Euphonix R1

Andy Stewart takes delivery of Euphonix's formidable digital multitrack recorder loaded with new version 3 software.

Multitrack recorders used to be built like tanks and one of the most substantial of them has got to be my old two-inch Studer. These days they are much lighter and smaller, and I have often imagined that one day they'll end up the size of postage stamps. So when I went to pick up the Euphonix R1 digital multitrack recorder in my panel van, I was amazed to discover that it wouldn't fit in! I have been given the demonstration model which is housed in two large flight cases, so it exaggerates its size a bit – but not a lot.

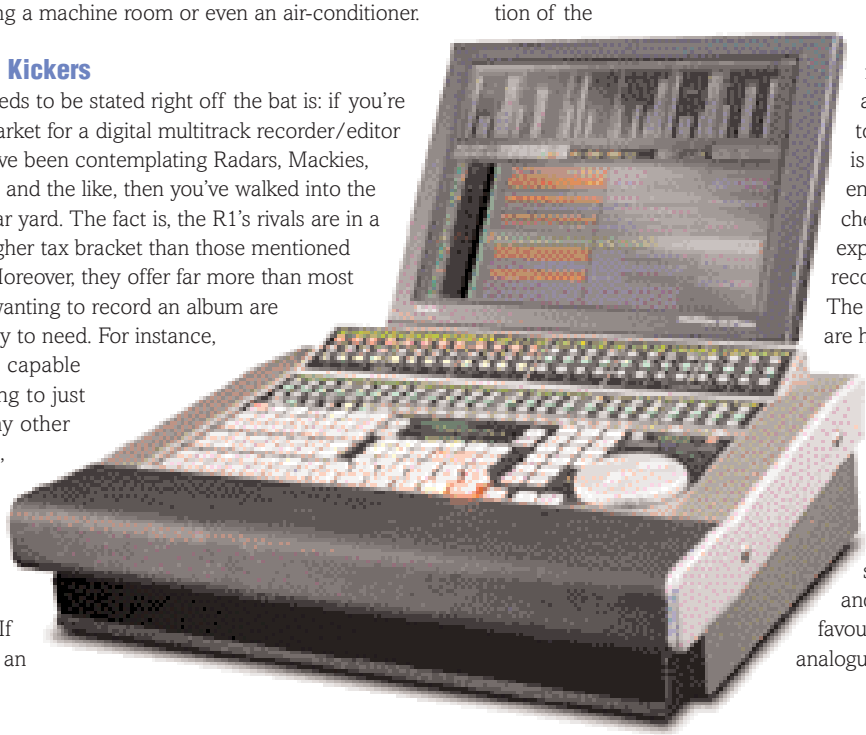
The R1 is made up of a series of inter-dependent 2U boxes which house the various hardware components. Initial impressions suggest that the R1 has a build quality reminiscent of its price tag. All the interfaces are constructed of heavy milled and brushed aluminium, with luxurious power-up switches and well-designed screens, shuttle wheels and hard drive bays. All the components are well ventilated by grilles in the front panels and fans at the back. It is a physically noisy beast and has makes no attempt to imply that it can sit next to you while you record or mix. The unit has only one place of residence, and that is in a dedicated machine room. What this *does* imply, however, is that it's designed for and aimed at – big studios and post production houses, not the small operator who for the most part attempts to get away with not having a machine room or even an air-conditioner.

No Tyre Kickers

What needs to be stated right off the bat is: if you're in the market for a digital multitrack recorder/editor and you've been contemplating Radars, Mackies, Tascams and the like, then you've walked into the wrong car yard. The fact is, the R1's rivals are in a much higher tax bracket than those mentioned above. Moreover, they offer far more than most people wanting to record an album are ever likely to need. For instance, the R1 is capable of syncing to just about any other machine, and converting one code to another. If you own an SSL or Neve console, the R1 can be happily piloted by them. If you're working in a facility that uses equipment with different timecodes, sample rates and machine control configurations, the R1 seems more than capable of driving them or being slaved to them. This plethora of options makes the R1 a powerful and versatile interpreter, suitable for any large facility requiring a multitrack recorder.

What appears to be the other main strength of the R1 is how it sounds. It is strong and 'solid' down low and the top end is open and clear without sounding glassy or harsh. In fact 'harsh' couldn't be further from the list of adjectives used to describe it. It's smooth as silk. But because it has a variety of sample rates and bit depths it presumably has at least a couple of 'sounds'. Though in practice I would defy anyone to pick the difference, especially with a blindfold over their eyes and 100 dollars riding on the outcome.

It certainly seems that the new standard 24-bit/96k devices are finally beginning to solve some of the previous concerns we have all had with digital recorders: that they sounded small, weak, flat, grainy etc. The R1 also boasts 40-bit internal floating point processing which is effectively like having a console with great headroom. It allows for comprehensive digital manipulation of the recorded material without any compromise to the sound. This is where the differences lie between cheap and expensive digital recorders become. The R1's strengths are here, in its sonic integrity, rather than in its editing prowess. Of course, sonic integrity is no substitute for sonic character, and if you have a favourite two-inch analogue tape machine,



as I do, then don't expect something even of the calibre of the R1 to be a drop-in replacement. But as far as analogue/digital observations go, it has always been thus, and there is no point comparing apples with oranges here, so we will stick to the task at hand for the moment.

Jogged Memory

The R1's centrepiece is its large wheel-around remote controller which is similar in appearance to the Sony 3348 multitrack remote. All control over the R1 takes place here, complemented by an adjoining keyboard and mouse which slide out on a tray from underneath the remote proper. The controller is very similar to most other reel-to-reel remotes, with all the usual dedicated transport keys, edit features, record and rehearse functions, and track arming switches. There is a classy jog shuttle wheel, which leaves all others I have used for dead – it is fluent in its movement and designed to be used all day. What's great about this feature is that (unlike other shuttle wheels) there are no bizarre fast forward or reversing glitches that send you diving for the volume knob on the console. It plays forwards and backwards with full fidelity so you can listen to it as if it were analogue tape. This is a great feature of the R1 remote. You can 'rock the reels' to find your edit points without the sound driving you insane.

Remote Control

The R1 remote is comprehensive, but initially a little daunting. Consequently, I found myself using the mouse for all but the usual transport features. But this is just unfamiliarity, not a design fault. In the centre of the remote there's a twin timecode display which is a little small for my liking. Surrounding it are the usual locate addresses, cueing adjustments, pre and post roll and trim features. There's a capture button which allows you to throw a displayed time from one screen to the other 'on the fly' which is a common yet essential feature of any good remote control. At the top of the remote there are track arming buttons familiar to anyone who has used a multitrack recorder before. When the R1 is functioning as a 24 track there is a single row of these switches. When it is configured as a 48 track there's an additional row of these buttons placed above the first 24 on a more acute angle. Apart from this change, the remote is exactly the same in 24- or 48-track mode. It also allows you to switch and view the sample rate and bit depth status of the machine without going into the menu options (though you can do it this way if you prefer). In short, the controller allows you to work any way you like, which is of great benefit to anyone who needs to replace one machine with another quickly, without feeling concerned about mastering it before it's used in a session – there is nothing worse than feeling pressured by a machine the moment it is installed. The R1, once set up correctly, is easy to use immediately and simple enough to learn as you work.

Waveform – Wherefore Art Thou?

Where I think the R1 is lacking, however, is on the screen. At first glance it is a good looking visual image – its colours are very appealing and the detail is legible without appearing too cluttered; the on-screen metering

is particularly clear and can be adjusted to hold peaks and show available headroom, which is great because we all have our own metering fetishes don't we? Furthermore, in the R1's solo mode, single or multiple audio tracks and the metering can be soloed – even though the screen does not show just the soloed tracks. What the R1 most obviously lacks, however, is the ability to view waveforms in close-up. It is a common expectation in the 21st century to be able to solo a channel (or channels) from the multitrack and view them in a similar fashion. Unfortunately the R1's v3 software has only just begun to show waveforms, and waveform crossfades, and for reasons best understood by Euphonix, this capacity is still presumably under development. What this means is that if, for instance, you're recording a single vocal track, you're still lumbered with the 24-track screen image that cannot be altered in any way. If you have six vocal takes that require fine and detailed comp'ing, the waveform cannot be made big enough to be of any great assistance. This makes some of the editing features of the R1 a little difficult to use compared to other editors.

Hardware Store

Having said all that the R1 is very forward looking in many other respects. From a hardware perspective the machine incorporates some nice design features like the ability to

'hot swap' the removable hard drives, provided the one you're removing isn't being used! The converters provide a stereo output summing bus which sends all of the odd numbered tracks left and the even tracks right. At first this seems bizarre when you imagine what most of your recordings would sound like without any attenuation, EQ, or effects and with everything panned left and right leaving nothing in the middle. This feature is designed for when there is no console to monitor through, as is often the case in video post production environments. Editing and arranging can be performed by using the recorder's mute and solo functions to listen to any combination of tracks. Although there is no dynamic control over the signal, for this purpose it is not necessary.

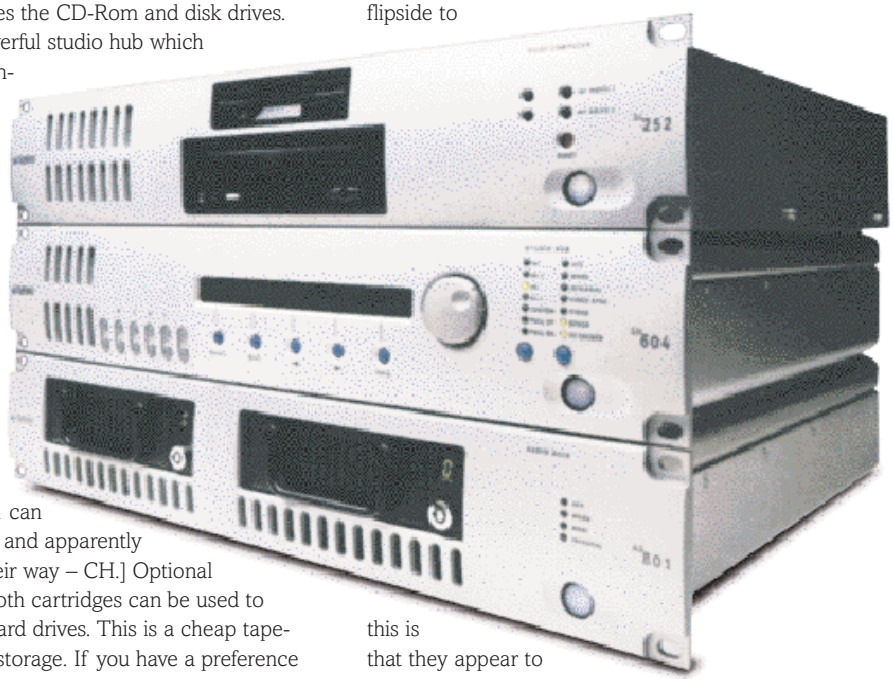
Like so many other digital multitracks, the R1 is made up of any combination of audio decks, analogue and digital converters and backup formats. This allows you to customise your own setup. The basic system requires three units. The first being the pilot computer which runs the software and houses the CD-Rom and disk drives. The second is the powerful studio hub which incorporates all the synchronisers, audio routing and machine control. The third unit contains single or twin, removable 9GB drives which can record up to 142 track minutes of 16-bit/44.1k 24-track recording. If you are recording 24-bit/96k, four drives are required and the track time is reduced to 86 minutes. [The R1 can now take 18GB drives, and apparently 36GB drives are on their way – CH.] Optional 20GB exabyte Mammoth cartridges can be used to backup two full 9GB hard drives. This is a cheap tape-based format for data storage. If you have a preference for another manufacturer's converters, or if you want to use the ones you already own, these can be used in place of the proprietary ones. Conversely, if you have an installation that includes MADI (up to 56 channels of digital audio on one coax cable) the R1 can be purchased without converters.

Software

In the software department some other good features include the easy track list library that can pull up a song off the drives in a few seconds. There is a comprehensive yet simple address screen that tells you what songs are on which drives, and this is comforting for those of us who worry about 'where' our work actually is. Virtual tracks for comp'ing and overdubbing are 'infinite', which is of great benefit to some (and downright disastrous to others!). Internal patching can be customised to suit your particular circumstance, making it no longer necessary to remember what port contains which signal information.

Sound, Support, The Future

Like all companies serving the professional, Euphonix seems to be making the right noises about product support, software upgrades and user feedback. It will be important to the R1's future that Euphonix listen to their market and move forward in the software editing department, as this seems to be where they need to make up some ground. Let me explain. The market is now awash with digital multitrack recorders (some cheap, some not to cheap) and many of them promise to do everything with 'rock-solid reliability' and 'superb sonic integrity'. But the reality of too many of these companies is that they get the product out there as fast as they can, then expect the end user to do their debugging and R&D for them. Euphonix seem not to work this way, which is admirable. The unfortunate flipside to this is that they appear to be a little behind in the editing department. Where they *do* seem to be winning is in their sound. The 24-bit/96k recording combined with 40-bit internal processing is a boast that very few other recorders can make. The digital headroom of the R1 is both an indicator of where Euphonix are coming from as a company, and why many regard it as the best sounding digital multitrack recorder on the market.



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Price

- *A typical system costs in the order of $94,000*