Raising the standard

Steven Helstrip dreams of a stable future but in reality enjoys effects which are quite the reverse.

◄ **Fig 1** Steinberg's Karlette VST plug-in working inside Cakewalk, courtesy of Amulet's VST to DirectX adaptor

I can hardly believe the millennium issue is upon us. To start each new year at *PCW*, it has been customary for me to write a wish list for the next 12 months. This is something that I have devoted a lot of thought to and – for the first time – my list is surprisingly short.

The main considerations for me at present are reliability and the convergence of audio standards. PC audio hardware and software have finally come of age, so there'll be no wishes for a particular sound card or a plug-in that does this, that and the other.

Looking back over previous wish lists, it's incredible to see how far sound technology has come in such a short time. In 1996 my number one desire was for someone to build the ultimate sound card. It needed to have decent sampling capabilities, digital I/O, multiple outputs, built-in EQ and effects processors. Nothing came close to that description at the time, but four years on there's an abundance of options.

Additional memory has featured several times in past wish lists to assist in the smooth running of software. In 1996, a system with 32MB of RAM would have made me very happy indeed, enabling two tracks of audio to run alongside a MIDI arrangement. This, of course, was state-of-the-art at the time. Although once expensive to come by, you can now pick up 128MB of RAM for as little at 70 quid. Pop that inside any PIII system and you'll have enough power to run a 32-track audio sequencer with effects, software synths and mastering tools – in other words, a truly professional setup.

Wishful thinking

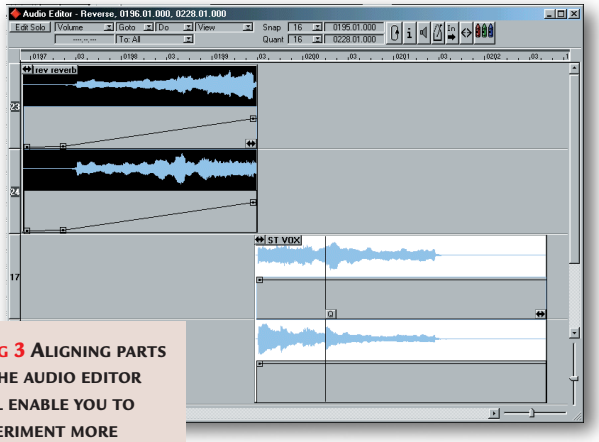
So we've come a long way, but where to now? Well, I'm going to keep this short. Numerous combinations of PC software and hardware make it possible to produce any genre of music cheaply and to a professional standard. The only notable flaw with a PC setup is reliability. Meaningless blue-screen error messages are still commonplace, and software manufacturers continue to release bug-ridden upgrades. A recent release of Cubase VST, for example, refused to open its own songs. How did that get through the net? So please, let's have more stable software.

My next wish is for audio programs to work seamlessly alongside each other with a single sound card. For this to happen, a standard needs to be established for audio hardware drivers. Steinberg's ASIO 2.0 driver system looks more favourable than MME or DirectX, but until drivers are written for each sound card, and third-party developers include ASIO support in their software, we're stuck with conflicting standards.

Must-have utility

While on the subject of convergence, I recently came across a utility that will be of interest to many of you. It's simply a program that enables VST effects to be used inside DirectX applications. So, all those free plug-ins I mention regularly can

▼ **Fig 2** To monitor or record the return from an effect, use the Pre fader option and set the fader to infinity gain



▶ **Fig 3** Aligning parts in the Audio Editor will enable you to experiment more freely than in the Arrange window

now be used inside Cakewalk, Sound Forge, Logic and Acid. The utility appears as a regular plug-in within your host program [Fig 1]. When selected, a dialog box lets you choose from any VST plug-ins that are installed on your system.

I have tried various combinations of host programs and plug-ins and it seems to work perfectly well. The demo version of VST to DirectX Adaptor allows one plug-in to be used without limitation. Registering will allow you to run multiple instances within a single program. Check out http://surf.to/amulet.

Reversing tips

One thing you can be sure to find in every audio application is the reverser function. Used creatively, it's possible to produce some very interesting effects. I'm not just talking about reversing a vocal part or drum loop – although these can work well in various contexts – but reversing, say, the return signal from a reverb or delay effect. This audio part can then be used to introduce your original, dry part. Perhaps the most famous example of this little trick is the start to Depeche Mode's *Personal Jesus*.

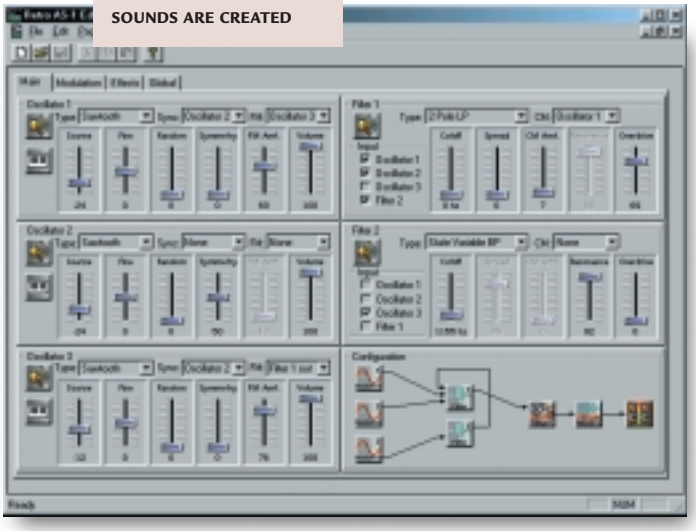
So how is it done? Before hard disk recording came along, the output from the reverb effect would be recorded to tape, which would then be played backwards before being recorded to another tape. It's much easier to achieve with a PC audio sequencer, though. I'll be using Cubase VST to illustrate the following examples – however, the concepts are the same whichever sequencer you use.

First we need to capture, or mix down, the return from the reverb effect. To do this, it's best to set up your reverb as an auxiliary effect and route your vocal part (or whatever you choose) to it using the Pre fader option in your mixer, shown in Fig 2. If you then pull down the channel's fader, all you will hear is the return from the reverb. Next, mute any additional audio tracks and use your sequencer's mixdown feature to create an audio file.

We now have an isolated recording of the reverb that can be reversed. To align the reversed and non-reversed parts, open both regions in your audio editor and experiment with offsetting the parts [Fig 3]. The best results are often stumbled across by chance, so give lots of ideas a try, no matter how outrageous they may seem.

Using a long reverb decay time will indeed allow you to stretch out a vocal or guitar intro. But you needn't stop there. Sampling the reverb and using it as an instrument in its own right can produce great results. This is one of the tricks Massive Attack has a lot of fun with. It doesn't have to be a vocal; try recording a long reverb decay from a hi-hat or piano.

▼ **Retro AS-1 gives you up to 32 voices of analog synthesis and comes with over 1,000 instrument patches. Here's where the sounds are created**



Bitheadz Retro AS-1

Bitheadz is one of the main pioneers of software synthesis, but until now its programs have only been available for the Mac. Retro AS-1 is the first package to be ported over to the PC and is one of those synths we'll be hearing a lot from. Coinciding with the new millennium, AS-1 comes with 1,000 pre-set instruments and can handle up to 32 simultaneous voices over 16 multi-timbral parts. Providing your PC has enough processing power, it will play and handle just like a real hardware synth.

A virtual MIDI port is installed during setup, which enables the synth to be accessed straight from your sequencer. Simply choose the AS-1 port and all the sounds are ready to play. Instrument patches are arranged into folders on your hard disk and a simple program/bank change is all that's needed to select them. This approach means you don't need to run an instrument editor concurrently.

The scope of instrument timbres is vast and covers everything from basses, strings and analog synths, through to percussion and effects. Up to three oscillators are available for programming your own instruments and there are seven filter types, including low, high and band pass variations. There are 100 synth parameters to tweak, many of which can be controlled via MIDI in real time.

Compared to other soft synths, such as VAZ or Generator, AS-1 strikes me as having wider appeal. It reproduces a wide range of sounds extremely well and is straightforward to use and program. Sadly, it's not as stable as VAZ and did fall over on two occasions during testing. Once these early bugs are fixed, it'll be well worth checking out.

PCW CONTACTS

Steven Helstrip welcomes your feedback on the Sound column. Contact him via the PCW editorial office or email sound@pcw.co.uk

Bitheadz Retro AS-1 costs £129.99 (£110.62 ex VAT) and is available from Digital Media 0181 642 6306

www.bitheadz.com