

Magix Samplitude 8

Long-time Samplitude user, Sean Diggins, lifts the lid on the 'best kept secret' in audio.

First up, I should declare my bias. I have been a Samplitude user for nine years and I've owned Sequoia since the first release. I've beta tested Samplitude and Sequoia for many years and (as an independent contractor) I wrote the 5.92 and 6.0 manuals for Sequoia, plus the 6.0 manual for Samplitude. I like the way the development team at Magix-Dev (in Dresden, Germany) designs software and have known most of the team for a long time. That said, I have no financial or business relationship with the company beyond typical unpaid beta testing. I'm willing and able to offer criticisms of this software, but readers should be aware I'm writing from the perspec-

files... and all processed at 32-bit float resolution. Later, Samplitude was the first DAW software to offer 24-bit format with 96k sample rates, combining mastering quality CD burning with non-destructive processing and powerful object-based multitrack recording and editing. Even today, no single native software multitracker offers all the features offered by Samplitude.

Tost of the Town

Samplitude was incubated prior to 1990 at the Dresden Technical University by Tilman Herberger and Titus Tost. In 1990, Tost developed the first

version for the brilliant but ill-fated Amiga platform, before porting the software to Windows 3.11 in 1994. Around the time Win95 appeared, the only successful PC multitracker was Digidesign's Session 8 - an eight-track version of ProTools ported to PC that required expensive proprietary hardware. Of course, the big sequencer applications were also busily establishing turf on the Windows platform, but Samplitude focussed on audio and did not even attempt to compete with the likes of Cubase, Logic and Cakewalk. Bob Lentini's SAW and Syntrillium's Cool Edit Pro (now Adobe Audition) appeared on



The mixer is fully scalable, can be placed on a second monitor and offers a large variety of configurations.

tive of a long term user who loves the product line.

Although only becoming a hot 'new' name on everyone's lips over the last couple of years, Samplitude was actually the first native (no hardware DSP cards required) multitracking PC DAW software offering real-time non-destructive processing. In other words, it was the first native DAW which could add processing (including effects) to audio, during playback, with no changes at all being made to the original audio

the native multitracker scene, but SAW's GUI looked dreadful and CEP didn't offer real-time processing. Tost and Herberger, while being visionary developers, did not have the marketing power and experience of Digidesign or the existing user base of the sequencer companies and were content to let the software slowly evolve. They chose to avoid directly competing with software developed for the Mac platform, realising that Microsoft and Intel were on the verge of huge

market penetration which new developers could exploit despite having very limited resources.

32-Bit Float

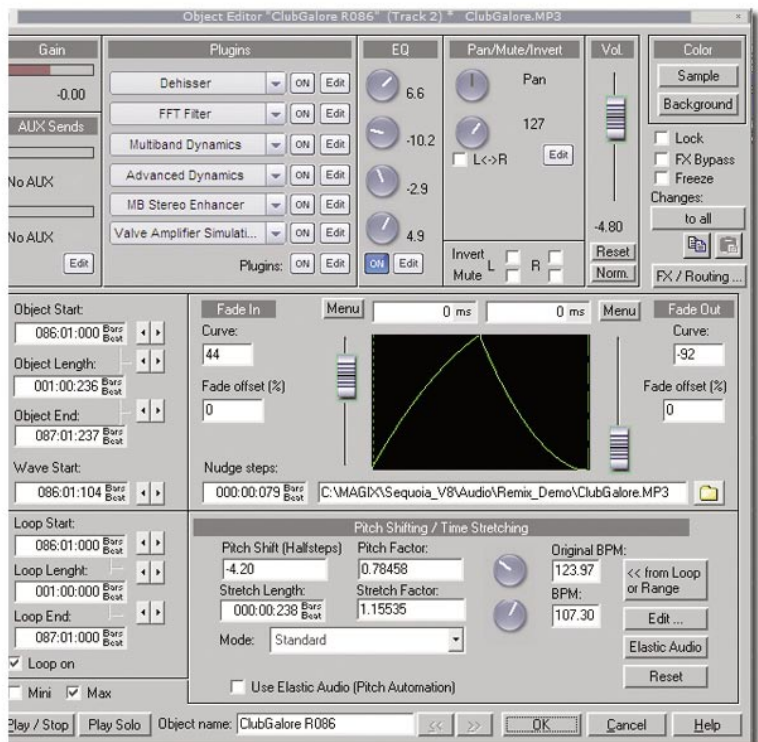
In 1996, when I purchased my first Samplitude license after a very smart nudge from colleague Scott Wise (a disgruntled Session 8 user), I joined a small coterie of devoted users who liked the innovative approach to audio software adopted by Tost and Herberger and could see the hitherto untapped potential of multitracked digital audio on PCs. Already a seasoned user of the two-track editor Sound Forge, I was totally stunned by the power of Samplitude... even on my 133MHz Pentium with 32MB of RAM! The interface (GUI) was a little unorthodox and the machinations of the program took a while to figure out, but once the 'virtual' (non-destructive) editing paradigm 'clicked' with me, I was delighted at the ease of use and speed of editing. More particularly, I was pleasantly surprised by the pristine sound of this program – it seemed to sound a lot more open and transparent than Sound Forge. Over time, I discovered this was a view shared by nearly everyone who heard the program, with Samplitude's audio engine becoming the envy of many competing developers.

However, the real secret weapons which gave Tost and Herberger the edge were their early adoption of 32-bit float, object-based editing and linear phase processing. The 'unlimited' headroom within the 32-bit float processing environment was a revelation to users familiar with the limitations of integer-based DSP cards. Similarly, no one was using linear phase processing, yet Samplitude included linear phase EQ as standard. Somewhere among the early versions a linear phase multiband compressor and linear phase FIR Draw Filter also emerged, years before other developers even began coding such tools (much less including them within multitrackers). Clearly, Samplitude was designed to provide high precision fidelity, suitable for the huge European classical music demographic and also (thanks to the robust built-in CD burning) an excellent tool for professional mastering.

Natives Restless

The argument of 'native versus proprietary', which compares the high cost and rapid obsolescence of DSP hardware-based solutions with the vastly cheaper, cutting edge host-based solutions (limited by the power of the computer), was raging in many corners of the internet. Nowadays no-one disputes the benefits of native processing, but back then it was considered quite brave and more than a little foolhardy to 'go native'. Certainly, it wasn't a world suitable for anyone unfamiliar with the inner workings of a PC and I'm not afraid to admit the cutting edge felt more like the (painfully) bleeding edge on many occasions during the late '90s.

For the next five or six years, Samplitude remained



The Object Editor is a secret weapon unique to Samplitude, allowing an infinite variety of non-destructive processing and routing.

a 'boutique' application, slowly gaining popularity via word of mouth. Tost and Herberger wisely concentrated on the European market, while developing close-knit network of contacts and users in the US, UK and Australia. The slow but steady growth of the program was aligned with the advances being made in computing power, but many of the users were puzzled at the company's refusal to engage in big advertising campaigns and were bewildered that their favourite program remained the audio world's 'best kept secret'. (In hindsight, given the cashflow related disappearance of many programs and the 'takeover absorption' of others into multinational conglomerates, the slow but steady approach adopted for Samplitude appears to have been as visionary as the program.) When Tost and Herberger inked a deal with their mates in European consumer software giant Magix, a small development team named Magix-Dev was formed to build all the software and Samplitude's financial backing was assured. All the program needed now was the continuing Moore's Law advancement in computing power.

Among the first items on the new Magix agenda was assessing the best demographics for marketing Samplitude. Determined to avoid the sequencer markets, Magix noticed an emerging problem in the high-end mastering, post production, classical editing and broadcast sectors. Previously untouchable proprietary solutions such as Sonic Solutions, Soundscape, AudioCube and SADIE seemed to be losing

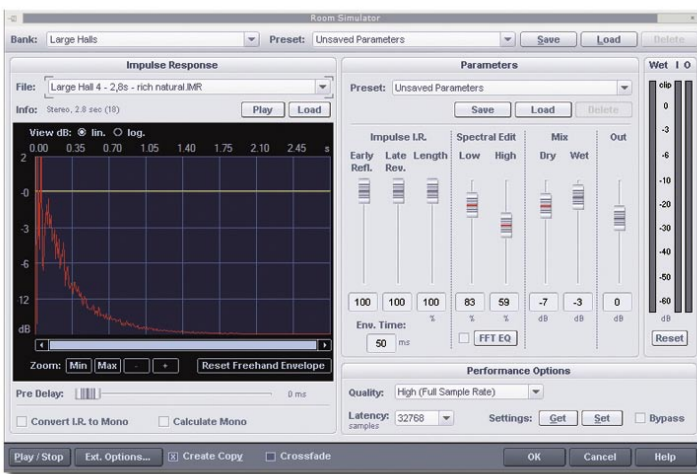


Analogue Modelling Suite: great sounding analogue modelling, exclusive to Samplitude 8.

market share due to the high cost of upgrading – their customers were swaying on the vine, tempted away from the fold by less expensive native solutions. Seeing a timely opportunity, Magix decided to introduce Sequoia – an upmarket edition of Samplitude (on steroids). I'll go into more detail on Sequoia next issue.

Evolution & The Competition

Samplitude has continually evolved over the years and the English version 8 was officially released in late February. Offering enhanced Midi sequencing, enhanced surround tools, ReWire support, a drum machine, best-of-breed time/pitch tuning and two fabulous proprietary analogue modelling plug-ins from Sascha (of digitalfishphones fame) plus a plethora of tweaks and enhancements, this new release cements



The venerable Room Simulator has had many years to mature, offering pristine convolution reverberation during playback.

Samplitude's reputation as the most feature rich native multitracker on the planet. That said, clearly other applications such as Nuendo and Sonar are nibbling at Samp's heels, however Nuendo is targeted at the high-end post/broadcast sector, Sonar is targeted to songwriters and arrangers, Logic is gone from the PC, Cubase is still a sequencer at heart... and you'd have to buy the whole suite of Sony products (Sound Forge, Acid, CD Architect, Vegas) to get all the features included as standard in Samp. Although it is arguable, I have no hesitation in saying Samplitude is still the only application that has (as standard) the best of everything you could reasonably need to work with multitracked audio. Recording, effects processing, Midi sequencing, mixing, restoration, mastering, CD burning – it does the lot, all with a reputation for pristine audio quality and rock solid stability that many companies would kill to achieve. More particularly, Samplitude is the only program to offer full, non-destructive object-based editing. The flexibility this offers is hard to describe (any portion of audio can become an infinite number of discrete objects with a full regime of effects and routing), but suffice to say that Samp's Object Editor is a total revelation to new users and an essential tool for the converted. In this respect, Samplitude is unique.

Master, Classic & Professional

As always, Samplitude comes in three versions: Master, Classic and Professional. Although this review concentrates on the Producer version, the differences are fairly minor, relating to limitations on track count, submix bus counts and so on. Most users seem to buy the Professional version, however, Master and Classic are suitable for those on limited budgets. For version 8, Magix has implemented copy protection via a USB dongle from WIBU. Although existing users initially expressed Fear, Uncertainty and Doubt about such drastic measures, Sequoia users (who have always had WIBU dongles) quickly calmed things down with assurances that the WIBU dongles work unobtrusively and reliably. Unlike many USB devices, the dongle and OS do not need to communicate continuously – start up the program, the dongle gives the okay, then it goes to sleep until next time. One advantage of the dongle over the previous hard disk ID method is the ease of use on multiple machines. Have dongle, will travel...

The installation of Samplitude (including 480MB of excellent room impulse samples), the dongle and subsequent online registration (the user has 90 days to register) was a breeze. Thankfully, the DAW does not have to be connected to the net – registration is possible via any internet connected computer. Registration entitles users to access the free (but password protected) online support and forums, where users regularly exchange information and receive support direct from the developers. The only 'dongle gotcha' which may confuse some users is the dongle's reliance on functioning TCP/IP networking and the user must

also allow access through any firewall watching TCP/IP communication. This is easy to do and the documentation is simple and helpful.

Main Features

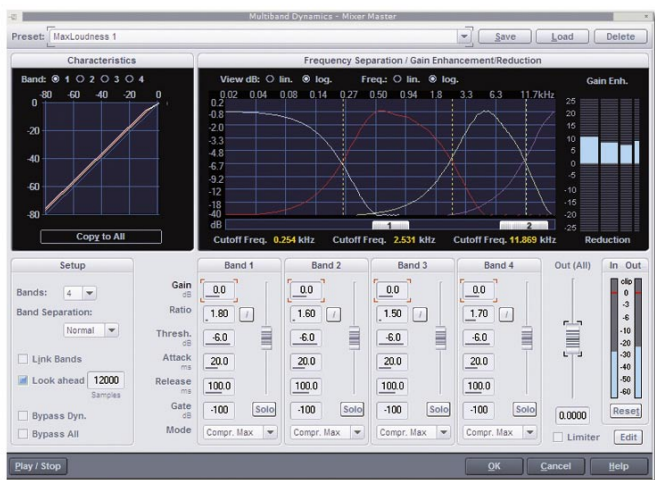
Upon invoking the program, I was greeted with a nicely professional GUI which I like a lot more than previous releases. A number of users are also working on 'skins', but these don't ship with the program. A hunt in the installation directory uncovered the version 8 readme document (actually, English users benefit by getting version 8.1, after bugfixes discovered during the earlier German 8.0 release) and the usual long list of features was listed. Some of the highlights include:

The 5.1-channel surround, surround effects and Object surround matrix has been rebuilt from scratch. Among the new surround tools are 5.1 panning, a multi-channel equaliser, a real-time room simulator based on convolution technology (yep, Samp's excellent room simulator is now surround) and the dynamics processing tools have been extended to surround format. The Object Editor's surround function allows each object to be positioned discretely within the surround field.

Despite being primarily an audio program, Samp 8's expanded Midi toolset makes it much easier to integrate VST instruments and hardware synths. The new editor allows for parallel display and processing of Midi control and pitch bend controller data. The Midi drum editor includes matrix and cell editing features as well as graphic velocity and easy management of drum mapping. Even for a Midi-phobic Luddite like myself, Samp's Midi tools are an asset, particularly the excellent range of Midi-based sync tools and the onboard presets for a variety of popular controller boxes. Throw in the new 'retro look' Robota eight-voice virtual analogue synth/drum machine and you really get into fun with Midi...

Some time ago, Magix secured the services of über-plug-in coder Sascha Eversmeier, who is well known for the free (but brilliant) VST plug-ins Endorphin, Dominion and the much loved Fish Filler chainer. For Samplitude 8, Eversmeier has created the Analog Modelling Suite, consisting of the AM Pulse transient designer and the AM Track tape emulator/compression emulator. The compressor is dual mode (VCA vs 'Classic', which I presume to mean opto) and offers wonderful tape saturation. I was very impressed with this tool and consider it the equal of the excellent analogue compressor emulation made popular by Universal Audio for the UAD-1 card. Likewise, the transient modeller is in some ways superior (offering tuning and saturation) to the Waves Transform TransX plug-in, although it doesn't offer the more powerful targeting made possible with the multiband TransX. Even so, I was easily able to make snares and kick drums and crash cymbals whack through dense mixes with clarity and punch.

The new Elastic Audio tool is clearly among the 'best of breed' time stretch/pitch tuning tools available. A logical extension of Samp's existing time/pitch stretching algorithms, this tool seems inspired in equal parts by Waves



The GUI for the multiband compressor can be a little confusing but it sounds fantastic.

excellent Sound Shifter (from Transform), Antares Autotune and Celemony's innovative Melodyne program. Combining the best of these tools into a beautiful interface and employing high precision algorithms results in a tool which is magical to use. Audio data can be pitch-shifted as flexibly as Midi data. Worth the upgrade alone!

Other new or enhanced features include a nice manager (for file libraries, objects, tracks, segments and markers) DVD audio burning directly from the arrangement window, enhanced punch-in recording, extended support for external hardware controllers, a remix/slice agent which is similar to Beat Detective, optimised effects handling, full-screen video output (supports 16:9), simplified but more efficient playback buffering and 'surround format' impulse samples.

Making the Upgrade

For existing users, Samp 8 is an essential upgrade which delivers value far beyond the upgrade price and tools which are genuinely inspiring. Although 8.1 still has a few niggling bugs, these are minor issues which I presume Magix-Dev will have fixed in their usual prompt manner. In the meantime, the developers are working on enhancements to the Take Manager, a tool many hoped would be more developed in time for the 8.1 release.

For those yet to try Samplitude, what can you expect? For starters, there's a limited demo available for download from www.samplitude.com, but you should be aware this doesn't include the Analogue Modelling Suite. Even so, you'll quickly get a good overview of the program. Make sure you use the QuickStart guide in the help menu, particularly as you try to figure out the object-based virtual editing system. It's a lot like riding a bike: at a certain point, it just clicks... and then you suddenly grasp the new power at your fingertips. You owe it to yourself to experience the freedom of Samp's Object Editor.

Is it better than the other programs? Only you can

decide whether the workflows made possible by Samplitude are suitable for you, but I have no hesitation in recommending this program. It offers a mix engine that is the envy of other developers, giving an undeniable 'sound' which really shines, despite the naysayers who insist that all software mix engines sound the same. It offers incredible efficiency, resulting in massive track counts, all in 32-bit float resolution (with file storage also in 32-bit format) and with all plug-ins/inserts/auxs featuring full automatic delay compensation (as a side note, if you own UAD-1 cards, Samp works brilliantly with the UAD-1). Samplitude offers a real-time FIR Draw Filter which allows you to re-draw the frequency response of an audio file during playback with high resolution linear phase accuracy, while even the standard EQs in Samp are phase coherent. The built-in noise reduction is high quality and the sample rate conversion algorithms are excellent. The Room Simulator has been included in Samp for years, way before impulse convolution became popular... and Magix gives you a pile of good impulses. Likewise, the linear phase multiband compressor is easily as good as any competing processors (although its GUI is a little confusing for some). Throw in batch processing, extensive import/export format compatibility, robust CD/DVD burning, very flexible routing/aux options, guitar amp modelling, a nice vocoder, video support and POW-r dither... and you're still only scratching the surface.

Ministry of Magix

That said, Samplitude is not for everyone. Some people find the VIP system (Virtual Project) a bit confusing and prefer simpler solutions such as Vegas. However, Magix has made great improvements to the Samplitude GUI with version 8 and the video tutorials which come with the retail version are an excellent way to quickly absorb how it all comes together. Similarly, the new paperback manual is very good and quite thorough. Not only that, but purchasers of the Producer version are given a full version of the company's new video editor (Magix Movie), a revolutionary program which works with video in the same way as Samplitude works with audio.

Next issue we examine the high-end feature set of Sequoia and the specialist plug-ins made by German developers, Algorithmix....



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• Innovative Music
Phone: (03) 9540 0658
Email: sales@innovativemusic.com.au
Web: www.innovativemusic.com.au or www.samplitude.com

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