

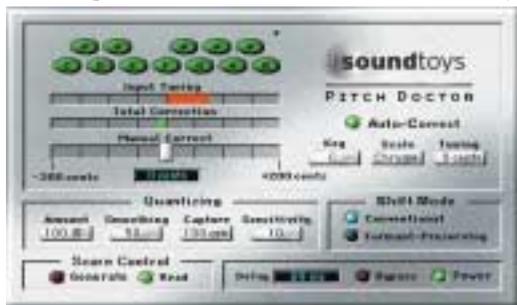
SoundToys UltraTools HD

Formerly known as Wave Mechanics, SoundToys is the new brand identity for a company that has been producing plug-ins for Pro Tools for some time, and whose founders have been involved in DSP for signal processing for even longer. SoundToys has taken Wave Mechanics product lines and updated them to support OS X and Pro Tools HD.

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THE ULTRATOOLS HD BUNDLE is comprised of four separate plug-ins, namely Sound Blender, PurePitch, PitchDoctor and Speed — and while they are all distinctive in their use and application, they all share common processes that, as the names suggest, revolve around pitch-shifting.

First up to bat is **PitchDoctor**, which is accurately



described as 'first-aid for out of tune vocals', although it is equally effective on any other single pitched sound source. Although not alone in the field of pitch-correction devices, it benefits from an easy user interface that allows automatic or manual correction to be performed.

In practice, auto-correction works very well for material that suffers only slight tuning problems, typically anything less than half a semitone. Material that is more out of tune than this sometimes causes PitchDoctor to mistrack, with unpredictable results. In these cases, a manual pitch correction mode can be employed. A graphical keyboard can be used to force correction to a particular note simply by clicking on that note. Correction is only applied when the incoming pitch falls within a user-defined window around that note but perhaps the neatest, if the most time consuming, approach is to use the Correction Score function. This uses Pro Tools plug-in automation to constantly change the type of correction applied to individual parts of a track. Automation data can be drawn in the usual way, and indicates a number of step values that correspond to no shifting, shifting to a particular scale note, or automatic shifting.

While this would be tedious to perform manually, PitchDoctor can analyse a section of a track and generate this automation data as a starting point, which can be finely edited later. This works well and is

relatively efficient with material that only has a couple of really bad instances of tuning problems.

Whichever approach is used, the pitch shifting employed can be conventional, or formant preserving. For large shift amounts, using the formant preserving option avoids the 'chipmunking' effect, although it does seem to increase the latency of the plug-in — which is constantly displayed as a delay time so the appropriate offset can be applied.

PurePitch takes a slightly different approach — here the emphasis is not on seamless correction of



small errors, but on generating much larger shifts for creative purposes. A classic example here would be the generation of instant harmony vocals, or even just plain old ADT effects. A kind of sideways keyboard dominates the plug-in window, with buttons for the desired pitch shift in musical intervals. Fine control of the shift amount between intervals is also possible. Sliders allow control over the dry/shifted balance, and delays can be applied to the dry or pitch shifted signal.

Again you have the choice between conventional or formant preserving pitch shifting and there is no doubt that when using large shift amounts, formant preserving mode sounds far more natural in most cases. It's not magic, though, and the effect becomes very obvious when really stretching things but buried a little in the mix and with judicious application of plate reverb, you can get away with shifts of as much as five semitones either way.

Speed is perhaps the most straightforward in the bundle, being capable of altering the length of a piece of audio without altering pitch or vice versa. While it works well enough on a range of different material of varying rhythmic and tonal complexity, again there

are limits to its capability. This is most evident on full mixes, where time stretches of more than about 15% start to generate audible artefacts.



For my money, the jewel in the crown is **SoundBlender**. If, like me, you hanker back to days where random twiddling of (real) knobs coupled with mad patching of outboard led to



the discovery of some outrageous effects, then this is right up your street. On paper, SoundBlender doesn't sound that exciting and consists of a pair of classic pitch shifters (no formant preservation here), delays and filters. These can be configured in a number of ways with different feedback loops and with the filters in a choice of positions in the arrangement. Add to this the ability to modulate pretty much any combination of these parameters from a choice of LFO waveforms, input signal levels or external sidechain signals, and you have an incredibly flexible and powerful tool for sound manipulation. Think Eventide Harmonizer crossed with Lexicon PCM80/81 and you are somewhere near. SoundToys has worked hard to provide an extensive library of presets, ranging from subtle modulation effects to quite outrageous sound-shaping and special effects creation tools. There isn't space here to even start describing them, but suffice to say that even the more extreme examples start suggesting useful applications while listening to them, rather than simply showcasing the flexibility on offer.

And this is where the name change makes sense — don't be fooled by the use of the term 'Toys'. It doesn't mean that UltraTools is anything less than a serious bit of kit, but rather that SoundToys has put some fun and magic back into effects processing. As a bundle (UK£940 inc VAT), UltraTools represents terrific value. While PitchDoctor and PurePitch have worthy alternatives from the likes of Waves and Antares, SoundBlender is truly distinctive and useful. It probably justifies the price tag by itself. ■

PROS

Good value for money as a bundle; natural sound pitch shifting if used carefully; tremendous flexibility and capability of SoundBlender.

CONS

TDM only (except Speed); PurePitch and PitchDoctor have some very capable competition; sheer flexibility of SoundBlender could be overwhelming or result in a serious obsession.

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Operation

PITCHDOCTOR — Automatic correction is achieved by first selecting an appropriate key and musical scale from equal tempered and just-tempered scales. Global pitch adjustment matches the incoming material to the plug-in's pitch detection algorithm, and other controls determine how precisely incoming notes will be shifted to scale notes and the rate of change. Lower settings enable natural vibrato to be preserved.

PUREPITCH — One nifty feature is the ability to control formant shifting independently of pitch shift amount for creative manipulation of the timbre of voices or other instruments. A set of parameters that allow compression or expansion of the 'pitch envelope' of spoken dialogue. It's a pitch processor with some very creative applications.

SOUNDBLENDER — SoundBlender really comes in two variants. PitchBlender uses the processing architecture already described. TimeBlender is essentially the same, but uses reverse pitch shifting to emulate backwards tape type effects and features only two algorithm arrangements compared with SoundBlender's four.