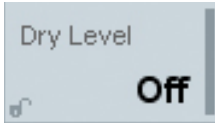
Dry Level
Off

And here comes the Parameter Lock. Press the small lock in the Dry Level parameter field, and the Dry Level will stay at the value that you've set it on – no matter what is saved with the preset you choose.

Dry Level
Off
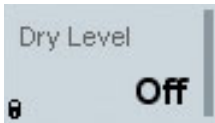
Once you touch the parameter or send automation data, the lock will automatically unlock.