

Fig.1



Caliber

What a pleasure it is to play an instrument of Rose Whisper's caliber (Figure 1). Sadly, I recognize that I am not able to *fully* do it justice; there is an obvious range of capability here, layers of subtlety—even a novice can tell, just by playing this wonderful instrument. You will simply have to listen to these samples from more capable hands (go to <http://www.supremepiano.com/product/demo4.htm>) to get an idea of what Rose Whisper can do. When I first heard these audio demos, *I was convinced* that a real piano had been substituted.

Fazioli Brunei

Wang Yichi created Rose Whisper based on the sounds of the Fazioli Brunei (www.fazioli.com/en/pianoforti/special/brunei), a concert grand costing over \$400,000. The ten foot Brunei, Figures 2 and 3, was made by engineer and pianist Paolo Fazioli, a man who is as well known for his scientific acumen as for his musical skills and knowledge. It is therefore fitting that another engineer and pianist, Wang Yichi, should attempt to emulate this extraordinary piano. Wang is playing some of the demos at his site, showing his classical training as well as his experience as a classical concert pianist.

NEO Hybrid Modeling Engine

One of the things you'll notice with the Rose Whisper (Wang's wife was the inspiration for the name) is that, unlike many sampled pianos, this instrument shows a great depth of playability. The reason for this extended level of expression is Sound Magic's NEO Hybrid Modeling Engine. For example, standard sampled piano sounds are always static with no interaction between the strings while playing, but the NEO Hybrid Modeling Engine forges these subtle harmonic changes, generating subtle resonances based on which notes are being played at any given moment. The NEO Hybrid Modeling Engine is always changing, always reproducing

Piano

Sound Magic

by Ben Paturzo



Fig.2

this interaction between strings. This produces a living, *breathing* sound, if you will. The NEO Hybrid Modeling Engine achieves this realistic and authentic sound by using physical modeling to shape the sound's "skeleton" and then maps it to a series of harmonic components in real time to provide the resonance between the strings and the sound of the piano "box." The proof is in the playing.

HD Velocity Layers

Adding to the nuance and expression of Rose Whisper, Sound Magic's revolutionary HD Velocity Layers suggests a new way to achieve many more velocity layers using traditional MIDI. When you press a key, Rose Whisper Piano not only reads the current velocity of this note, but also takes into account the velocities and after touch information from the previous 2 or 3 notes. HD Velocity Layers will then use a set of algorithms to combine the data and produce an actual velocity level (a 6 digit number). In this way, Rose Whisper Piano can support up to 65536 actual velocity layers when using traditional MIDI signal (127 levels). In addition, Rose Whisper Piano achieves a new level of realism by emulating the behavior of Piano Legato. When you are playing legato phrases on a real grand piano, the transition between two legato notes is created by subtle



Fig.3

variations of key pressure. Rose Whisper Piano is able to respond to these differences and allows your playing to come closer to that of a real piano (Figure 4).

Master Wang

It is always easier to write about people who are doing worthwhile things, people who are definitely adding to our little corner of the audio world. Just from our limited interaction, I have learned a great deal about pianos, their tuning and structure, the importance of proper emulation techniques, and what it takes to properly play an instrument, even a virtual one. I am constantly amazed by the talent and generosity of the devs you've seen in this magazine. Wang is an excellent example. There is a series of weekly piano lessons (available via email) that teaches you how to get the most out of Rose Whisper. An excerpt is:

How To Get Your Ideal Piano Sound in 6 Hours - or Less!
Part 3: Get Warm, Spicy or Hot through Dynamic Control, a little Magic!

Apart from velocity layer, the effect of dynamic on piano sound is often ignored. In fact, a little adjust on dynamic may lead to a magic result on sound which none other effect units could ever reproduced. So we should first know how a real grand piano acts on its own dynamic.

Real Piano Dynamic

We often heard that a piano's dynamic is around 33dB. That's part true for they did not tell you this 33dB is measured only on note A440. Just think about more in your mind, with a bit physics knowledge, we all know that bass strings are heavier than the strings for highs. That means bass strings are always carrying more energy than higher strings. This will lead to the fact that strings for highs will decay much faster than bass strings. The research by scientist also proved this fact, which shows the dynamic for C8 is over 50dB. This is also the reason why the piano sounds mellow when you play it soft. It is a great pity many pianos are using the same algorithm calculating the dynamic. If you have the chance to measure their dynamic, you will find they have nearly the same dynamic

ranging from A0 to C8; all 88 notes have the same dynamic range. They all did wrong in this point and the terrible result will be revealed.

Further on in this particular lesson there are diagrams and audio demos to illustrate and demonstrate what Wang is teaching. This is a dev who is obviously proud of his work and generous in sharing his knowledge and experience. Master Wang doesn't have to do this, but he chooses to do it.

Closing

Looking at Figure 1, you will notice a fair number of controls to adjust the timbre of Rose Whisper, the dynamics, tonal color, as well as the player's interaction with the instrument. There is even a control for the Lid Position! The controls are logically laid out and perform as intended; the caveat here is that as you progress in your abilities, more of the subtleties of Rose Whisper will open up to you. This is an instrument you should try for yourself, and if you are a novice, grow with. Quite delightful.

Fig.4

Without Piano Legato, there is a huge gap between two notes.
Result in sounding staccato, no legato and not musical at all!

With Piano Legato, The two notes connect well.
Achieve a legato and musical sound.

