FAIRLIGHT DREAM II PRODUCTION WORKSTATION FAMILY

The power of ‘the card’ is not something to be sniffed at, so with an eye to the future of audio production tools, Fairlight has come up with something new.

Text: Paul Mac

A company’s history is a traditional and convenient device to start a product profile such as this. But in the case of Fairlight, we’d need the rest of the magazine to do that job. The company has been at the cutting edge of digital audio technology since, well, in my case when I first got to select Page R with a slightly worn light-pen. I can’t swear to it, but I’m sure the phrase ‘you could buy a house for that’ came into it somewhere. Things have changed.

It’s fitting that Fairlight should remain at the forefront. In that respect it may have found its proper place in the audio technology industry once more – a leading light in the development of high-technology for the good of us all.

The company makes no secret of its target – to dent the domination of Digidesign in the audio post production marketplace with a new piece of technology that cannot fail to impress. Enter the CC-1.

It’s worth briefly explaining CC-1 technology for those who have missed the explosion of discussion around this little powerhouse. It’s a processing core based around FPGA technology – a type of chip that requires a different approach to development than is currently practised in the world of DSP. For those brave enough to make the jump, the rewards are super-fast and super-powerful.

Think of an FPGA as something that doesn’t so much read instructions and act on them, but rather is both the instruction and the process combined. In a strange twist of imagery, traditional DSP is like reading a recipe, gathering the ingredients, combining, mixing, and then cooking, whereas FPGA technology is like reaching into an enormous oven where every kind of cake you require is always available to be picked out.

It sounds like the perfect solution, but it’s a specialist one. Product development is more time consuming, and while most plug-ins, for example, are easily adaptable to most DSP architectures, developing a plug-in to run natively on an FPGA is a much bigger job. Consequently, Fairlight has spent three years getting from the drawing board to the studio with a solution that has already been one of the biggest draws on the tradeshow floors of recent times. (See our interview with Fairlight CEO, John Lancken, for more on FPGA technology).

WHYS & WHEREFORS

In 2007 a steady stream of CC-1-based Fairlight Dream II systems have been leaving the Sydney factory for studios around the world. But surely what’s inside doesn’t matter so much as what it does? After all, the machine room is down the hall isn’t it?

Well, what if you could put an extra edit suite where the machine room is because you’ve got rid of the towering processing racks and replaced it all with a single off-the-shelf PC and a PCIe card? Better still, you could now afford the gear for that suite because you’ve bought a very large mixing and editing system for the price of a small one.

A single CC-1 PCIe card is a 230-channel console with 72 buses. You might want to read that line again, so here it is: a single CC-1 PCIe card is a 230-channel console with 72 buses.

Each channel has an eight-band EQ and three stages of dynamics. You can edit, process, mix, and master to your heart’s content, throw plug-ins at it, run multiple, multi-format outputs, play audio and video tracks from different sources, in different formats, at different rates, without conversion or import complications. For example, you can drag and drop a QuickTime file or stream a video/audio OMF or Quicktime reference file from an Avid Unity server. Want more than 230 channels? Add another CC-1 card and double that. Heck, add another two and run over 100 channels of 384kHz for a very special project.

DREAMER

Among the Fairlight Dream II family of products is every component you’ll need for your HD-ready audio post-production room, including integrated video, all based around a CC-1 core: the range of surfaces from Fairlight starts with the SatelliteA V, the most compact of the range and one geared mainly towards the editing environment.

While it does still offer full control, most of the real estate is taken up with a single LCD, the central Binnacle jog wheel/and control area, and other dedicated edit, selection, and control buttons.

The next step up is to the StationPlus. This option adds more control – more buttons, more displays, a fader, and so on. Both the SatelliteAV and StationPlus can handle fader sidecars, with up to 24 faders for the StationPlus.

Up from this is the Constellation-XT, an altogether
more comprehensive solution that, at its most basic, has the central editing area and the Channel Switch Panel, a motorised, touch-sensitive fader panel, plus a control panel. There are two of those available: the CAP (Channel Assign Panel – an exploded channel strip), and the In-Line Panel (a large bank of assignable encoders for everything from input levels to plug-in control, supported by the high-resolution OLED displays for graphic and numeric feedback). Larger Constellation-XT systems can be built up using these components, as required.

Lastly, and the most recent development in the Fairlight suite of surfaces, is Anthem. This is very different as it's aimed at a customer whose remit extends beyond post production into the realm of music recording and mixing. The console can actually work in three modes: in-line, split, and ‘Constellation’. The first two mimic the two main variations in analogue mixing console configurations, while the Constellation mode presents the systems’ more post-specific tools (clip-based automation, multi-channel panning) and options (post/video networking) in a conventional Fairlight way.

Once you’ve decided on a surface, there’s I/O to consider. Currently there are two basic I/O options for the CC-1-based Dream II family: the SX-20, and the SX-48. The SX-20 is standard issue with Dream II systems and brings the basic sync requirements (tri-level sync, video sync, wordclock), plus a ‘starter pack’ of I/O (two mic/instrument inputs, two balanced line inputs, 12 balanced analogue outputs, four digital inputs, and eight digital outputs). The SX-48 is a modular I/O device with I/O installed in six, eight-channel blocks, plus all the sync options and an Ethernet-based control interface. You can connect one SX-48 to a single CC-1 card via MADI, or up to four SX-48s with the optional CMI (Crystal MADI Interface card), which brings it up to a maximum of 192 channels of I/O per CC-1.

**DREAM-TIME**

My time in front of a Dream II product involved a Constellation-XT system and dual screens. The two screens, while not compulsory, seem to be the best way to go. The Fairlight system works in two distinct modes – Edit and Track – and with one screen dedicated to each, it was considerably easier to see what was going on.

Switching between Edit and Track modes is taken care of by the software – all you need to know is that when you touch an edit control you’re in Edit mode, and when you touch a track control, you’re in Track mode. The distinction is simply your focus of operation.

When editing, you’re working in a clip-based environment. You can even apply clip-based EQ here, so everywhere the clip goes, the EQ curve goes as well. If you’re used to ‘standard’, mouse-intensive DAW editing facilities, then you should be prepared to move past that narrow band of low expectation. Watching a practised operator in front of the Binnacle control hub is an impressive thing. Clip-based cuts, moves, duplications and more are only a couple of button presses away.

When you have a clip to move and you hit play, the clip gets dragged along by the play cursor, ready for you to drop it where it’s needed. Once into Track mode, everything goes track-wise – track select and arming comes alive, as does the second screen. The screen and the surface interact very smoothly, and every parameter on a channel is accessible through the Channel Assign Panel, and/or the In-Line panel (all accessible to the automation system).

It was during this playtime that we examined the CPU meter. With everything at idle, it reached around 15 percent (a basic Dell 390 was the host). Then we put 96 tracks into play, all with EQ and dynamics. The CPU meter couldn’t quite make it to 20 percent – and most of this increase you could probably attribute to the graphics, as we also had all 96 tracks showing on screen. Thus the case for the CC-1 card was proved: very impressive.

**PLUG THE GAP**

So with the CPU only ticking over at 20 percent capacity, what to do with the spare 80 percent? You can run plug-ins – though I should qualify this with an explanation. You see, the CC-1 card is quite capable of running plug-ins and lots of them. It already has a fair showing of effects built-in. However, you may recall my comment earlier about the extended and more specialist R&D that’s required to bring plug-ins to this platform – this means that one of Fairlight’s current preoccupations is encouraging third-party plug-in developers to join the party. There are two levels of partnership with Fairlight. You can be a Platinum Partner (where you’re committed to bringing CC-1-native plug-ins to market), or a ‘Gold Partner’. The Gold Partner program pulls developers together in a ‘spirit of co-operation’, bearing gifts of VST compatible plugs. In other words, yes, there’s a VST bridge built into the CC-1 system so you’re not limited by the Platinum offerings. Though this does come at a small cost, as once host-based processing and virtual instruments (ReWire is also supported) come into play, you’re at the mercy of the host’s latency. Granted, there’s nothing else going on (no native mix engine and so on to be concerned with) so the impact of this is much less than you might expect; but with an amazing fixed latency through the CC-1 of just 0.5ms there is a price.

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Current Platinum partners include two of the staples – Synchro Arts (VocAlign) and Serato (Pitch ‘n Time), as well as Creative Network Design, Dark Matter Digital and Virtual Katy. Gold partners, at the time of writing, include BIAS, Ableton, Waves, IK Multimedia, and others.

**FRILLS**
Fairlight has made many steps forward in developing the CC-1 system and the editing/mixing software that goes with it. One might be the sheer speed of set up. I witnessed the basic assembly (from scratch) of a session with three 5.1 sub buses, one stereo bus, multiformat main outputs, plus track assignments to all of those. This took around a minute and a half. Another might be the inclusion of the AudioBase 3 facility – a networked sound effects library that will even bring in iTunes-based effects libraries – a carrier that is becoming increasingly popular in post.

Fairlight has declared itself on a mission to deal with every major sound, video, and metadata format – from .wav to OMF, through AES3i, and on to AAF/MXF and XML. You can drag and drop just about anything onto the timeline, and within a heartbeat (or so...), it will play. These are all good, but I think the package as a whole speaks more about the Fairlight ethos than any part. You can work with a Dream II system without ever feeling you’re dragging a plough behind you. It does seem to find all this audio stuff very easy, and given half a chance it would probably be off somewhere doing some really hard sums, very fast.

Lastly, let’s hear it for the price. You can set yourself up with a CC-1-based system for less than a system from ‘a major competitor’. Affordable is not something you may have thought of Fairlight before, so if that was the rumour putting you off getting a demo, then let it be dispelled.

**BLEEDING EDGE**
Your reservations might justifiably lie in ‘bleeding edge’ technology, or a desire not to be the first one in the pool. It might be client pressure to conform that is causing you angst, but I’m pretty sure a demo will help clear up much of that. I’m also sure you’ll see benefits in the Fairlight way... once you’ve had a Fairlight come and stay.