TUTORIAL:
WHAT'S THE DELAY?

In Reason, there's a very powerful delay unit that will have you bouncing sounds around like a ping-pong ball in a hurricane. Darren Lock investigates

DELAY CONTROLS
This part of the panel controls the amount of delay feedback, the position of the effect in the stereo spectrum and how much dry or wet signal is fed back into the mix

EXTERNAL CONTROLS
The Pan and Feedback input controls to the rear of rack can be connected to the Modulation Outputs of other instruments, to take remote control of the panning or feedback of the effect

DELAY TIME
The amount of delay time (in steps or milliseconds) is displayed here, and the controls to the right of it increase/decrease delay time

EFFECT INPUTS
To the rear of the rack you have the stereo inputs for the effects unit. These can be routed directly to an instrument, or connected to the Aux Send buss of the mixer

STEP LENGTH
If you are using the Step setting to determine delay time, you can toggle the delay between 1/16 or 1/8 of the song tempo time

EFFECT OUTPUTS
Below the inputs there are a set of stereo outputs, which again can be routed directly into the mixer or alternatively connected via the Aux Return buss
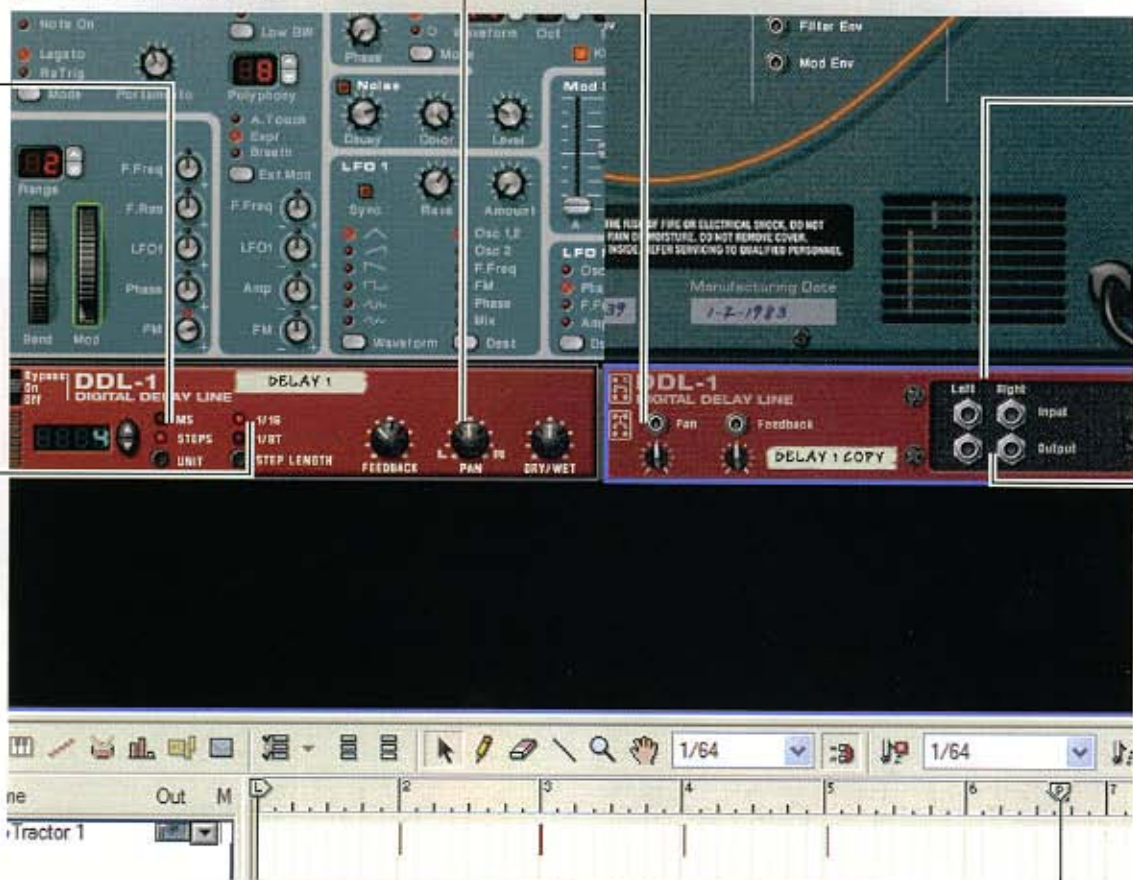
In the old days, delay effects (or 'echo', as they are sometimes known) were created by tape loops that re-recorded small snippets of sound until they gradually degraded and faded out. The length of the tape used in the loop determined the length of the echo or delay.

These days, thankfully, we don't need to use such antiquated techniques, and in Reason there is an excellent virtual digital delay unit called the DDL-1, which would put many of its hardware predecessors to shame.

As with most of the effects that are on offer in Reason, the DDL-1 can be used in one of two ways. You can either directly chain your instruments into the delay unit, (or units) so that each instrument has its own individual insert effect. Or, alternatively, you can connect the

DDL-1 to the Aux buss of the mixer, so all the instruments connected to the mixer board can access that particular effect. The decision on how to chain effects is entirely up to you and how you plan to use them.

With the DDL-1, there's a number of control buttons to tweak. You have the length of delay (in either steps or milliseconds), Step length, and the Feedback, Pan and Dry/Wet controls that actually control the output of the delay. So it is quite a simple effects unit to get to master.

In this two-page tutorial, we'll be showing you exactly how to get some pretty interesting sounds from the DDL-1 to soup up your mix. It's not too complicated, and you'll certainly notice the difference if you follow our steps.

STEP-BY-STEP: Using the DDL-1 Delay Line

The DDL-1 is a really cool effects unit, and we'll show you how to get the best from it

1 Adding a unit: Assuming you've already opened up a new song template in Reason, you can add a DDL-1 Delay unit to the rack by right-clicking on the mouse and selecting DDL-1 Digital Delay Line, or click Create, DDL-1 Digital Delay Line from the main menu.

2 Making the connection: We've already added a mixer to our rack and we need to press the Tab key to see the reverse. We connect the Mixer Send 1 to the L/R Inputs of the DDL-1 and connect the L/R outputs of the DDL-1 to the L/R Aux 1 Return.

3 Get the sound: With an instrument connected to the first channel on the mixer, adjust the Aux 1 Send Level on that channel to add delay to that instrument. Tweak the Return level of the delay by adjusting the Aux 1 Return levels to the right of the mixer panel.

4 Playing with delay: Now start playing with the DDL-1 delay level. Click on the Delay Time buttons to increase/decrease the delay time. The Unit button toggles between Step time and milliseconds. Step time is proportionate to the tempo of your song.

5 More about controls: The Feedback button controls how much delay is repeated, so the longer the feedback level, the longer it takes for the delay to decay. The Dry/Wet knob controls the amount of processed sound fed to the Aux buss.

6 Basic delay: You should now have a basic delay setup. The sound of this effect can be heard by playing DDL-1a.mp3 (without delay) and DDL-1b.mp3 (with delay). As you can hear, this is just a basic delay, but there are some other tricks you can use to good effect.

7 Stereo delay: By adding a second DDL-1 Line to your mixer and assigning it to the Aux 2 buss, you can create a neat stereo delay. Just set the Pan of either unit to hard left or right – you now have the basis of a stereo delay. Use two different delay times to get a chiming effect.

8 Four-head delay: For some interesting rhythmic delay, add two more DDL-1 lines to mixer. Adjust the delays so that they are panned gradually across the stereo field, and set the delay time incrementally across the four delays.

9 Output control: With the DDL-1 line, you can control the Pan and Feedback of the delay unit by connections at the back of the rack. We've connected the LFO 1 Modulation Output from Subtractor to the DDL1. This creates a wavy delay effect, as heard in DDL-4.mp3.