

Some ideas for tweaking the NN-XT sampler.

Stereo Split.

This is an effective technique to give a more defined stereo image for your sound. Simply separate the Left and Right outputs of your NN-XT by patching them to two channels of your mixer. Next, using the 'Pan' knob, set the left channel fully left (-64) and the right channel fully right (63).

Conversely, some sounds can benefit from the opposite process. Remove the right channel patch cable from the mixer giving a mono (left only) output. This produces a more centred sound that can give more definition and means that the 'Pan' control acts as a true pan instead of a stereo 'balance' control.



Fig 1: Sending the left and right output to separate channels.

Attack.

Have you ever thought 'I love that sound but wish it came in a little more gently'? This is especially common with string sounds where a real player would naturally vary the attack of his bowing technique according to the music. With a sampled sound however, the attack or aggression of the played note is fixed. Using the Amp Envelope in the NN-XT you can quite effectively alter this characteristic to suit your piece of music.



Fig 2: Selecting a group of samples

Before adjusting any of the NN-XT's parameters, you must first select the samples that you want to be affected by the changes that you make. To do this you should left-click in the column marked G (for group) on the left side of the samples screen - to work on a set of samples (e.g. an instrument patch) - or click on the individual sample name to work on a single sample (e.g. a drum sound). Once selected the sample or group of samples will be shown highlighted. The picture above shows the set of samples (all named 'plain--') selected ready for adjustment. It is worth noting that multi-sampled sounds have sets of samples for different velocity layers so care must be taken to make sure you have either selected them all (shift-click to select multiple groups) or have selected the correct set for the adjustments that you want to make.

The picture shows the Amp Envelope controls for the NN-XT. These are found at the bottom right corner of the control panel. In our example the attack (the top-left knob marked A) is set to 'off'. As you rotate this knob, the length of time it takes for the note to reach its full amplitude (or volume) will increase. Using our string example, a little extra attack time (say 5 ms) can soften the initial bite of the bow for those 'sensitive' moments, a lot of extra attack (the envelope goes up to 50 secs) can give a convincing crescendo effect. For even more variation, this control can also be mapped to the note velocity (i.e. how hard you play the note on the keyboard) using the 'Amp Env Attack' control in the Velocity parameters - see the next section of this article...



Fig 3: Amp Envelope controls

Velocity Sensitivity.

Many NN-XT patches already include some amount of Velocity Sensitivity but different keyboards (and keyboard players!) have different velocity characteristics so it can be useful to be able to adjust this.



Fig 4: Velocity controls

The Velocity controls are found on the left side of the control panel, between the Modulation and LFO 1 sections. All of these controls are 'bipolar' knobs which means that they go from negative values on the left to positive values on the right with zero at the centre. A positive value means that the amount of the parameter you are controlling will be increased as you play the note harder, a negative value means the parameter will be decreased as you play harder.

To make the note sound louder if you play harder (basic velocity sensitivity), simply increase the (positive) value of the 'Level' control until you have a natural-sounding sensitivity between loud and soft notes.

On many instruments the note will also sound slightly different when played loud or soft. Using our string example, a softly used bow will have less 'bite' than one used hard. Assigning velocity sensitivity to the attack parameter (as described above) can impersonate this effect. Using the knob marked 'Amp Env Attack' set a negative value so that as you play harder, the attack time decreases giving you more of the initial bite of the sound. This will work whether or not any Attack value has been assigned in the Amp Envelope controls.

Joystick Modulation.

Here's how to set up Joystick (or mod-wheel) control of vibrato. The aim is to get a progressive increase of the vibrato depth as you increase the amount of joystick applied. (If you're using a mod-wheel, first check that it is set to zero.)



Fig 5: Modulation controls



Fig 6: LFO 1 controls

The Modulation controls are found at the top-left of the control panel and the LFO 1 controls at the bottom-left. Start with the LFO 1 AMT knob in the centre (12 o'clock) position and click on the 'W' button below the knob so that it is highlighted in green. This allows your mod-wheel (or joystick) to control this parameter. If you wiggle the joystick on your keyboard you should see the 'virtual' mod-wheel on the NN-XT's front panel move in unison. Next go to the LFO 1 controls and set the 'Pitch' and 'Rate' knobs to the levels that you'd like for when the vibrato is at maximum. Now go back to the LFO 1 AMT knob and increase the value until you've got the amount of vibrato that you'd like when the joystick or wheel is all the way down (minimum). If you turn the LFO 1 AMT knob all the way up then there will be no vibrato when the joystick is at minimum. This knob works by applying a percentage of the modulation effect that is controlled by the wheel instead of always applied. When the knob is at 100% then all modulation effect is controlled by the wheel. Other LFO 1 controls that will affect the vibrato are the waveform choice - the triangle is the best to start with - and the Rate selection. If 'Group Rate' is selected then the vibrato rate will be determined by the setting of the Rate knob in the Group section (top-left) and will be applied to all samples in the patch. Tempo Sync allows you to sync the vibrato rate to the tempo of the song and in this mode the knob will read in beats/bars. Free Run lets you adjust the rate independently in Hz (cycles per second). To achieve a tremolo effect, the same process can be applied but use the Level knob (in the LFO 1 section) in place of the Pitch knob.

With a bit of familiarity, the NN-XT is a very versatile and expressive virtual instrument and the above processes are really just scratching the surface. Most of the parameters described above can be controlled by external sources, such as synthesizers, and many more parameters can be controlled by a joystick or mod-wheel (try experimenting with the Filter Frequency!). A lot of this information is in the documentation that comes with Reason and if you're looking to get the most out of your NN-XT or other Reason devices then I would recommend taking the time to study the manual, become familiar with the parameters and then start experimenting!