

Audient Sumo

Brad Watts wrestles with the heavyweight implications of an analogue summing stage.

Funny old world innit! For the last 10 years the heart of the recording studio – the mixing console – has been cut, drawn, synthesized and quartered down to the barest of footprints. Now, ironically, we see a host of devices that we link up to do the same task. It's all because of the DAW (or digital audio workstation) – those units we hook our virtual faders, individually chosen mic pre's, compressors, monitoring and metering systems up to. Recently there's been a reasonable degree of 'hoo-ha' surrounding analogue 'summing units'. Basically they're a shrunken version of a balanced stereo bussing section from a large format console, sometimes with compression, sometimes without. The obvious differences between these 'rack equivalent' devices and their weighty forebears are typically: the power supplies that run them, and the long lengths of cable found inside large format consoles that feed into the summing amplifiers. Of course, the immediate

of coding methods to perform the digital equivalent of this process. However, in some cases, the results can sound flat and lifeless – simplistically put, it's the result of too many numbers being 'crunched' at once by the stereo mix bus. To avoid this final bus 'narrowing', many engineers often output individual tracks from their DAWs into a mixing console – thus utilising the superior analogue summing amplifiers. This trick has been going on for years of course, even to the point of using as little as eight output channels arranged as four stereo pairs. The results? To many peoples' ears, the result is a smoother, more open mix; a more 3D-sounding mix – as opposed to what many describe as the 'two-dimensional sound' of a mix done completely within the DAW (or 'in-the-box' as it's become known). Because the best summing amplifiers are found in some of the best high-end analogue consoles, it's not surprising to see the high-end console manufacturers



question from the uninitiated is 'why bother?', when these features are available (in a digital form) in their DAW software. Well, here's the thing, not all digital systems have great bussing. Shock *and* horror! A digital system imperfect?! We've grown used to finding these things out. As digital recording technology advances, the manufacturers eventually admit to a technical shortfall and a bunch of band-aid products appear.

Of course, not all analogue consoles have perfect summing busses either. Some are better than others. Nevertheless the analogue bussing hysteria does hold a large degree of merit, despite the fact that most of it is trumpeted by those lucky enough to own 'classic' (read 'expensive') boards like Neves and SSLs. With any recording there are a number of tracks that have to be summed together into a stereo output. In an analogue console, this job is invariably done by the stereo bus and master section, which provide enough headroom to handle the multitude of sources being mixed together – with good dynamics and a minimum of distortion. Conversely, digital systems utilise a variety

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The Sum of its Parts

Eager to join this newly discovered fray is Audient. As a manufacturer of large and reasonably expensive analogue consoles, Audient began in 1997, founded by David Dearden and Gareth Davies – formerly of DDA. DDA consoles were not to be sneezed at – 'our very own' Studios 301 ran one for quite a spell in fact. Audient's cleverly named Sumo combines a 'class A' summing amplifier, a mix bus compressor, along with a monitoring and two-track master record bus. As one would reasonably expect from a company such as Audient, the box is professionally constructed. The front panel seems a tad clinical but there's a good quotient of fashionable blue lights. First to grab my attention was the 26-segment LED metering. This monitors the main summing bus or external two-track input (–36 through to +26dBu). Should the optional digital card be

installed, the metering will reflect that output's level – in which case the 'scale' runs from –60dBFS through to 0FS, with the last two LEDs signalling overs. Sample rates supported include every whole standard up to 192k with output via AES/EBU or coaxial S/PDIF. A wordclock input is also included. Mix gain control sits below the meters with the master and monitor output controls to the right hand end of the front panel. The monitoring output can be switched into mono.

Analogue input to the Sumo is via 25-pin D-sub connectors. Two D-Sub ins accept 16 inputs with a third D-Sub for adding further Sumo units. Three units can be bumped into this expansion connector to give you a total of 64 inputs. Then, if you want to get silly, you can connect three units to each additional box. Interconnect cables are available from Audient or you could follow the included wiring diagrams and make your own. Output connections are XLR. The simplest way to use the Sumo would be to take all the outputs from the audio interfaces straight into the unit. The preferred voltage is +4dBu – Audient then suggests returning the mix outputs back into your DAW and monitoring that path as you mix. A perfect scenario, they also advise, would be to do this digitally, either with the best converters you can get your hands on or with the digital board. Dropping a patchbay into the equation would give you eight high-headroom stereo inputs. Damn useful for flying anything into the mix from anywhere at any ol' time. The first four input points can be switched into mono. In addition, there are mix insert points across the final stereo output. These can be switched either pre or post the built-in dynamics section. Dynamics section I hear you ask? That's correct!

Dynamics

There's an incredibly useful 'mix bus'-style compressor and peak limiter in the Sumo. This is the style of compressor you'd find across the mix bus of an SSL console – the kind 'cloned' by many manufacturers. This particular variation provides that classic style of processing but can do quite a lot more. The ratio, attack and release dials are all stepped. Ratio settings are 20, 10, 4, 2 and 1.5:1 or the final step takes the compression out of the equation altogether. Attack timing options are 30, 10, 3, 1, 0.3 and 0.1 milliseconds. Release times are 0.1, 0.3, 0.6, 1.2 and 2.4 seconds or slip the process into auto release timing. Threshold and make-up gain controls are continuous (not stepped). After that you've got a peak limiter that you can use to really wind in the limiting. I found the compression section a little quirky to begin with but did find a whole bunch of useful settings ranging from 'pound-the-living-daylights-out-of-it' through to 'a slight tickle' of mix-bus compression.

As far as specs are concerned the Sumo is flat (give or take 0.1dB) from 22Hz through to 22kHz. At extreme frequencies Audient has measured a 3dB drop at 135kHz! Dynamic range is 120dB and distortion characteristics are less than 0.003% at 1kHz at the full +28dBu output. Suffice it to say this is a very clean device with buckets of headroom. In use not much could be simpler. The proof, however, is in the listening... and in the driving. Taking all your sources out to the Sumo suddenly gives back that 'desk feeling' – it's a real analogue summing stage. Simply running a mix through the system resulted in a much 'ballsier' bottom end and a smoother, far less brittle top end and midrange. Although, don't expect to notice what's going on if your monitoring and your multiple D/A converters (or your ears for that matter) aren't up to the task – the differences are reasonably subtle. Folk who are used to driving a console (in the voltage sense) will appreciate the system and the headroom. Plus, into the bargain, you'll end up with a great dynamics processor, peak limiter, a usable monitoring path and an extra bunch of input points to your DAW. This is top-shelf circuitry, but whether it's the kind of unit required will depend greatly on each individual's appreciation of the analogue summing process.



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