



TEST.

Chord Electronics Ultima Integrated

12.03.2024 // WOLFGANG KEMPER

Five years ago, Chord Electronics began to establish a new top-end line with the Ultima preamplifiers, as well as mono and stereo power amplifiers. Now the British company has added an Ultima integrated amplifier to make their high quality standard accessible to fans of more compact audio systems.

Just as a reminder: John Franks originally built high-quality electronics for the aviation industry, in particular a reliable power supply for fighter jets. Following his passion, he founded Chord Electronics Ltd. in 1989 to manufacture high-end audio electronics. His audio career got started with amplifiers for the BBC, later for Abbey Road Studios, Sony Music in New York and the Royal Opera in London. John Franks is responsible for the entire concept of the amplifiers, including their unique appearance. And here we already get to a point where opinions might differ: The Ultima Integrated shows up with a very unusual, striking appearance. Such an original design undoubtedly catches the eye of every guest in the living room equipped with such a kind of music system. My own opinion on this matter will not play a role in this review or in the respective assessment, but I would still like to share it with you. I like this casing design so much that I would be prepared to put up a little more money for it at the dealer's counter. Then again, I don't quite identify with the colourful illumination concept of the Ultima Integrated, which we repeatedly encounter in a similar form throughout Chord's portfolio. This colourfulness is not only to be found on the control elements, but is also visible from the inside thanks to the air-permeable housing, which of course primarily serves cooling purposes. As on standby, the Ultima Integrated always contents itself with a minimum power requirement of less than one watt by waiving a main power switch, thus making it therefore always ready to play and having the central power button on the 28 millimetre thick front panel made of aircraft-grade aluminum constantly illuminated in red. At the North-German



The Chord Ultima integrated amplifier combines an unusual look with a remarkable musicality

Hi-Fi Days I talked to Chord Electronics representative Doug Graham at the exhibition stand of Drei H, the German distributor. Doug Graham openly admitted that this particular styling is John Frank's design preference and therefore ex cathedra and irrevocable, so to speak. But here's the all-clear: With regard to the lighting, a dimmer button on the pleasantly tactile remote control included in the scope of delivery allows the brightness to be significantly reduced. This also allows for the red light to glow discreetly when in standby mode. And if you don't appreciate the unusual design of the Ultima, don't worry. Because instead you can also opt for black side blocks made of gloss acrylic at no extra charge. A photo taken by my colleague Finn Corvin Gallowsky at the North-German Hi-Fi Days back in 2023 shows an Ultima preamplifier in this optional design.

Over the course of this review, we are primarily concerned with listening and the musical qualities. Anyone for whom the 10,000 Euros asking price is not too much of an expense, and I would like to say this in advance, should by any means listen to the Chord Ultima Integrated. Its sonic performance is as remarkable as its design is original. By briefly pressing the power button or using the IR system remote control, you can switch-on the amplifier ready to play. The red illumination then changes to a pastel green, which is pleasingly characterized by the fact that, even when not dimmed, it does not penetrate the eyes as many green LEDs commonly do. On the left of the front panel is the volume control knob to be found, which can be operated remotely thanks to the Alps Blue-Velvet motorized potentiometer and is surrounded by a circle of light that changes its colour depending on the selected input - one to four. For example, this ring lights up red for XLR line input one and yellow, green or blue for RCA inputs two, three and four. The four inputs are selected either using the remote control or by pressing the volume control knob once or several times. The selection of the inputs on the device is made in ascending order in one direction, which should not be a problem at all with merely four inputs, whereas the remote control conveniently allows a direct selection. Arranged symmetrically to the volume control on the left side, to the right of the power button sits the balance control, which is motorized as well and is always illuminated in a subtle white colour. This only changes to violet when the balance control is pressed until it starts clicking softly until the AV mode is activated. This is also possible by using the remote control. In AV mode, the selected input is bypass-looped straight to the output stage without level correction and signal processing within the preamp. Like the volume control, the balance control also has a distinctive notch for positional orientation that is clearly visible from a distance. Initially, I was a little perplexed, but after a short period of familiarization I really liked the fact that the balance control does not have a zero detent. This really forces you to adjust it by ear. I like

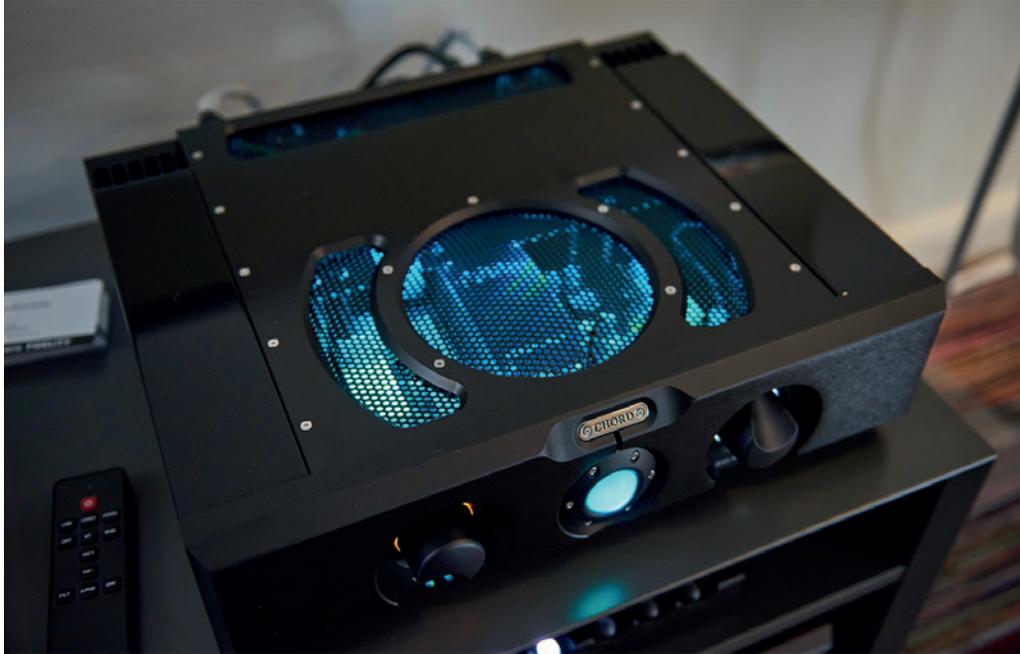


The well-designed openings at the top of the Ultima Integrated are used for cooling, but also allow the light from the LEDs to shine through in a green-blue colour

this special feature because the zero detent otherwise has something compelling about it and the purist in me is reluctant to deviate from it. The control range is very fine in the centre area and only becomes more intensive towards the left or right end. This makes optimum tuning to the listening position child's play and rewards you with the feeling of sitting in the best seat in the concert hall.

The volume control is similarly finely tuned in the wide lower range, making it easy to find the desired setting at low listening levels. The Chord Ultima does not feature a numerical display for this setting, as it can be found on my reference amplifier, the Soulnote A2. If we take a look at the rear panel, which is visually dominated by the cooling elements, we can see the two pairs of terminal posts in the centre of the connection panel for accepting speaker cable ends like bananas, spades or bare wires. Above the terminals, the IEC connector is positioned, which allows for an AC supply of 80 to 250 volts. Next to it we see a mini-jack connector providing a 12-volt trigger signal for switching other components on or off at the same time or for a passive use when being driven by another device. Above it, the XLR and RCA connector pairs are located adjacent to each other. The AV XLR output can be connected to a surround control unit if required, while the preamplifier XLR output always carries a signal. Next to it sits the only pair of balanced inputs, followed by the three inputs two to four in unbalanced RCA fashion. Mounted above, there is also a connector for additional earthing. The internal circuit topology of the integrated amplifier is conceived fully balanced, so I am therefore a little surprised that only one balanced input is available here.

But now the time has come to finally listen to the Ultima Integrated. The full-range ribbon loudspeakers from Analysis Audio with their superb fine-resolution capabilities and unproblematic impedance response are ready for testing. In regard to my new Phono Veritas P 9.2 SE I'll have to wait a little longer for them to arrive. Once in-house, they will also be used for evaluation. With the Analysis Audio ribbon speakers, the Chord Ultima Integrated has an easy time convincing me of its musicality. I've already experienced many amplifiers with these speakers, and I really liked some of them very much. However, my A2 can't quite show off its dynamic qualities here. The Ultima Integrated demonstrates its strength through a deeper spatial imaging and an elaborate analytical differentiation. On the Folkocracy album, I experienced the voices of Rufus Wainwright and his fellow musicians in the fourteen vocal tracks not only with a clearer spatial outline and autonomy, but also with a credible corporeal presence. This is particularly impressive on the Mamas & Papas track "Twelve-Thirty" where the main artist sings alongside Sheryl Crow, Susanna Hoffs and Chris Stills, the son of Steven Stills. A wonderful



As an alternative to silver, all Ultima devices are also available in black finish. The Ultima Pre here makes a little less extravagant appearance with the alternative glossy acrylic side blocks

interpretation of this 60s hit from the head of John Phillips and, in my opinion, one of the rare cover versions that surpasses the original, which is also due to the superior recording quality of Folkocracy. The Chord amplifier renders this song in an enormously lively, multi-layered, three-dimensional and colourful way. It leaves recognizable space between voices and instruments. One ability that is clearly audible is its velocity, which simultaneously draws the music with sensitive accuracy and yet with an impressive wealth of tonal colours. Is this possibly a result of the switching power supply that powers the amplifier? This is executed in a very complex manner and Doug Graham told me that the Ultima Integrated does not need a mains filter of any kind upstream. When I asked whether an upstream Audioquest Niagara, for example, would bring any disadvantages to the sound, I was reassured that this is not the case. During the test, the Chord Ultima performed without a mains filter. Its power supply section features four separate, phase-corrected high-performance power supplies that work together in harmony to impart the Ultima Integrated its high energy levels and fast transient response. The power supply filters the incoming current and generates a high-voltage direct current. This is then chopped up using high-voltage MOSFETs. This waveform is then passed on to a high-frequency transformer with a ceramic core, where it is rectified again. This ceramic-core transformer is able to handle the switching of the clock frequency of the high-frequency power supply unit of 80 kilohertz, which normal toroidal transformers are incapable of. Chord's proprietary downstream dynamic coupling system enables close coupling of the positive and negative rail voltage by means of a variable "controlling" magnetic field. In the event of a rail voltage peak, this ensures that the same power level is available at any time. This dynamic coupling technology was developed by John Franks and is a cornerstone of Chord's amplifier design. The Ultima technology is based on technical work by Dr Malcolm J. Hawksford (Emeritus Professor at the University of Essex), which was taken up and refined by Bob Cordell of Bell Labs.

At 80 kilohertz, the switching frequency of the power supply is well above the audio signal spectrum and is said to not cause any interference. The technical design subsequently features a capacitor bank consisting of twenty capacitors, because smaller capacitors can charge and discharge faster than large ones, as is the case here. According to Chord, John Franks' error correction topology, which monitors and immediately corrects signals before they reach the output stage, is also a key to the quality of the Ultima Integrated and offers an astonishing signal accuracy. All four inputs feature individual buffering and are filtered against potential high-frequency interference. Switching takes place via microprocessor-controlled sealed relays. The audio signal is processed exclusively in analogue form and is first prepared in the small signal amplifier PCB. Within the power amplifiers, several amplification stages are to be found, known as signal mirrors. A special feature of the Chord



The rear is characterized by the cooling fins for Chord's proprietary power MOSFETs

Ultima amplifiers is the dual feed-forward error correction, which controls each individual amplifier stage and eliminates any unwanted noise or distortion caused by the amplification process. Each stage amplifies slightly higher up until reaching the MOSFET output stage. In the event of a fault in the system, be it caused by the amplifier or the loudspeakers, protective relays switch off the output. The power MOSFETs were developed by Chord themselves and each of them is a dual-die MOSFET. This means that they are thermally coupled during production to be perfectly matched. Each amplifier is painstakingly handcrafted over a period of several days at The Pumphouse factory in Maidstone, Kent, on the banks of the River Medway.



Shown here is the balanced connector section: AV input for integration into a surround system, preamplifier output, but only one pair of balanced inputs

Meanwhile, the Veritas SE have arrived and have had time to become acclimatized. I still well remember their sound in conjunction with the Soulnote A2 from one of my previous tests. This has impressed me to such an extent that I decided to purchase the Phonar speakers. I wasn't up to believe that the Ultima Integrated could surpass this in terms of sonic performance until I heard the first few chords of Eric Clapton's album Unplugged (Live) streamed via Qobuz. With silky, beautiful overtones, the Chord Ultima clearly opens up the stage in depth towards the back and also a little towards the front. It lends the guitars and Clapton's vocals even more space. The sonic imaging with the A2 is quite inspiring and has its strength in the fundamental range, where it seems to provide a little more substance. This can be quite pleasing, but the Ultima doesn't just win it over when you merely limit it to its spatial capabilities. Another advantage emerges from its enormously clean sonic image. The Soulnote doesn't play impurely at all, but the Chord wins the listener's sympathy with its outstanding accuracy and, thanks to its velocity, reproduces the music completely free of acoustic slag. It opens up the space as if it had taken me into a concert hall - that's a fascinating difference. The Soulnote delivers no less of a detail, which I proved again through the Qobuz-streamed Bee Gees oldie "New York Mining Disaster 1941", for example. The Soulnote identifies the voices of the three Gibb brothers no less well than the Chord. However, the amplifier from Kent conveys a different sense of space as soon as the recording does. The Ultima Integrated sounds a touch less dry in the bass than its Japanese counterpart. Although it makes the much lower-priced Soulnote very appealing with some bass instruments, the Ultima, on the other hand, doesn't play soft or undifferentiated. Its diction is the result of its enormous speed, which produces a vivid, colourful bass. The joy of playing, dynamics and authenticity form the musical character of the Chord Ultima. It brings the instruments and voices into a fascinating three-dimensional order. Each voice, each instrument is presented on stage with its own individuality, in an impressively contoured and three-dimensional manner. The image doesn't seem torn in any way, but rather organically connected, thus allowing the listener to listen into the recording room without strain. The fact that this phenomenon, this particular ability of the Chord Ultima, is revealed in the same way on both, yet so different loudspeakers, clearly shows that it's the Chord Ultima and not the speakers themselves that is mastering this art.

Classical music also confirms this beautifully. It's a pleasure to listen to the wide-ranging strings with their delicate melodiousness and the orchestra's spacious performance in Hector Berlioz's Symphonie fantastique, performed by the Munich Philharmonic Orchestra under the baton of Sergiu Celibidache (Qobuz 24/96). The



The metal remote control offers more functions than can be set on the device itself, such as dimming the lighting when switched on and off

Ultima powerfully conveys the energy of the low strings, while subtly and vividly celebrating the woodwinds in the third movement or the menacing atmosphere towards the end. In "Nisa", taken from the album Sotho Blue by Abdullah Ibrahim & Ekaya, the wind instruments sound energetic and downright magnificent. The Chord Ultima seems to extract every last ounce of information from the music file - at any rate, I have never experienced such an abundance of tonal colours and fine dynamic evolution here.

STATEMENT

If you like the particular design, the asking price of 10,000 Euros for the Chord Ultima Integrated is a rather favourable expense when compared to its musicality. Impulsive speed, striking wealth of nuances, contour acutance with spatial order and depth as well as the wonderfully authentic tonal colours are sonic properties that would be very difficult to find elsewhere in this price range.

LISTENED WITH

CD transport	Wadia WT 3200
Streamer	PS Audio Bridge II
DA converter	PS Audio DirectStream DAC with tuned mains transformer and Plixir Elite BDC linear power supply for the analogue PCB section
Integrated amp	Soulnote A2
Loudspeakers	Analysis-Audio Epsilon, Phonar Veritas P9.2SE
Accessories	Audioquest Hurricane HC, Audio-gd RCA and XLR interconnects, QED Genesis Silver Spiral speaker cable, DH-Labs Silversonic D-150 S/PDIF cable, MudraAkustik Max power strip and mains cable, AHP pure copper and Synergistic Research Quantum Blue fuses, Room absorbers from Mbakustik and Browne Akustik, Audioquest Fog Lifters

MANUFACTURER'S SPECIFICATIONS

Chord Electronics Ultima Integrated

Type	Integrated solid-state stereo amplifier
Frequency response	10 Hz-200 kHz +/- 3 dB
THD	0.01 % 20 Hz-20 kHz
Signal-to-noise ratio	90 dB on all inputs
Input impedance	100 Kiloohms
Input maximum voltage	3 V RMS
Output maximum voltage	35 V RMS
Gain	21 dB
Channel separation	100 dB
Operating voltage	80-250 V AC auto-switching
Power output	125 W into 8 Ohms
Power consumption	Standby: 1 W; Idle: 45 W; Operation: 200 W
Finishes	Black or Silver, optional gloss black acrylic side blocks
Dimensions with supplied Integra legs	13 cm (H) x 48 cm (W) x 38 cm (D)
Dimensions with optional side blocks	11 cm (H) x 43 cm (W) x 38 cm (D)
Weight	14,75 kg
Warranty	5 Years
Price	9,990 Euros

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