



D U Y Z-Room

User's Manual

DUY Z-Room

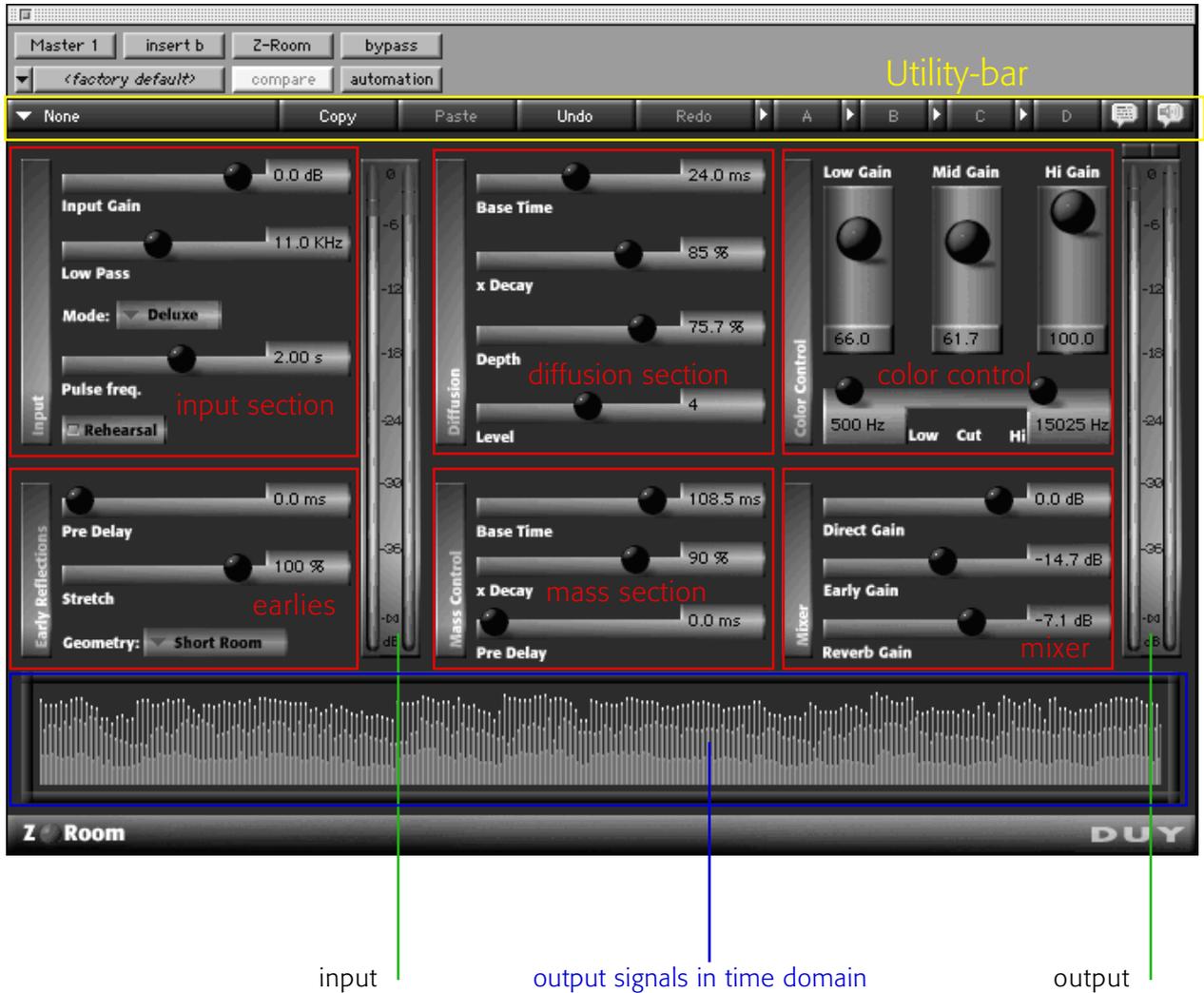
DUY Z-Room is a natural sounding reverb, featuring:

Main features

- High quality density and diffusion.
- Total control over parameters which had never been available to the user before, with a friendly and intuitive user interface
- Three modes: Deluxe, Economy and Earlies. The second allows to free processing time.
- An exclusive Rehearsal Mode allows you to set the parameters while hearing the real impulse response of the reverb. This is one of the finest tools to evaluate the quality of the reverb.
- You can choose between several Early Reflections responses (reverse, gate, hall, room, stage...). All these presets can be modified with the Stretch and Pre-delay parameters.
- Processing time is freed when you choose not to include Early Reflections.
- Independent mixing controls for each of the three selectable bands, as well as for the Direct, Early Reflections and Reverb signals.
- Total control over the iteration depth, with six levels of calculation.
- Z-Room is the only reverb that allows you to control the time base of the reverb's algorithm.
- Visualization of the Direct, Early Reflections and Reverb signals in the time domain.

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1. Z-Room's interface



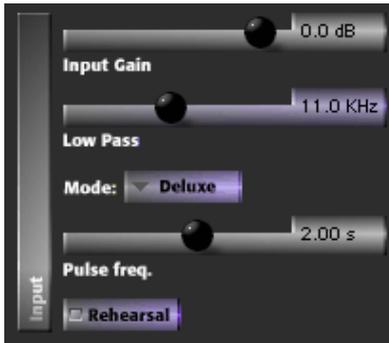
Z-Room is divided into 6 operating sections:

- Input
- Diffusion
- Color control
- Early Reflections
- Mass Control
- Mixer

2. Z-Room 's Sections and Parameters

2.1 Input section

In this section you can program the parameters related to the input stage of the sound, that is: Input Gain, Frequency response and other general parameters and Operation modes.



Input Gain

Use this slider to set the level of the signal to be processed. You can reduce the input level to reduce the excess of regeneration produced by the reverb. The displayed value is in dB.

Low Pass

Use this slider to reduce the high-frequency contents of the input signal. Lowering the value will cut off higher frequencies, making it suitable to avoid unwanted ringing effects. The low-pass value is displayed in KHz.

Operation Mode

There are 3 operation modes:



- Economy Mode: In this mode, Z-Room frees processing time from your processor. This may be useful when you're running many plug-ins at a time in the same session.
- Deluxe Mode: The reverb uses more processing time to enhance quality results.
- Earlies Mode: The strength of the algorithm focuses basically on the Early Reflections.

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Rehearsal Switch



Z-Room introduces an extremely useful tool to evaluate the quality of the reverb patch that has been set or that the user may be programming.

When the Rehearsal switch is on, Z-Room enters the Test Mode. A series of very short pulses are produced in order to hear the response of the reverb. The pulses are repeated as often as set with the Pulse Frequency slider.

The gain of these pulses is controlled by the Input Gain.

Pulse Frequency

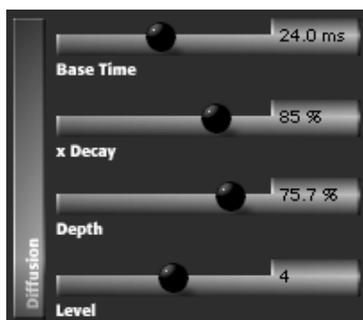
This slider changes the frequency of the pulses used to test the parameters of the reverb, controlled by the Rehearsal button.

This slider only has effect when the Rehearsal switch is on.

The display shows the time between one pulse and the next in seconds.

2.2 Diffusion section

This section allows to program the degree, amount and type of sound recreation before entering the reverb stage.



Base time

This slider will set the seed time used to calculate the series of tap delays used to diffuse the sound.

This slider functions in parallel with the 'x Decay' parameter.

The display shows the current value of the seed time in the diffuser.

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x Decay

The cross-decay parameter controls the time differences between the diffuser's internal blocks.

The current value displayed is the decay time in the form of a percentage (%).

Depth

This slider allows to control the amount of sound Diffusion.

A value near zero will produce no diffusion at all, but it will create an additional delay proportional to the current Base Time and x Decay.

The value of the Depth time in is displayed as a percentage (%)

Level

The number of iterations in calculation inside the Diffuser section are selectable (1, 2, 3, 4, 5 or 6).

A lower level will mean less diffusion and less processing time consumption. A higher level will imply a greater diffusion of the source sound and will consume more processing power.

2.3 Color Control

This section is used to select reverb decay times based on frequencies responses. This kind of control allows the selection of different reverb times per frequency band.



Low Gain

This slider controls the decay time of the Low frequency band, selected by the Low Cut parameter of this section.

Mid Gain

This Slider controls the decay time of the Mid-frequencies band, set with the Low and Hi-Cut parameters.

Hi Gain

This Slider controls the decay time of the Hi-frequencies band, selected by the Hi-Cut parameter.

Low Cut

This control defines the Low frequency band, that ranges from zero Hertz to this parameter. At the same time, this slider defines the Mid band's lower value.

The value is displayed in KHz.

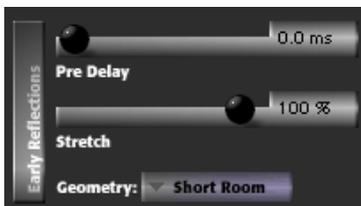
Hi Cut

This control defines the Hi frequency band, which ranges from this Hi value to the maximum allowed. At the same time, this slider defines the Mid band's higher cut value.

The value is displayed in KHz.

2.4 Early Reflections

In this section you can define the type of Room where you wish to introduce your sounds in. Early Reflections define the first perceptions of a sound located in a Room of a certain size and geometry.



Pre-Delay

This slider controls the time of silence introduced after the original signal and the Early Reflections' response. Value in milliseconds.

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Stretch

The Stretch parameter controls the size of the Room at the Early Reflections stage. Lowering the slider value will produce shorter responses or smaller Room sizes.

Geometry

This menu allows you to select the type and shape of the Room modelled by the Early Reflections response. A choice of 12 different room models can be selected.



12 different room models can be selected in the "Geometry" box included in the Early Reflections section of Z-Room.

2.5 Mass Control

This section provides control to the internal parameters of the Reverb processor.



Base Time

This slider sets the seed time used to calculate the series of delay lines used to reverberate the sound. This slider works in parallel with the 'x Decay' parameter.

x Decay

This parameter controls the time differences between the reverb's internal blocks. The value is displayed as a percentage (%).

Pre-Delay

This slider controls the timelength of silence introduced after the original signal and the Reverb response.

2.6 Mixer section

This section provides 3 independent sliders to set up your final effect output. The Direct gain, Early Reflections gain and Reverb Gain can have independent values.



Direct Gain

Sets the final Gain of the Original sound (unprocessed). Setting this value to its minimum will mute the original sound. This signal is displayed in gray on the Scope at the bottom of Z-Room's interface.

Early Gain

Sets the final Gain of the Early Reflections section. Setting this value to its minimum will disconnect the Early Reflection section, freeing processing time. This signal is displayed in blue on the Scope at the bottom of Z-Room's interface.

Reverb Gain

Sets the final Gain of the reverberated sound. Set this value to its minimum in order to mute the reverb sound. This signal is displayed in red on the Scope at the bottom of Z-Room's interface.

3. Signal displays

3.1 Input Meter

This plasma meter shows the value of the input signal in dB.

If the input signal is mono, only one plasma meter will appear.



3.2 Output Meter

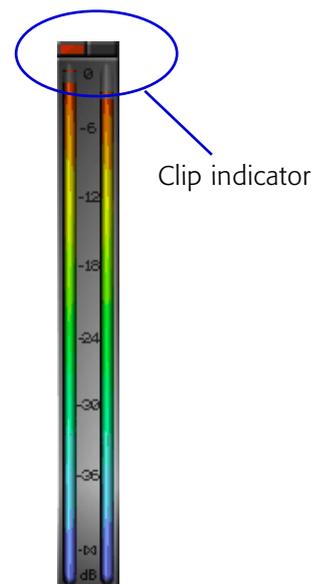
This plasma meter functions in exactly the same way as the Input Meter. However, it adds an extra visualization option: the Clip Indicator.

3.3 Clip Indicator

This Indicator will light in red if signal overflow occurs in the calculation and means that some clip distortion has been produced.

Click on the Indicator to reset it.

To avoid this kind of distortions we advise you to lower the input gain.



3.4 Scope Output Display

The Scope Output Display is located at the bottom of Z-Room's interface. This display allows you to visualize the sound evolution of the output signal in the time domain.

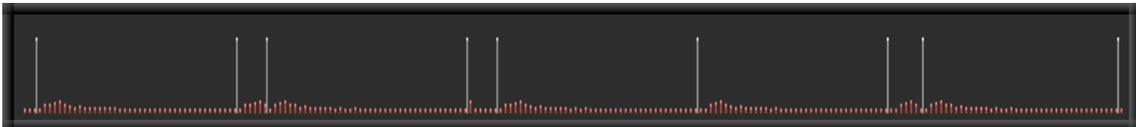
Three signals are visualized on the same screen, carefully color-coded as follows:

- Gray: Direct signal
- Blue: Early Reflections
- Red: Reverb signal.



Scope Output Display of a signal that includes direct, reverb and early reflections signals.

The figure below demonstrates the output signal when you're working in Rehearsal Mode. Remember that Rehearsal mode emits a series of short pulses in order to try out the response of the reverb.



In gray, the direct pulse signal. In red, the response of the reverb.

4. The Utility bar

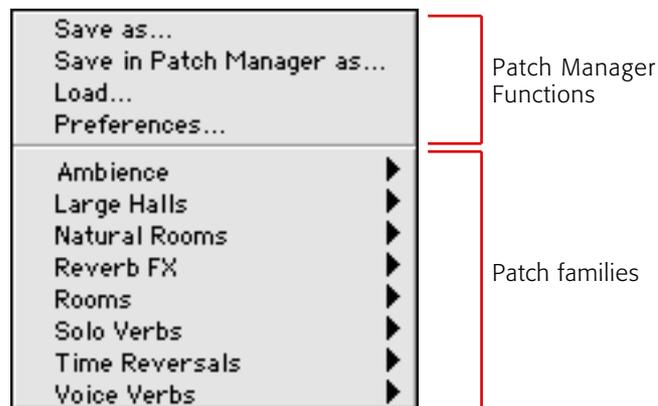


The Utility bar is located at the top of Z-Room's graphic interface.

It includes several useful functions when it comes to creating, loading and saving presets.

4.1 The Patch Manager

The first part of the bar is the Patch Manager section (in the figure above it shows up with the word "None". Click on this part, and the following menu will appear:



PATCH FAMILIES:

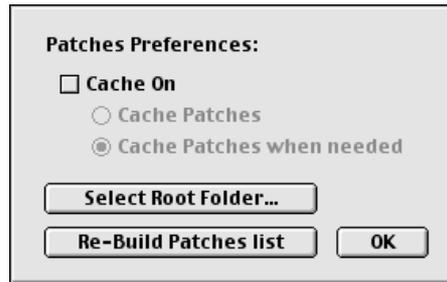
The provided presets (also called "patches" throughout this manual) are categorised in families, just as shown above. In the figure above, the names of the families are below the line ("Ambience", "Large Halls"...). Each one of these families contains several presets. You can create new presets of your own and add them to the list. This is where the Patch Manager comes in handy.

PATCH MANAGER:

The Patch Manager allows you to save and load your presets to and from any location you want in your disk.

The "Save" and "Load" options let you find a preset wherever in your disk.

If you click the "Preferences..." option, the following screen will appear:



The “Cache On” option lets you choose if you prefer to store all the available patches in memory or not. If you want them in memory as you go along, you can choose to have them all available permanently or only the ones you need at the time.

The “Select Root Folder” options lets you choose the folder where you would like Z-Room to read the presets from in order to show them in the pop-up menu that appears as seen at the beginning of this chapter.

Once you’ve selected the folder, you must activate the “Re-build Patches List” command and then press OK. If you don’t click the “Rebuild” button, it will not regenerate the list of presets after you’ve pressed OK.

4.2 Copy/Paste/A/B/C/D

If you would like to play around modifying some of the existing presets or some of your own creation, you will find these commands very useful.

The Copy/Paste commands allow you to copy the settings from one preset and copy them onto another brand new one. The COPY command will copy the current state of your process and store it for later recall. To recall your copied data you must use the PASTE command. If you have temporary settings and in-between changes and options before saving the preset, you can store them in memories A, B, C or D.

To store in A, B, C or D, click on the arrow at the left of each letter. To recall, click on the letter.

4.3 Undo/Redo

You can revert the parameters of the process to the previous state before the last edition. Up to 10 editions can be reverted (undone/redone)

4.4 Balloons Help / Talking Help

The last two icons in the utility bar are the “Balloons Help” and “Talking Help”. Click to activate. You’ll need to activate the Speech manager to use the latter.

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PROVIDED PRESETS

Ambience

- Dark Ambience
- Hi Ambience
- Mid Ambience
- Soft Ambience

Large Halls

- Cathedral Hi
- Cathedral Mids
- Colored Long Hall
- Dark Hall
- Granular Long
- Marble Hall
- Widespread Hall

Natural Rooms

- Cavern
- Dark Stone Booth
- Dumped Drum Booth
- Mids Stone Booth
- Natural Bright
- Natural Dark
- Natural Neutral
- Near Room
- Solo Natural Short

Reverb FX

- Ad infinitum
- Hyper-Ringy
- Late Mid State
- Madly-Ringy
- Supa-Ringy
- Tapping
- Tube Verb

Rooms

- Mid Room
- Mid Room 2
- Steady Room
- Whole Room
- Xtra Room

Solo Verbs

- Diffused 1
- Diffused 2
- Diffused 3
- Hi Spread Brass
- Natural Solo
- Tapped Disorder
- Wooden Ambience

Time Reversals

- Convergent
- Gated
- Reverse 1
- Reverse 2

Voice Verbs

- Breathing HF Vocals
- Solo Voce
- Voice Delayed
- Voice Diffused
- Voice Diffused Hi
- Voice Diffused Mid
- Vox in Short Room

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