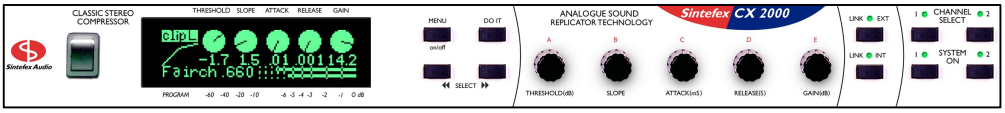
Sintefex FX2000 & CX2000

Following in the footsteps of the original Replicator, Sintefex' new processors sacrifice carefully-researched capability for carefully-researched affordability. Dave Foister investigates



THERE AREN'T MANY genuinely new ideas around in our game, but one of the few last year was the Sintefex Replicator. The brainchild of SADiE co-conspirator Mike Kemp, it's a digital processor that clones the behaviour of any external signal path by squirting it with impulses, analysing its response and using convolution to model that response digitally. The obvious use of this concept is the replication of classic analogue signal processors so that their characteristic sound can be used without the downsides--less noise and distortion (unless you actually want it), accurate duplication of settings across two or more channels, and of course the facility to have a large selection of processors in one box without the expense and space considerations of buying the real things. The system is powerful enough to emulate the dynamic behaviour of a compressor in fine detail, and to reproduce fixed EQ settings complete with phase response. It's even possible to build an adjustable EQ by taking multiple measurements of the device, although Sintefex suggested this was a laborious process best left to them.

It would have been easy for that to be the end of it; Sintefex the one-hit wonder. That would have been a shame, as the concept is so off-the-wall and effective that more people should have access to it. So it's pleasing to be able to welcome not one but two new processors from Sintefex, both using exactly the same technology but simplifying things by not offering the possibility of setting up your own replications. This is no big deal now, as Sintefex has a substantial library of sampled processors, and all the models have the facility to have new ones uploaded when they become available. Users can get them from the net or on floppy for upload via a PC.

The original FX8000 was a very distinctive beast visually, and the new FX2000 is clearly the same thing scaled down a bit. Until it's powered up it looks baffling, because its operation is centred almost exclusively on the big screen. This is of a type I have only previously encountered on the FX8000, a white screen with black text and images that can be seen clearly from a surprisingly wide range of viewing angles. With this alight it's immediately apparent how dependent it is on softkeys, cursor buttons and a single data entry knob, but it soon becomes intuitive and reasonably easy to navigate.

In the absence of the onboard analysis feature, the FX2000 is entirely dependent on its internal library of presets and programs, all contained on a clearly audible hard drive. The capacity of this drive is enormous in terms of the number of setups it can hold, and it's supplied with a healthy selection, carefully-sampled from more recent technology, while the programs seem to comprise full-blown adjustable versions of classic EQs, both valve and solid-state. In the case of a compressor, the adjustable parameters that appear in the window reflect those available on the original, although the ratio values run in the same standard steps that the Replicator's original analysis sampled it at. The screen shows a guide to the kind of curve on offer, so that a Fairchild 660 shows as a very soft knee while the Focusrite Red 7 is a clear hard turnover. In all cases attack and release times are fully variable, as is the threshold, and input and output gains are adjustable even where they might not have been on the source device.

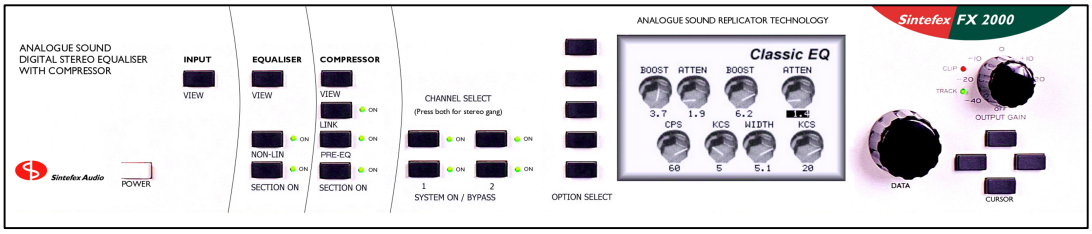
Controlling this is done from a set of pictures of rotary knobs on the screen, all using the same quaint black Bakelite style. One at a time can be selected using the cursor keys, and then adjusted with the data entry knob. Changes to the compressor curve are reflected in the graphic, and vu or bargraph meters can show gain reductions. In fact the screen can be filled with the meters once the parameters are set, and so effective are they that I had people poking the screen to see if they were real mechanical meters or not.

More on-screen knobs are required for the EQ presets, with some having three controls for each of four bands. Again a selection of familiar models is on offer, with perhaps a greater range of adjustment than is present on the originals.

The sonic character of each is readily apparent, with some models far more aggressive than others while some have their expected smoothness. Where appropriate, the bands on the screen can be switched between variable-Q parametric and shelving circuits, and adjustment of gain is in 0.1dB increments for really detailed tweaks.

There's a hidden plus point on the EQ operation too; the whole equaliser can be made to work with linear phase. As the manual points out, this can't be done with the analogue originals, or with simpler digital EQ, and has never been done before with sampled EQ. The process of loading the preset takes some time longer if this option is selected, as it appears to modify the data as it comes off the hard drive rather than using a separate file, but the result is worth checking out as it makes a significant difference to the behaviour. It appears to open the sound up, lending a bit more transparency to the EQ; in a way this sort of defeats the object, as it's the very colouration that we're after here, but at the same time to have the very real character of EQ curve that the presets offer but a more open sound is quite an attractive option.

One huge advantage, already hinted at, of using replicated models of the original processors is that the two channels can be ganged together for accurate stereo matching, which will appeal to mastering engineers who would perhaps love to have these treatments available but can't trust the matching of a pair of real devices. The same applies to the rest of us, with the option to apply classic processing to drum overheads, stereo submixes and complete mixes. The 8000, of course, has the facility to run up to eight channels, all ganged together, which will appeal further to the surround mixing fraternity.



At the same time the 2000 will happily run entirely different programs on the two channels, working completely independently of each other. This allows you to choose your EQs and compressors for individual channels, even allowing one channel to give you EQ while the other compresses. Only one will be on display and available for adjustment at a time, but switching between them is simple.

A full set of ins and outs is on the back, although the analogue interface is an optional extra, and the 2000 can actually work analogue one channel and digital the other if required. It's always 24-bit and the sample rates go up to 96kHz, with external clocking if needed. Although you can't analyse your own outboards, you can store your own setups of the provided presets in further program memories--the hard drive has space for over a thousand programs.

Simplifying things still further--as indicated by its only needing 1U of rack space--is the CX2000. This ditches not just the onboard sampling but the EQ as well, leaving a highly capable dual-channel or stereo compressor with much the same selection of preset types as found on the FX2000. The big difference is in the user interface, which is actually faster and more intuitive to use but lacks the detail on the display. This is a small low-resolution green-on-black window that still manages to show the positions of all the controls, the nature of the compression slope and the gain reduction, together with occasional error and overload messages. The meters are in fact quite high resolution at the critical top few dB, and the result is surprisingly informative for something that initially looks a bit crude.

Choosing one of the onboard presets is done by scrolling through a list that replaces the main display until the selection is made. The initial range of types comprises an 1176, an LA2, an LA3 and a Fairchild 660, and all have side-chain EQ available. Adjusting the chosen compressor is actually simpler and faster than on the FX, because there are five data entry rotary encoders dedicated to the essential functions of threshold, slope (ratio), attack and release, plus make-up gain. All these are shown in the display, each with a cursor line pointing roughly in the right direction and a precise numeric value below it. I suspect this makes setting up faster than on some of the originals, and the consistency of approach is also a time-saver. As with the FX, independent 2-channel and fully ganged stereo modes are available, and your own adjusted setups can be stored in memory. The sonic performance seemed identical to that on the bigger FX, with real character in the presets and an even more direct

feeling of control over its behaviour. This is much more powerful than it might look.

Again analogue inputs and outputs are on an optional extra card, as is the 96kHz facility, but as standard it runs 24-bit and has wordclock lock. An interesting point on the back is a digital link bus, allowing multiple CX2000s to be ganged together in terms of their gain using SPDIF signals.

Like the original FX8000, these two Replicators are the kind of toys that just make you want to play with them. At first sight the concept seems like either a rather far-fetched designer's concept that shouldn't rationally work, or a sledgehammer to crack a nut. In fact it's neither--the sound of the various sampled devices speaks for itself as being a convincing reproduction of the original, while the benefits of doing it this way become more apparent the more you use it. There's no denying that all three of these units are strange and unlikely beasts, but once you learn your way around them they are also powerful, useful, time-saving, money-saving tools and a load of fun. Set aside your opinions about whether it can or should be done, and give it a try.

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