



## Avid HD Omni, HD I/O, Pro Tools 9 & HEAT

Avid has clearly been busy with the end of last year seeing a veritable cornucopia of new releases coinciding with a repositioning of the company as a more outward facing operation. **GEORGE SHILLING** tucks in.

2010 was a busy year for the 'formerly Digidesign' part of Avid, especially after the relative quiet of 2009, where all I seem to remember were (too few) Pro Tools 8 bug fixes, some new added bugs, and the odd new low-rent Mbox bundle. With the launch of three new interfaces, HD Native, the Instrument Expansion Pack, and Pro Tools 9 (and even some smartly revamped Mboxes) the transformation into Avid is complete, along with a rather more radical and positive outlook from the old firm.

### HD OMNI

The new interfaces claim much improved digital conversion and all share similar cosmetic designs. Perhaps the most interesting of these is the HD Omni.

This 1U crams in a lot in terms of functionality and connectivity, and aims to solve a number of control room issues and possibly even replacing a few monitor controllers. Although it effectively replaces the Digidesign 9610 as the cheapest HD interface, this is a completely different concept. Despite the plethora of connection options, it is only possible to plumb up to eight channels of audio into Pro Tools at a time, and similarly, the outputs are limited to eight — plus a stereo headphone bus. The extra layer of bussing that came with Pro Tools 8.1 was mainly to accommodate this device and make sense of all the possibilities that lie within.

The Omni clearly aims to be an 'all-in-one' unit with features that include a pair of preamps with front panel access, cue output, monitor section, and control

of up to 7.1 formats. Even with the computer powered down it will allow you to monitor external sources. In Pro Tools' Hardware Setup there appears an oddly primitive Mixer tab for preconfiguring the Omni's many inputs for later standalone use. Connection to the HD Core card is via a new style 'Mini Digilink' that saves panel space but requires a provided adaptor. The connection does seem rather more secure with its thumbscrews than the older spring-clipped Digilink plug. A similar Expansion Port allows for chaining, say, an HD I/O.

Rear panel analogue connections comprise two Mic and four Line inputs, insert sends and returns for the first two channels, two TRS Line Outputs, and eight line outputs on a D-Sub. Comprehensive digital connections include two AES XLR inputs,



eight AES outputs (on D-Sub), ADAT/SMUX/SPDIF (optical x2) and SPDIF (phono). Word Clock and Loop Sync inputs and outputs are provided with BNC connectors. For a device clearly meant to be situated in the control room within easy reach, it does seem surprising that there is a fan within. In use this wasn't loud enough to be a problem, although there are mixed reports online of units becoming noisy after a period of time.

The busy front panel has two Combi jacks for mic and instrument input and the two XLR mic inputs on the rear are overridden by the ones on the front. Also on the rear are four TRS analogue line inputs and the preamps are digitally controlled from the front panel, either individually or together by clicking the Link button. The clear green display shows what is being edited and the setting, and switching between channels is achieved by pushing the soft knob used for editing values — it required a rather firmer push than the Monitor knob needed (to toggle Headphone level). Small buttons provide Mic/Line/Instrument input selection. Pad, Polarity and HPF light up with a green LED when selected, while 48V is sensibly red. Also on the rear are useful separate TRS jacks for insert input and output for each preamp, and these are switched from the front. It can be a nuisance only being able to see the status of one channel at a time for all those settings. But the preamps are obviously of very high quality, being crystal clear, detailed and sweet sounding and I enjoyed using the insert to patch in a decent outboard compressor and/or EQ into the recording chain.

In the middle of the front panel are status indicators that show which of six possible sample rates (44.1-192) is selected, and also whether clocking is external or internal. Word Clock status is also shown with Loop or Master indicated with an LED. Eight handy five-segment LED meters are provided for confidence checking or problem-solving, with a simple In/Out button to flip the display.

The Monitor section at the far right includes selection of the configured Cue path, an Alt path selector (configured in Pro Tools' Hardware Setup), Mute, and access to the Setup menu. The Monitor soft volume knob ranges from Off/-90dB to +10dB in 1dB steps, with a push the function and display change to headphone volume with a similar range.

Entering setup enables output level calibration, configuration of the new Curv input limiters, sample rate conversion, clock source and suchlike. There is also a Fold-down mode selector, enabling folded down versions of surround outputs to be created or monitored from Omni when set up in Pro Tools. The algorithms for combining are apparently fixed, but it's a potentially useful option nonetheless.

## HD I/O

The HD I/O is fairly obviously a replacement for the previous 192 interface. It comes in three flavours, 16x16 Analogue (supplied for review), 16x16 Digital, and 8x8x8 (8 analogue and 8 digital I-O). The front panel is identical to the 192 except for the new gunmetal colour scheme, the Avid badge, and the chrome power button. It features the familiar sample rate and sync mode LEDs, plus the full 16 input and output meters. The rear is somewhat different, however, and the enclosed circuitry is entirely new. Four bays each allow 8 analogue inputs, 8 analogue outputs, or 8 digital I-O, while the fixed enclosure includes ADAT/SMUX/Optical SPDIF, stereo AES XLRs and stereo SPDIF phonos. Word Clock and Loop Sync are, of course, provided here. However, despite the included and/or optional cards, the maximum simultaneous I-O is 16. The analogue boards' connections are provided on DB25 connectors and include a trimpot for each channel, but you no longer get the 'B' trimpots that were provided on the 192 for flipping to an alternative line-up, nor of course the

Legacy connector. Again, the Mini Digilink is employed here for the Primary and Expansion ports, with a handy adaptor provided in the box to connect your old Digilink cable. The fan is noisier than that of the HD Omni, but this box doesn't need to be within such easy reach.

Before installing the new interfaces I had become familiar with a setup where I was recording mainly with a standard 192, and monitoring through an Apogee Rosetta 200. Moving to a situation where I was using the new interfaces for all conversions, I perceived a small but noticeable increase in overall 'bite' and aggression in the sound compared to my previous setup. There is certainly good clarity and improved detail across all frequencies, and any recording deficiencies with such things as miking are made clearly audible. The 192 was rather long in the tooth, and this complete internal redesign should stave off some of the aftermarket competition, although those boutique convertors will not go away. I never had a particular problem with the sound of the 192 but these new HD boxes definitely sound better and (along with their sibling the HD MADI) should give good service for many years to come. Now then Avid, when do we get more powerful HD cards...?

### PROS

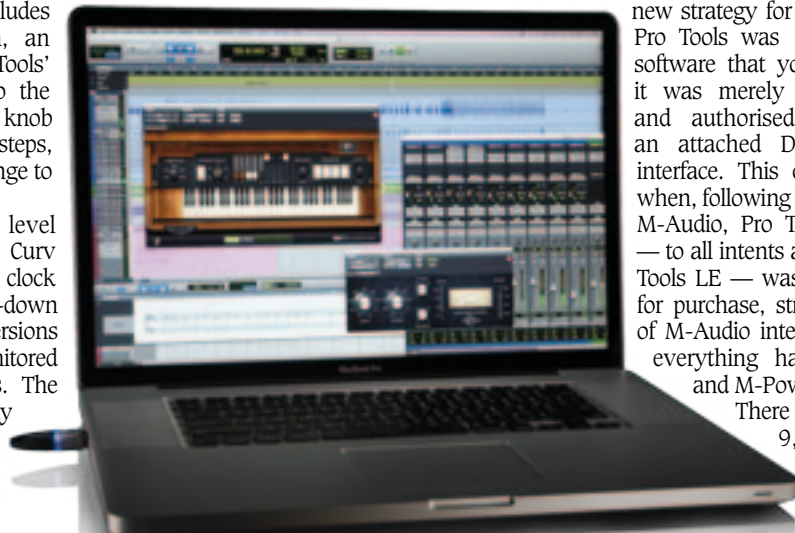
Better sounding I-O for HD users; HD Omni's monitoring and preamp functionality will make it a perfect solution for many project studio users.

### CONS

HD Omni has no talkback.

## PRO TOOLS 9

Pro Tools 9 represents a seismic shift from the Digidesign era into a



new strategy for Avid. For years, Pro Tools was (uniquely) DAW software that you couldn't buy; it was merely made available and authorised by virtue of an attached Digidesign audio interface. This changed slightly when, following the acquisition of M-Audio, Pro Tools M-Powered — to all intents and purposes Pro Tools LE — was made available for purchase, strictly for owners of M-Audio interfaces. But now, everything has changed. LE and M-Powered have gone.

There is now Pro Tools 9, the optional Complete Production Toolkit 2, and

9HD. Most excitingly, all now come with

Core Audio and ASIO support.

Many previously HD-only features have been unlocked for all users, and many more interfaces can be used other than those with a Digidesign or M-Audio badge. The native version now includes Delay Compensation, an oft-requested feature that will delight users, while MP3 Export, AAF/OMF/MXF File Interchange are also included for all. The Complete Production Toolkit gives non HD users much of the functionality available in HD, such as track counts, VCA mixing, advanced automation features, video editing, surround mixing, Icon support and so on.

There are relatively few improvements for HD users, but a variable stereo pan depth is one bonus. And all users now have Eucon compatibility. What is most useful for HD users is the option to plug their iLok into any computer and run Pro Tools sessions with the built-in audio or any other compatible interface, for some editing on the train — or in front of the TV. Maximum track



counts have been improved in some areas; native users can now record to 32 tracks simultaneously and their Instrument track capability has been doubled to 64. All users now get 512 possible MIDI tracks instead of 256 (but not something most will notice!) Aux tracks go up to 160 instead of 128, and buses go up to a whopping 256 for all. But launching Pro Tools 9 after the splash screen you won't notice any difference from version 8, and indeed there aren't any that are immediately visible.

Selecting different audio devices is organised from the Playback Engine window. Above the conventional settings is a new drop-down menu displaying the Current Engine, and from which you can select other possibilities, such as the Mac built-in inputs and outputs. There is also an option called Aggregate I/O for combining these, using the AudioMIDI setup. It seems that despite the new boasts, ASIO and Core Audio support is not entirely universal, with users finding that Pro Tools won't work with devices that don't support exactly compatible buffer settings.

The Pro Tools Reference Guide is no longer a PDF but instead comes as an HTML file that pops into your browser, with a Windows Help style menu on the left with Contents, Index and Search.

One seemingly minor improvement I'd campaigned for over many years has finally been implemented: shortcuts for Playlist creation and duplication. Yet there is still no way to scroll up and down through long Playlists without the mouse, unless you are in Playlist view. Perhaps a few more years to wait for that then, and meanwhile you must still battle to find that impossibly small arrow with the mouse cursor. And miserably, there are few bug fixes included with Pro Tools 9, although one particularly annoying MIDI timing/recording issue seems to have gone away. Pro Tools 9 seems to signal a change in attitude at Avid, so the faithful must now be praying that further improvements are on the cards.

## HEAT

HEAT stands for Harmonically Enhanced Algorithm Technology (and they had a couple of years to come up with that while it was being developed!) It was designed with Dave Hill of Cranesong, whose Phoenix plug-in has found many fans with its enhancement of a subtle yet appealing nature. HEAT is not entirely dissimilar, but with its console-wide mode of operation, the possibilities are rather different. Rather than a plug-in, HEAT is an optional enhancer that is cunningly built in to the TDM

mixer — it won't work on Native systems. New purchasers of HD systems will find it included, but existing users must purchase an iLok licence (UK£416.95 + VAT in the online store) with either a download or a mailed disc with the necessary software installer. Snow Leopard with Pro Tools 8.1 or 9.0 is required. With it installed and enabled, the HEAT system uses DSP resources much like a plug-in, but despite operating across the entire mixer, the penalty is fairly small. On a session using 84 TDM voices (some of which were for RTAS implementation, some for Aux channels which, like Instrument channels, don't work with HEAT), the DSP usage was about 3 Accel chips. HEAT adds just 4 samples of latency, and is compensated for when ADC is active.

To access the controls you must click an arrow at the bottom right of the Mixer window which opens a full height panel. However, only a very small area at the top of this is used, containing simply two buttons and two knobs. An Activate button enables HEAT; the transport must be stopped to do this. However, for quick comparisons there is also a Bypass button. The two knobs are labelled Drive and Tone, and both default to a vertical position where no processing takes place. Although these appear as rotary knobs, there are in fact just 5 click positions each side of the null for Drive, and only 3 each side for Tone. Notching the Drive knob left instigates tape-style saturation with odd harmonics, while turning it right adds increasing triode tube-style even harmonics.

For a little more control you can access the HEAT item in the Mixer View list, and this places an extra item at the top of the mixer channels with individual buttons for Pre and Bypass, and a



horizontal bar that glows orange with varying intensity dependent on the level driving the effect. The Pre buttons shift the effect from after the channel's fader to the point before its plug-in chain starts. You can shift all simultaneously using the Alt button while clicking one, but if the transport is rolling this can take Pro Tools quite a time to sort out. And even when parked, the monitors emitted a burst of (fairly quiet) clicks when doing that.

HEAT tends to be less subtle than Phoenix. A little Drive in either direction, plus a bit of Tone boost seems to open out the sound a bit, reducing that 'closed-in' digital character a little, and adding some friendly 'glue'. But care is required, as with higher

Drive settings, distortion quickly becomes apparent. Driving HEAT also increases overall level; it's a shame that (as with Phoenix) there's no way of matching level with the bypass condition — as always, louder seems better! But undoubtedly adding some HEAT will frequently help make your mix gel. ■

### PROS

Vast provision of previously HD-only functionality for native users; unlocked from Avid hardware; take your iLok and edit anywhere; HEAT is a fun and simple way to add some shizzle to your mixes.

### CONS

Few improvements (apart from HEAT'S separate launch) for HD users despite higher upgrade fee; plenty of bugs still to be fixed; chaotic organisation of Preferences; still only 8 outputs from HD rigs when using Core Audio.

### Contact

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