The Rain Piano

An Upright Piano with unique character
8 True Velocities X2 (Pedal Up / Pedal Down)

Said about The Rain Piano:

- *''DAMN that sounds awesome!!!"*
- *"It´s natural and realistic"*
- *"The idea is wonderful and the sound is very convincing!"*
- *"Quite a lovely little piano"*
- *"Love it!"*
- *"Interesting and intriguing"*
- *"Finally someone who realised that instruments should have character"*

Background

There are a lot of sampled pianos. Most of them are grand pianos that are tuned and recorded in a way that is standard in the world of recording. But what about all the wonderful recordings made in studios using Uprights? Could I reproduce that character in a functionally useful sample piano? It would have to be perfectly "in tune" and yet retain the natural detuned personality of a typical studio Upright.

Concept

The Instrument

After consulting with some experts on upright pianos, I chose a Swedish piano from "**Svenska Pianofabriken**". It had the tone I was after, so that was a good place to start.

The Studio.

I chose Studio Kuling in Orebro, Sweden. Partly because it's near to where I live, but mainly because it has one of Sweden's finest rooms for recording acoustic instruments.

What to record

A piano sounds very different if you strike a key soft or hard. It is important that you can go from feather-soft to hard-banging and get a natural transition between the two extremes.
In my opinion, the most important factor for a natural piano sound, is to record many velocities (different loudness = different timbre). This gives a smooth, natural transition when playing with different strength.
I therefore sampled 10 different velocities per note.
This is impossible to do "by hand", even for a professional pianist, so I therefore used a special developed software that let me sample in steps of 2 dB.
From those samples, I then chose the final samples for assembling the sampled instrument.

These source recordings were made at 24bit stereo resolution. If I was to sample all notes, full decay, the file would be too big to handle. So I decided to sample the piano in thirds, that is: C, D#, F# & A in each octave. Tone "stretching" is virtually not noticeable and in this specially tuned piano, chromatic 3rds helps to unify the overall pitch and timbre.
To get the file size down some more, I "only" sampled 10 seconds of each note.
The samples are then looped to emulate a full envelope.

10 seconds are enough to make sure that in most playing situations, you will never even reach the beginning loop point, so basically, you will be playing unlooped samples.

The recording space at Studio Kuling

The Preparations

With me in the studio was Jussi, the piano tuner. I find it extremely useful to have a piano tuner around when sampling a piano, to be sure that the piano I use is always in tune throughout the entire session, not just at the beginning.
This time Jussi got a somewhat strange instruction….

- *Worra: "Can you make the piano sound like it's been out in the rain for a couple of days…."*
- *Jussi: "….??????"*

Now, I can understand that this was an instruction that he never got before, and for a moment I thought that he wouldn't do it. Something about his honour as a piano tuner and that he had to consult with some fellow pianotuner first.
Well he did, and he agreed on doing it.

I wanted the piano to be tuned in a way that gave it character without becoming out of tune. It still had to work together with other instruments.
Jussi went to it, and after a couple of tries, we got a result that made us very happy.
What he did was, in short:

> ***An individual Piano tone consists in most cases of three strings. These strings are tuned in a way that makes them resonate to produce a single, nice tone. Jussi simply lowered one of the strings a bit, leaving the other two in perfect tuning. This gives the Rain Piano its unique character.***
> ***Nothing else, and I really mean nothing else, sounds like this piano!***

Recording

The Rain Piano microphone set-up

The microphones used were:

- MG UM-70, bass
- AKG C414, mid + high
- 2 Milab DC98, ambience (not in picture)

Recordings were made using Millenia HV-3B preamps and then directly to a ProTools HD system. All samples are originally in 24-bits 44.1 KHz stereo.

For each note 10-11 velocities was recorded using a specially designed custom software in 2dB steps.

The Sampled Instrument

I chose 8 samples per note/pedal from the set of 10-11 samples.
The samples were chosen regarding overall balance and timbre. This resulted in reusing some samples in some velocity splits, just because it sounds better.
In most cases, the notes have true 8/8 velocity, that is, 16 different samples are used.

The Presets

The Rain Piano has six Presets that you can chose between to suit your playing needs.

All presets have a low-pass filter that allows you to alter the tone by moving the modulation wheel. ModWheel normal gives you the original sound. When turned up, it gives a darker, more mellow sound.

Rain Piano (default preset)

This is the original Rain Piano. It has 8 velocities pedal up and 8 separate velocities pedal down samples

Rain Piano Dynamic

This is the same as the Rain Piano, but attenuation has been added to the velocity layers that gives you a bigger difference, in volume, when playing soft and hard

Rain Piano Pedal Down

As the Rain Piano, but only pedal down samples. Try it for soft, ambient playing!

Rain Piano Pedal Up

As the Rain Piano, but only pedal up samples.

Rain Piano Loud

Only uses the 4 loudest velocity layers. Gives a harder, more crisp attack, even when playing soft.

Rain Piano Soft

Only uses the 4 softest velocity layers. A more mellow sounding piano.