

# Magnat<sup>®</sup>

## CINEMA ULTRA



**This is as compact, flexible and powerful in sound as THX Ultra2 gets**

**THX**<sup>®</sup>  
ULTRA 2™

**DOLBY**  
ATMOS

# Cinema Ultra

This is as compact, flexible and powerful in sound as THX Ultra2 gets

Even the THX specialists themselves were amazed and had to heap praise on us in the end: The LCR 100-THX front loudspeaker of the Magnat Cinema Ultra system is the first in the world to have been awarded the strict THX Ultra2 licence – although it was designed for both horizontal and vertical operation. And on account of it also being one of the most compact front/centre loudspeakers ever certified, one of our most important objectives has therefore already been achieved: maximum set-up flexibility.

As a reminder: Hidden behind THX Ultra2 are by far the toughest conditions ever established for home cinemas by THX.

This concerns not only the optimum dispersion characteristics of the front and effect speakers but, rather, also sheer volume. For example, Ultra2 requires a level ability of 117 decibels in the bass range - corresponding to thunder in the immediate vicinity. Our Cinema Ultra Sub 300-THX system subwoofers meet these requirements effortlessly; the front and rear speakers of the system have also been developed to ensure level stability and extremely low distortion. A gripping action film with spectacular bass ranges sounds absolutely realistic with the Cinema Ultra system. You will be able to hear and even feel every detail - promise!



Sturdy ceramic/aluminium cone with excellent damping properties



Loudspeaker basket made from die-cast aluminium, torsionally rigid and anti-magnetic



Crossover with amplitude and phase optimisation



Magnat chassis with low-distortion bass/mid-range transmission



Optimised by laser-assisted Klippel measuring system



Good ventilation ensured through optimised voice coil construction



Long-throw subwoofer for maximum performance in the low bass range



Filter circuit for optimisation of the frequency response in subwoofers



Active control circuit for limiting cone excursion



### **PERFECT ENGINEERING FOR THE ULTIMATE PERFORMANCE**

But an awful lot of technical effort was needed to achieve this. For example, we have developed what is probably the biggest tweeter cone in the world with a diameter of 42 millimetres. Only with this could the strict guidelines regarding large band width and freedom from distortion be implemented. The Cinema Ultra 100-THX front loudspeaker is fitted with one of these world record tweeters, while the Cinema Ultra RD 200-THX dipole effect speakers have two of them! However, the 17 cm subwoofer with its aluminium-ceramic diaphragm (used in the front and the effect speakers) and the 32 cm high-performance bass of the subwoofer are also new developments, with their low-distortion qualities setting new standards. And you can hear it immediately: The acoustic patterns are stress-free, rich in detail and outstandingly transparent even at very high levels. That is why music in stereo format also sounds so incredibly good with Cinema Ultra.

All of the Cinema Ultra enclosures have stylishly unobtrusive surfaces – our „stealth look“. In a home cinema, the speakers should attract attention by producing the best sound, not because of shiny surfaces. For this reason, we have avoided reflecting surfaces and also paid attention to the little things: even our Magnat metal logos do not have a bright aluminium finish but, rather, a subtle brushed titanium look.

### **PERFECT SPATIAL REPRESENTATION**

The huge flexibility of the Cinema Ultra even applies to the playback of Dolby Atmos recordings. Dolby Atmos is based on a large number of additional virtual channels and represents a major step towards perfect 3D surround sound. For this playback process, we have, with the Cinema Ultra AEH 400-ATM, developed a compact coaxial loudspeaker that implements Dolby's guidelines in relation to dispersion characteristics to the letter. Four of these add-on loudspeakers turn our „simple“ THX Ultra2 system into a Dolby Atmos configuration. And the sound really is breathtaking: And, given the right type of recording, spatial depth and height become literally tangible.



## Highlights

- *World's first THX Ultra2-certified loudspeaker system to feature an LCR-speaker approved for vertical and horizontal orientation at all positions!*
- *World's most compact THX Ultra2-certified loudspeaker system to fulfill the very demanding requirements for maximum output and low distortion with only one subwoofer*



- *World's first Dolby Atmos-enabled add-on loudspeaker featuring a switchable crossover to become a direct-radiating on-wall or on-ceiling speaker!*

- *All models can also be used as powerful home cinema loudspeakers within non-THX-certified systems!*

- *Thanks to its small dimensions and versatility, this high performance home cinema loudspeaker system is extremely flexible in configuration and placement!*

# Cinema Ultra LCR 100-THX

Horizontal or vertical: the best THX front loudspeaker of its class

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Never before in the history of THX: Despite the strict requirements regarding dispersion characteristics, the LCR 100-THX was granted the coveted licence for both horizontal and upright operation. Two 17 cm subwoofers as well as the large tweeter cone ensure distortion-free levels up to beyond 110 decibels as well as outstanding purity of sound. The 42 mm tweeter cone runs in an optimally linear way from 1,500 – 27,500 hertz thanks to the installed horn (Waveguide) and sound distribution lens.

This helps the LCR 100-THX to achieve a level of efficiency far in excess of 90 decibels. In other words: Even smaller AV receivers make it possible to experience a great cinema feeling with Cinema Ultra. The enclosure of the LCR 100-THX is flat and is perfectly suitable for unobtrusive wall mounting via wall brackets and VESA fittings.



Sophisticated mounting system with numerous variations, wall-fixing mountings according to the widespread VESA standard



World's first THX Ultra2-certified loudspeaker system to feature an LCR-speaker approved for vertical and horizontal orientation at all positions



Particularly tight-fitting chassis layout and specially tuned crossover for uniquely homogeneous horizontal and vertical dispersion characteristics

# Cinema Ultra RD 200-THX

High power performance with great spatial representation

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The powerful 6.5" mid-woofer is located in the center, the 1.65" tweeter cones on the sloping sides: The Cinema Ultra RD 200-THX follows the ideal structure of classic dipole speakers. The two tweeters are – as stipulated by THX – connected together with reversed polarity to produce a diffuse, very three-dimensional soundscape. Because our cone operates in an extremely wide band, the Cinema Ultra RD 200-THX creates this desired diffuse sound field from as low as 1500 hertz.

Despite its small size and moderate overall depth of just 16 centimetres, the effect speaker is capable of impressive sound levels - an important factor for the best cinema sound. And optimum installation is also child's play thanks to the large number of wall-mounting options, including VESA brackets.



It produces a broad soundscape thanks to its dipole design



The Magnat Cinema Ultra RD 200-THX is the ideal rear speaker - it is powerful in terms of sound and level



For the audibly perfect match, the drivers of the LCR speakers and the surround speakers are identical

# Cinema Ultra SUB 300-THX

18 hertz and no end of acoustic pressure licensed by THX

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The Cinema Ultra Sub 300-THX subwoofer also amazed the THX testers: It is the smallest woofer so far to have been awarded the Ultra-2 seal. Here, too, the basis for the record is the very latest technology. The 32 cm high-performance driver is optimised for a large stroke and minimal distortions. For power right from the bottom - the Cinema Ultra Sub 300-THX goes all the way down to 18 Hertz! – the subwoofer is supported by two passive radiators of the same size and appearance.

Together with the newly developed 550 watt Class D power amp, they are located in a compact, extremely sturdy enclosure where the baffle alone, made of 45 mm thick MDF, effectively suppresses a lot of vibrations.



A perfect bass machine – also for non-THX applications



32 cm high-performance long-throw woofer with flow-optimised, highly stable die-cast aluminium basket



„Star Wars“ director George Lucas was also a man of conviction with regard to audio. The effects and sounds he incorporated into his films back then still set standards today. He was even more dissatisfied at that time with the quality of the sound in cinemas. So he instructed his sound engineer, Tomlinson Holman, to study the recording process up to and including playback and create a process to drastically increase film audio quality. This resulted in 1983 in the Tomlinson Holman Experience, a catalogue of requirements for cinemas and later also for home cinemas, which - always related to the size of the cinema – guarantees sufficient level, low distortions and the best speech quality.

In the jungle of the many specifications, THX has remained the only reliable indicator for over 30 years now. In cinemas, the THX certifications have ensured a huge surge in quality and, not least of all, made the cinema attractive again. Although the quality label is now also awarded in various categories, the THX requirements are still very high, also for home cinema devices. The inspection process sometimes takes months and requires several improvements by the manufacturers. Ultra2 is by far the most ambitious of the THX standards and applies to large home cinemas with an area in excess of 40 square metres. A surround system with an Ultra2 licence has received the highest THX accolade and is equipped for every demand.

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## COMBINING HIGH PERFORMANCE AND UNMATCHED VERSATILITY

Thanks to its small dimensions and its versatility, the Cinema Ultra allows for numerous configurations. THX already approves of the minimum configuration of a 5.1 set (top right). But many movie connoisseurs will surely demand more. A second subwoofer will add the extra bass punch to their home cinema, additional surround dipole speakers or even LCR speakers in the rear transform the Cinema Ultra into a highly capable 7.2 system. The flexible LCR speaker can take THX Ultra2 to a new level of practicality: three LCR speakers in horizontal orientation slim down the front trio, generating extra space for large televisions, screens and sideboards.



Three LCR speakers in horizontal orientation transform the Cinema Ultra into a THX Ultra2-certified system of unrivaled space requirements (surround speakers not shown).



# Cinema Ultra AEH 400-ATM

With defined dispersion characteristics for perfect Dolby Atmos surround sound

Dolby also imposes extremely strict requirements to ensure that the demanding multi-channel procedure can generate perfect reproduction. The dispersion characteristics and position of the add-on loudspeakers are important. A subwoofer with an integrated tweeter, a so-called coaxial driver, is the best option here. The Cinema Ultra AEH 400-ATM is a coax with a 13 cm bass plus 25 mm tweeter cone and is a perfect fit, in terms of both external appearance and installation depth, on top of an LCR 100-THX – which is also where it should be according to the Dolby guidelines.

For those cases where home cinema fans prefer to mount the excellent sounding AEH 400-ATM on the wall or ceiling, we have, instead of the frequency response optimised for ceiling reflection as stipulated by Dolby, included a second crossover for linear reproduction which can be activated via a toggle switch.



The Cinema Ultra AEH 400-ATM is the ideal addition to every surround sound system intended to reproduce the new multi-channel process like Dolby Atmos



Sound characteristics that can be switched over to direct dispersion ensure maximum flexibility

## DOLBY ATMOS®

This concerns nothing less than achieving the acoustic third dimension. Most classic surround sound systems were previously designed as follows: Front and centre speakers at around ear height and the rear speakers fitted somewhat higher behind the head. This meant that the sound patterns were almost all moving at one level because the movie soundtrack itself did not provide for upward and downward movements at all. Dolby's new Atmos process makes a lot more possible in this respect - and with comparatively modest means. For this, Dolby uses the existing discrete audio tracks but produces additional „audio objects“ in the recording which the sound engineer can virtually play and position anywhere in the soundscape. The Dolby Atmos-compatible processor in the AV receiver decodes this information and distributes it optimally to the connected speaker system - be it a 5.1-, 7.1 or 9.2 configuration.

It works amazingly well. With Dolby Atmos, the reproduction is made much more vivid, with the soundscape gaining in height and depth. The only drawback: Without additional treble or ceiling speakers, the playback remains two-dimensional as usual. However, as ceiling loudspeakers can often not be used, a number of Dolby manufacturers have developed specially licensed designs that emit upwards at a precisely stipulated angle to simulate ceiling speakers. This enables an impressively three-dimensional sound field to be created with very little effort.

## HOME CINEMA BECOMES THREE-DIMENSIONAL

In a movie theater, a large number of ceiling speakers generates the impressive extension of the sound field with Dolby Atmos soundtracks. At home, Dolby suggests a more practical approach: add-on speakers placed on the existing speakers radiate sound towards the ceiling at a defined angle. The reflection of this sound reaches the listener, generating the illusion of overhead speakers. The Dolby Atmos-enabled add-on speakers AEH 400-ATM are part of the Cinema Ultra and the perfect extension for this set (top right). They do not only fulfill all of the strict requirements for Atmos-enabled speakers, they also offer a direct-radiating mode. This transforms them into the ideal accessory for your home cinema as on-wall and on-ceiling speakers.



Thanks to its dual-crossover and VESA mount, the AEH 400-ATM has many options of placement: as an Atmos-enabled add-on speaker on top of or near your front speakers, as a direct-radiating speaker on your wall or on your ceiling



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## Cinema Ultra LCR 100-THX



### Principle

THX Ultra2-certified LCR Speaker  
2 way, sealed

### Equipment

2 x 6.5" mid-woofer  
1.65" dome-tweeter

### Power Handling (RMS / Max.)

220 / 350 watts

### Frequency Response

80 - 27.000 Hz

### Sensitivity (2.8V/1m)

93 dB

### Dimensions (WxHxD)

280 x 520 x 188 mm



## Cinema Ultra RD 200-THX



### Principle

THX Ultra2-certified dipole surround  
speaker, 2 way, sealed

### Equipment

6.5" mid-woofer  
2 x 1.65" dome-tweeter

### Power Handling (RMS / Max.)

150 / 240 watts

### Frequency Response

80 - 27.000 Hz

### Sensitivity (2.8V/1m)

89 dB

### Dimensions (WxHxD)

400 x 300 x 160 mm



## Cinema Ultra SUB 300-THX



### Principle

THX Ultra2-certified active  
high-performance subwoofer  
Dual passive radiator

### Equipment

12" subwoofer  
2 x 12" passive radiator

### Output power (RMS / Max.)

550 / 1100 watts

### Frequency Response

18 - 200 Hz

### Dimensions (WxHxD)

468 x 461 x 460 mm

468 x 461 x 478 mm (incl. amplifier)



## Cinema Ultra AEH 400-ATM



### Principle

Dolby Atmos-enabled high-performance  
add-on loudspeaker with direct-radiating mode

### Equipment

1 x 5,25" coaxial speaker

### Power Handling (RMS / Max.)

50 / 120 Watts

### Frequency Response

45 - 37.000 Hz

### Sensitivity (2.8V/1m)

89 dB

### Dimensions (WxHxD)

280 x 150 x 188 mm







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