

Aphex 204

Aural Exciter and Big Bottom

The magic continues in this dual-channel, balanced version of a classic processor

When Aphex first released their Aural Exciter, over 25 years ago, it was the stuff of legend. You couldn't even buy one; you had to rent it by the minute, no less. Many engineers were so enchanted with this new form of audio voodoo that they often kept it discreetly out of sight, invoking it surreptitiously when a bit of magic was needed. But it wasn't a gimmick or a sound du-jour. The Aphex Aural Exciter really worked, and deservedly won immortality when it was used to mix classic albums by Linda Ronstadt, James Taylor, and Jackson Browne. It has stood the test of time, too. Smart producers have been using it ever since, and really smart producers have been keeping quiet about it.

Now the Aphex Aural Exciter is well-known and available to everyone, and, **at a list price for less than \$400, how could you afford not to own one? You can't.** After more than 25 years doing just one thing - making mixes sparkle and tightening up the low end - the Aural Exciter is still doing what it did in 1975, but with improved circuitry, better sound, and many more musical opportunities to use it. **If you're a sound designer seeking to improve intelligibility in vocals, if you need to tighten up, focus, or better pronounce your low end without increasing the level (something EQs can't do), or if you want to add sparkle to a dull mix, the Aphex Aural Exciter 204 demands serious consideration. It will not only save a mix or two, it might earn you the title of Sorcerer of Sweetening or the Magician of Mix-clowns.**

OVERVIEW

The 204 is a dual-channel balanced processor with a thick, brushed-chrome faceplate, **sturdy housing, and solid-feeling controls.** The 204 actually sports two functions: the original Aural Exciter harmonics generator and the equally useful Big Bottom low-end-enhancing system. The originally named Big Bottom - the patented circuitry for adding low-end density without increasing the dB count - has become Optical Big Bottom in this incarnation, owing to an optical coupler in its works. But the basic operation and sound-processing architecture remain the same. So if you're already familiar with the Aural



► APHEX 204

MANUFACTURER: Aphex Systems Ltd., 11068 Randall St., Sun Valley, CA 91352, Tel: 818-767-2929. Web: www.aphex.com.

SUMMARY: Imperative for audio restoration, and for brightening a mix and bolstering bass; a rival approach to any EQ or compressor.

STRENGTHS: Great sound. Inexpensive. Solidly built. Balanced I/O. Processing doesn't compromise headroom.

WEAKNESSES: No headphone or footswitch jack.

PRICE: \$399

EQ FREE LIT. #: 121

Exciter line, this is just mo' better.

The 204's two channels are completely independent. In addition to providing 1/4-inch TRS and XLR jacks for both ins and outs, the back panel offers twin operating-level switches (-10 dBV, +4 dBu) - one per channel. Since there's no "stereo link" function, you could conceivably run two mono sources through the 204, one using, say, balanced 1/4-inch jacks at -10 dBV and another signal on the XLR jacks at +4 dBu. In practice, this doesn't come up very much, because the 204 is best suited to treating entire mixes - which invariably come in stereo. But it's nice to know you have two completely independent channels with their own level switches, all the same. For stereo processing, as long as you have the controls set for subtle usage, you shouldn't experience any imaging problems between the left and right channels. To have the two channels talk to each other would have required some extra circuitry - a DAC, DC voltage to track the pots, or some other solution which would certainly have driven up the price. In careful listening, I found no phase coherence or imaging problems.

On the front panel, each channel has six controls: three for Big Bottom (Drive, Tune, Mix, and



Mix) and three for Aural Exciter (Tune, Harmonics, and Mix). Those who remember the venerable 104, a.k.a. Type C2, will notice that "Girth" and "Overhang" are gone, replaced by "more serious-named" controls. Two other improvements over the 104 are separate bypass switches for each channel (previously, you could only bring both channels in and out of bypass simultaneously with a single switch) and the addition of a tunable high-harmonics control instead of a single, fixed switch. Last but not least, it's got a built-in power supply, another touch of professionalism over the 104's wall-wart solution.

DEFINING THE DOUBLE-ENTENDRES

Before we set up and start dialing away, it's good to know what we can expect from a unit that doesn't fit comfortably into the orthodoxy of staple processors such as gates, compressors, EQs, and time-based effects. The Aphex Aural Exciter re-creates and restores missing harmonics to a signal. Unlike an EQ, which can only increase the presence of existing frequencies through selective application of gain, the Aural Exciter is amplitude neutral. It will not increase the actual loudness, only the perception of loudness. **The result is an increased brightness, clarity, and presence.** It will not add harmonics to material with no inherent harmonic content (like sinusoidal signals), so you don't have to worry about distortion.

Although it's not an EQ or a compressor, the 204 shares properties with those effects and is ideally used in like fashion. For example, it's best to run the 204 inline, like a dynamics processor, rather than in a send-and-return configuration, where you'd mix the effected signal in with the original. You can of course, run the 204 on the insert points of the stereo bus as well.

The process also features the patented Transient Discriminate Harmonics Generator, which means it can supply missing harmonics in a transient, lending intelligibility (consonants, by definition, have a leading-edge transient), and fill out the amplitude envelope of a signal without changing its shape (in other words, without increasing the gain). This should raise the eyebrows of anyone in broadcast, where levels are tightly regulated, and optimizing definition and clarity in program material is a constant pursuit.

DIALING IN EXCITEMENT

Setting up the 204 couldn't be simpler: Plug your mixer's left and right outputs into the 204's back-panel inputs, and then

plug the 204's outputs into your mixdown recorder or monitor system. As mentioned, you could always hook up the 204 through your mixer's stereo inserts. If you decide to track with it (which is reasonable if you're recording, say, vocals with a bad mic), simply hook it through a channel's insert point.

The manual recommends you use the three controls on the Big Bottom and the Aural Exciter circuitry to tune by ear. Though the manual details the frequency ranges you're operating in, providing you with some clue, you really find your sound simply by tweaking the knobs. Except for referring to the knobs' ranges (which are not on the faceplate), I never had to use the manual. **Operation is straightforward and simple.**

IN USE

I discovered that it was better to tackle any bass issues before turning my attentions to the Aural Exciter portion of the 204. For really exposed, well-recorded music (like an acoustic trio of steel-string guitar, double bass, and hand percussion), a little bass management was all that was needed. After you've wrangled the low end (if necessary), you can turn to the Aural Exciter's controls, which are Drive, Tune, and Mix. **Even when maxing out any single control, I still found the results musical.** It was only on an A/B comparison that I found the cranked knob strategy too much, but this was on relatively healthy mixes. In subtler applications, **mixes came alive, hidden midrange material - like a stereoprocessed rhythm guitar that I'd never heard before - came to the forefront.**

I was most impressed with the 204 on program material that was otherwise suffering from a deficiency. For example, on a rhythm track where the acoustic bass was unpredictable - loud on the low notes and too soft on the upper notes - **the 204 evened out the bass, brought it forward in the mix (where it had been buried before), and tightened it up in the lowest regions.** In other words, it made all the right moves.

On the Aural Exciter side, **it increased the sparkle of reels of 7.5-inch tape that had suffered from age and not-so-great analog technology to begin with.** The 204 gave me the perfect excuse to dust off the old Revox, load up the reels, and transfer this musically viable but sonically dubious material once and for all to hard disk.

One benefit of the 204 that might not be obvious is that you can use it on background material instead of just sizzling up foreground tracks. Because the Aural Exciter generally tightens up a mix - filling out the

midrange, propping up and evening out bass response, vitalizing the treble content - it's no longer necessary to keep going to the backing tracks to fix your mix. By leaving the levels alone and simply enhancing definition, you enjoy increased dimensionality in your music - instruments retain their own sense of space, and each component is distinguishable.

CONCLUSIONS

If you're a sound designer or mixing engineer who works in the real world, and deals with real-world problems, **the recommendation is easy: Go get an Aphex Aural Exciter 204 - today. The 204's benefits for audio restoration are numerous, and its talents prodigious in this regard. Bass tightening, presence boosting, vocal intelligibility, and dull-to-bright conversions are all hallmarks of the 204. The newer, improved, and more-professional 204 should find its way into your short rack,** especially if a wide variety of mixdown material crosses your console.

If you're dealing with newer music, recorded well and in high-resolution digital audio, the benefits might not seem so obvious, but here the 204 works well, too. Often, I simply went to the 204 first, before engaging in a complex chess game of EQ, especially with regard to undefined bass and muddy mids. Since the 204 is dynamic (program dependent), it will "ride" your signal, where an EQ is static. I found it transparent in this regard, and **A/B comparisons throughout the mix always had me favoring the 204 processed signal.**

The manual is excellent, too thoughtful, well written, and supplied with plenty of real-world uses for the Big Bottom and Aural Exciter circuitry. It's rich with graphs and frequency charts, so that you know just how the circuitry is acting on your program material. The manual also devotes an inordinate, but welcome, amount of space to explaining balanced versus unbalanced lines, and how to rewire cable connectors. Bravo.

Detractors in the past may have taken issue with the "candy coated" aspects of former incarnations of the Aural Exciter, but with the 204, those criticisms are inapplicable. **The 204 is inexpensive, magical, and musical. And it stands alone as a unique approach to signal processing.**

Jon Chappell's latest book is *Rock Guitar for Dummies* (Hungry Minds), which includes a CD that he recorded using only techniques he learned from the Pages of EQ.