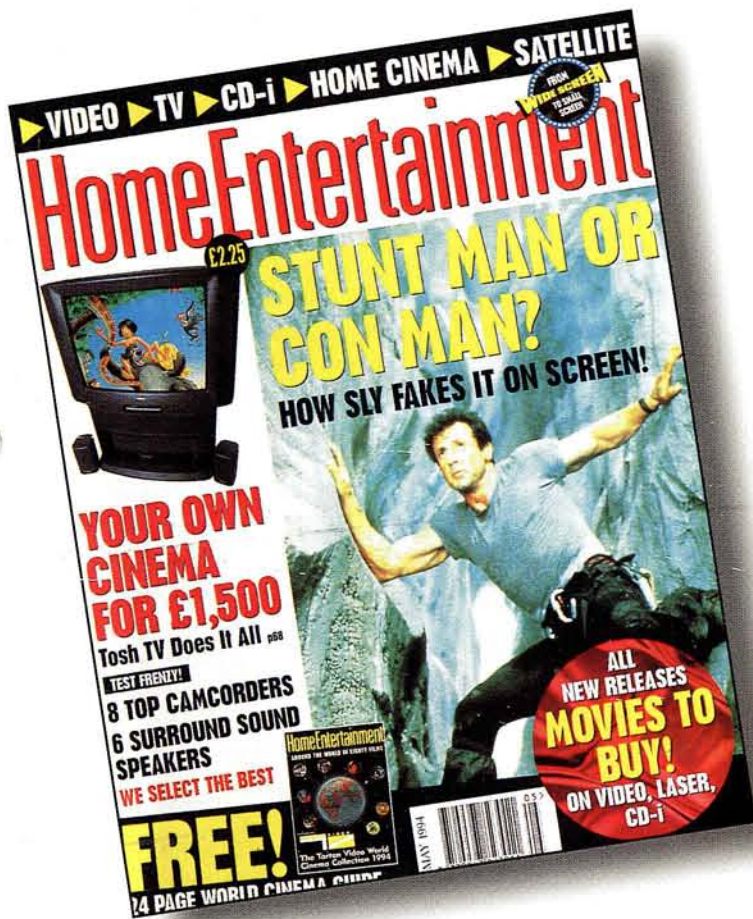




Synthesis and HT-1 Home Theatre Systems Reviewed



JBL Synthesis 2

IF YOU'RE PAYING 28 BIG ONES FOR A GROWN-UP RADIOGRAM, YOU'D EXPECT SOMETHING JUST A LITTLE SPECIAL. TIM FROST SAYS THE SYNTHESIS 2 DELIVERS — IN SPADES.

You open up the Synthesis 2 boxes, and in the best 'Toon tradition... Yowsa! Hubba hubba! You're last seen bolting around the walls leaving trails of fire and smoke. Then again, what do you expect with a home cinema sound system that costs £28k?

The JBL Synthesis 2 comes complete with a huge number of boxes, more power than you need to run a rock'n'roll PA stack, and an EQ panel that would fit comfortably in a recording studio. It also comes with the full weight of JBL International behind it — buy the system and a man comes in and installs it. He is backed up with training and test hardware that would set you back more than most would consider paying for a small car.

The Processor

This is probably the most recognisably regular. It's marked as a Synthesis controller, but inside is the top-of-the-range Fosgate 3a processor, with some additional remote switching. It's simple to use, offering good, analogue processing that sounds clean and precise on film and music.

It comes with a range of movie modes, including Pro Logic and THX Pro Logic, plus '35mm' and '70mm' modes, which both use higher-speed logic than the standard Dolby format. The 70mm certainly gives more accurate positioning of individual sounds, but the positions aren't always quite the



High power, 66MHz Compaq 486 sets up the system — here it shows the ideal set-up curve for speaker response.

same as with ordinary Dolby Pro-Logic. For music, there are various ambient and quad settings which work well in context, and are not over-ambitious.

To some degree the Synthesis/Fosgate lacks the sophistication of the Lexicon 3 processor, which allows

you to set up virtually every variable within the system. However, the Synthesis takes a plug'n'play approach, more appropriate if you're not interested in messing about with all the controls. And it does have that 'analogue' feel to the sound.

The Amplifiers

There are Synthesis-labelled amplifiers available elsewhere, but in the UK this system

The titanium dome tweeter (top left) and the 5in driver are specifically for hi-fi use. The horn loaded compression driver (middle) brings the true cinema sound into the home. High power/low distortion 8in drivers (top and bottom) are used for midrange in both cinema and hi-fi modes.

comes with professional amps supplied by Harman (JBL's sister company and distributor). These are the same as the Synthesis amps, except for the labels and some control-signal outputs. However, these pro-JBL amps are still THX approved, as they're used in real THX cinemas.

To drive the front system you get three stereo power amps of 400W per channel — the surround amps manage only a measly 275W. Think again if you imagine that all these powerhouses are connected to the same 13 amp socket: between amplifier and National Grid there's a power-switch control, so that when you switch on, each amp is energised in turn. If the whole amp rack was turned on at once, the mains surge created by its total 4kW potential would blow your house fuses.

The amps are not super-audiophile, but they are sonically superior to a lot of hi-fi amps due to their overkill build quality.

The enormous power really makes the system coast through the most extreme soundtracks, with rock solid bass and a comforting openness.

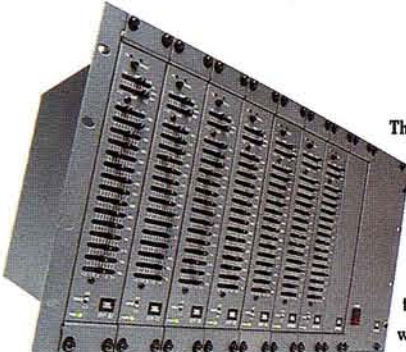
The Equaliser

Between the controller and the amps comes the Synthesis graphic equaliser panel. There are three separate channels for the three front cinema speakers, and a further two for the front music speakers. These graphics have





▶▶ three controls per octave—an octave being a difference between two frequencies, one twice the other—and are developed from JBL's professional studio designs.



The equaliser has a few more channels than the average mini-system. It allows for a room's specific acoustics, and controls the sub-bass boxes with a rod of iron.

Each of the two sub-bass speakers has its own dedicated equaliser, which has an incredibly generous six controls per octave. This approach contrasts with that employed on the only other THX equaliser, made by Rane. There, the equalisers are parametric controls, which means you can select the precise note which needs to be equalised. The Rane is like an audio SWAT team, which can be sent in to the heart of a problematic frequency, although it is substantially more complicated to adjust properly.

For the purist, equalisers are a no-no, as they inevitably do have an effect on the

sound. Even if all the controls are set flat, when the equaliser is switched in, the sound goes a little out of focus.

However, there are dramatic benefits to be had from proper equalisation. The sound opens up more, the speakers seem to become that bit more transparent, the bass end tightens up and little quirks become noticeable by their absence (see box, left).

The Speakers

A current hot topic of debate is whether home cinema speakers can be good for pure music replay and vice versa. My personal view is that no-one has yet produced a speaker that does both perfectly.

JBL has side-stepped the issue by putting a cinema speaker and a 'hi-fi' speaker in the same box. The left, right and centre boxes contain a compression driver on a 'constant directivity' horn, and two 8in high-power midrange drivers. These, together with the sub-bass boxes, comprise the cinema system. (Note: for those not familiar with speaker jargon, a compression driver is a high-power high-frequency unit used primarily for studio monitor and PA applications. It has a dome driver unit, 2in to 4in in

diameter, which produces its sound through a smaller hole, typically 1in in diameter, and thence through a horn. High efficiency is another characteristic; and until recently, high distortion. The latter is no longer such a problem.)

The left and right main Synthesis speakers also have a titanium dome high-frequency driver, and a 5in midrange speaker along the lines of JBL's £1,300 L5 hi-fi speakers. These switch in instead of the compression driver

Here's what you get for your £27,500

Pro-Logic/THX processor	one
Equalisers, full range	five
Equalisers, sub-bass	two
Amplifiers 2x400W	three
Amplifiers 2x275W	one
Switching system	one
Speakers, dual music/cine	two
Speakers, cine (centre)	one
Speakers, surround	two
Cables	loads



Why Equalisation?

Any speaker system, if properly designed, will produce a flat response in an anechoic chamber. In English, this means that if you put the speaker in a room which produces no echoes whatsoever, when you measure the frequencies that it can reproduce, no single note or group of notes will be significantly louder or quieter than any other. In a domestic room, however, the sound from the speaker interacts with the walls in several ways (i.e. echoes) and this messes up the frequency response.

An equaliser can thus be used to expel room-generated errors from the system. If the problems are immense, there's nothing an equaliser can do, but room gremlins are often small enough to be zapped out of existence by these advanced tone controls. Setting up the EQ properly is what the Synthesis 2 test-set is about. The latter comes in the guise of a portable 66MHz Compaq 486 computer (about the most powerful PC you can currently get your hands on), with a lot of extra specialised hardware and software.

There are five measuring microphones, which are placed in random positions around the normal listening position. The computer is pre-loaded with a test system that sends a tone burst to the speaker, and then shows the real response of the system in the room, comparing it to an ideal curve. Then it is 'simply' a matter of adjusting each EQ fader in turn, to get the actual response to match the ideal curve as closely as possible.

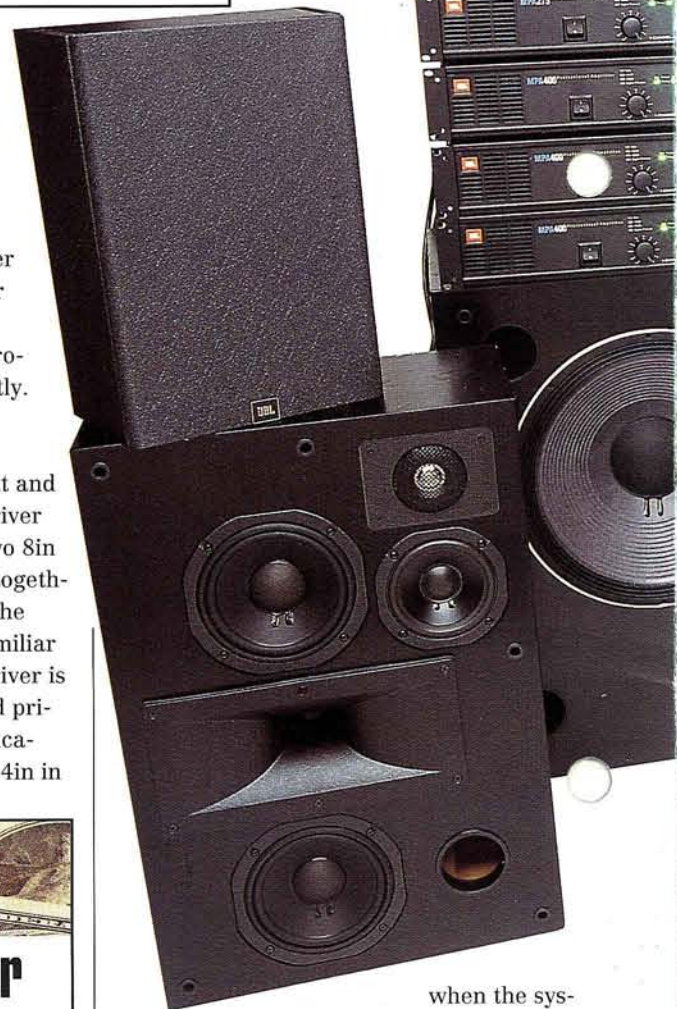
Perfection is rarely attainable, however, and it's more important to get the curves of all the front speakers to match, so the system response is symmetric.



The Synthesis Dealer

Sorry guys, but you can't buy a Synthesis system off the shelf and take it home. Part of the deal is having the system installed by the dealer, who has himself been trained by JBL, and also has access to the test rig that ensures the system is tuned to perfection.

Accredited Synthesis dealers go through a thorough training programme. They'll get a full understanding of what cinema soundtracks are about, what the system should be trying to achieve, and how the system should be connected and set up. When the installation is completed, JBL receives a copy of the system's set-up performance report, so that it can be sure that the gear is doing justice to both customer and supplier.



when the system is used for music. The changeover is done with an internal relay, remotely triggered when the Controller is switched from one of its cinema modes over into a music-playing rôle.

Performance

Working in music configuration (with the sub-bass boxes engaged too), the sound on CD is clean, crisp and open, offering all the dynamics and forward balance of a top-end JBL hi-fi system but with no trace of harshness. The two sub-bass boxes, with their cinema-size 15in drivers, do seem a little flabby

for music, but are just right for film. Should they have two sets of subs — one for music and one for film? Maybe that's going too far... And with two of these substantial boxes, there is no chance of running out of sub-bass under any domestic circumstance.

On switching to cinema mode I was expecting the sound to be harder, because compression drivers generate higher distortion figures than domes. But compression driver and horn technology has moved forward by leaps and bounds over the last few years and with these units running well within their power ratings there is no hint of harshness to be heard.

The dipolar surround speakers also use a compression driver — in this instance, a smaller, 1in unit. If there were any high-frequency distortion due to compression driver effects, the sound would be pulled sideways, but these speakers truly 'disappear' into the sound — their lack of

directionality is remarkable. Some of the latter is due to extra control over where the sound goes, which comes courtesy of the compression driver's horn design. Very little of the surround information gets projected directly at the listener.

The overall impression on movies is that dynamic passages are handled with absolute ease. Voices are portrayed naturally, and punch through the background sounds even on the most complicated mixes. Stereo positioning is rock solid — this is partially due to the excellence of the processor, but mostly down to the speakers and the

Home Theatre And The Art Of PC

The Synthesis system comes with two sorts of PC: the Personal Computer to set it up, and the Political Correctness of the installer's manual. Among the 250 pages on how to analyse a room and set the system up, there is a magnificent section on Customer Etiquette.

Someone has deigned to instruct the dealer on the niceties of treating a customer. The fact remains, though, that the sort of dealer who can sell £30,000-50,000 worth of home entertainment system is likely to have forgotten more about treating customers than some office cowboy or cowgirl in the bowls of Harman will ever know.

However, this document still goes on to encourage dealers to do such things as make appointments by 'phone before turning up to install the system, and to call customers Mr, Ms or Mrs...

And there is a Dress Code. Installers must wear the Synthesis polo shirt, which 'identifies you as a professional certified home media expert, and not the gardener or pool-cleaner.' This section also carries a great warning to those who believe that American and English are the same language. 'More pragmatically,' the section sums up, 'if your shoes or pants are dirty or wet, they may leave unwanted reminders of your presence in the home.'

Let's not forget the Harassment section: 'Harassment of any kind — whether verbal or physical, based on sexual, racial, ethnic, religious or gender identification factors — is not acceptable at any time, and can result in decertification.' I know of no dealer who would ever insult their customers in this or any other way (not to their faces anyway). This PC bull has no place in an installation manual for Europe, nor for the 'States. While most of the American hi-fi salesmen I've met may have only just attained the language skills of Bill and Ted, there wasn't an ounce of un-professionalism in their bodies.

equaliser. Elements in the soundtrack are pinned down with absolutely no doubt about their origin on the film set's soundstage.

Conclusion

With compression drivers to the fore, S2 gives that unique 'real cinema' sound, in a manner not approached by any other system. The over-kill power makes itself felt not by popping your eardrums, but by freeing the system from any restrictions, even on the most demanding soundtracks. When set up properly — one thing that Synthesis guarantees — the system clears the way for the sound to jump into the room with no excuses. It may be mega-bucks, but S2 is one heluva system.

VERDICT

JBL Synthesis 2 system (processors, amp & speakers) £27,500

+ Possibly the ultimate one-stop-solution for home cinema in the UK so far. Only available through certified installers; this plus computerised set-up ensures top results from Day One. Dual-purpose speaker systems ensure optimum performance for both music and film.

- So many boxes means goodbye lounge furniture. So many amplifiers means hello large electricity bill. Prodigious sound output means goodbye neighbours. Ludicrous price tag means hello bankruptcy (unless you're an exceptionally rich bastard).

Sound Quality	▶▶▶▶▶
Build Quality	▶▶▶▶▶
Features and facilities	▶▶▶▶▶
Ease of Use	▶▶▶▶▶
Value For Money	▶▶▶▶▶

Harman UK Ltd., Unit 2, Borehamwood Industrial Estate, Rowley Lane, Borehamwood WD6 7PZ ☎ 081-207 5050



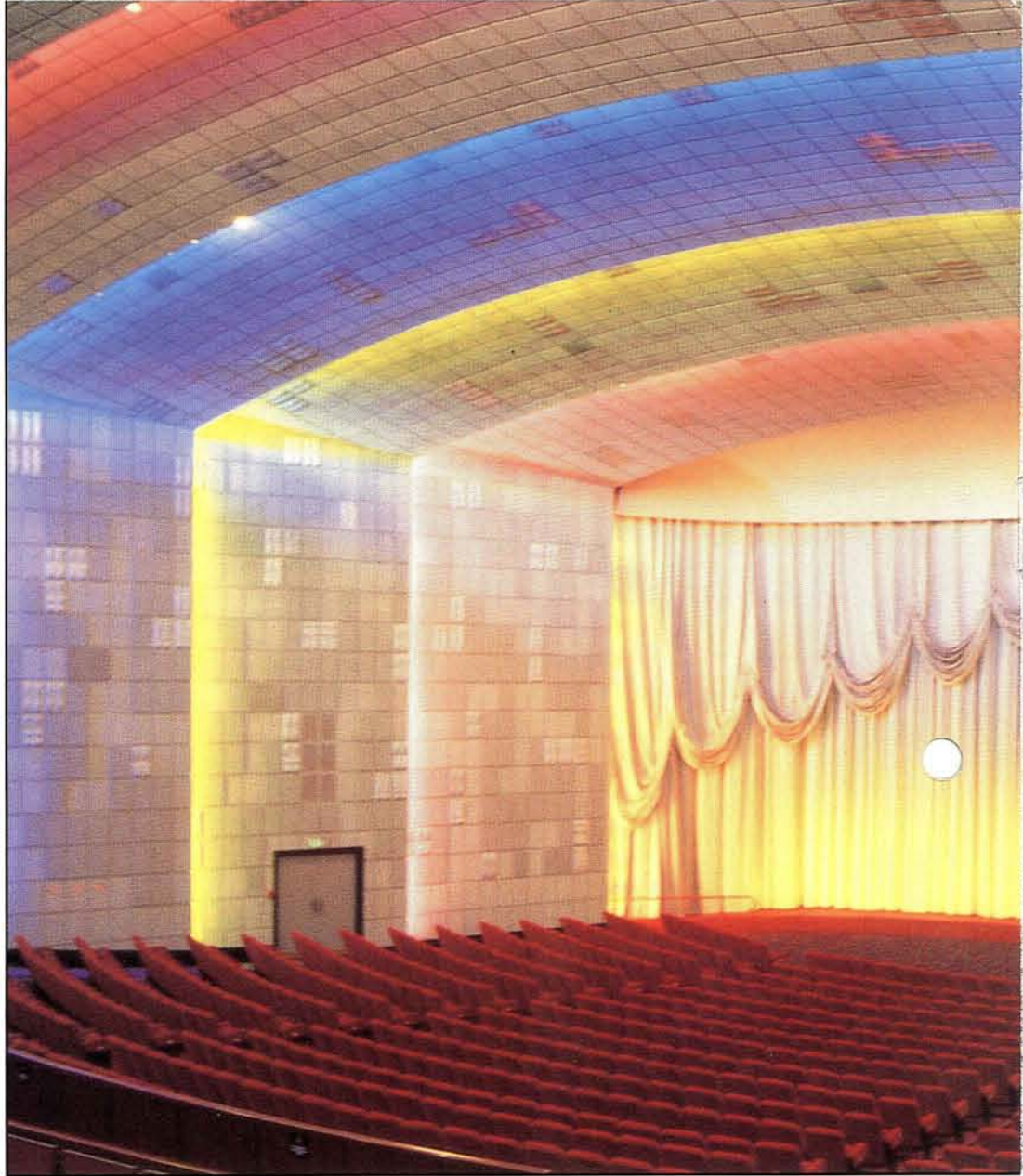
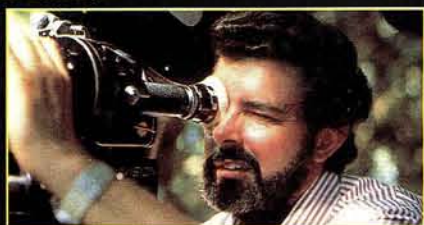
THX

THE ULTIMATE SOUND SYSTEM

EXPERIENCE THE REVOLUTION IN FILM SOUND, INITIATED BY DIRECTOR GEORGE LUCAS, BOTH AT THE CINEMA AND IN YOUR HOME. Star Wars made George Lucas' name, and it also revolutionised film sound. It's easy to think cinemas need just a couple of tinny old speakers to transmit the actors' words - until you've sat through a film which seems to be a mass of mumbles and crackles. Thanks to George Lucas you may never have to feel woolly-eared again. And it's all down to three little letters - THX.

The day Star Wars went on general release, Lucas slipped into one of his local cinemas to gauge the audience's reaction. He was aghast to discover all his hard work in creating perfect sound effects for the added dimension of wonder and believability in the epic space fantasy was lost because the theatre had 1941 issue speakers. Lucas returned to his office and immediately ordered technical director Tomlinson Holman to find a way to make Star Wars sound as good in cinemas as it did in the dubbing studio. Holman's research resulted in the setting up of an industry standard known as THX (Tomlinson Holman eXperiment) - an award like the Michelin stars given out to first class restaurants. THX isn't a rival format to Dolby, but a set of specifications designed to ensure the best reproduction of sound possible. The name also harks back to Lucas' first film, the science fiction drama THX 1138.

The biggest cinema in Britain to be THX-approved so far is the Empire, Leicester Square, but there are others including the UCI complex at High Wycombe and many more are on the way.



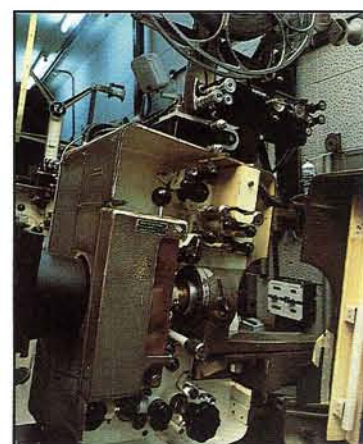
THE EMPIRE STRIKES BACK

The Empire, Leicester Square, is one of only a handful of cinemas in Britain to have its sound upgraded to the much coveted THX standard. Chris Price goes behind the scenes at the Empire and finds out how the sound compared to his local odeon.



CINEMA PARADISO

Cinema sound may have improved in leaps and bounds over the past few years but at The Empire, as in many places, the transmission of pictures remains the same. "They're the Rolls Royce of their kind," explains technical manager Fred Fullerton, looking fondly at the ageing Philips projectors. "We had them installed for Ben Hur in the 1950s." Costing roughly £15-20,000 at today's prices each projector features a 4KW lamp and has a water cooling system to prevent overheating. Standard 35mm film prints are a little more expensive than video tapes. Each one costs about £1,200 though this is about one tenth of the cost of 70mm prints.



explains Max Bell of cinema sound installers Bell Theatre Services, "because they're not designed with sound reproduction in mind." The Empire, which is half a million cubic feet in size, was particularly bad. Acoustic absorbers were fitted to the wall and a firm of Italian plasterers was brought in to re-construct the strange curved wall at the back of the cinema, again to improve reverberation levels. Along the side of the walls lie 22 discreetly placed JBL surround speakers and behind the screen are eight JBL 18in subwoofers, 20 15in drivers and five high frequency clusters. To meet THX specifications, the sound system had to be checked over once installed and then again every six to 12 months to ensure that it still meets the stringent standards set by THX.

Ultimately, however, sound quality depends on the original mix. Some film directors don't like surround sound to be used at all in dubbing theatres, while others go to town with all manner of effects. Several audio formats are available, including the conventional analogue Dolby SR optical soundtrack found on most movies. Two digital formats are also gaining in popularity - Dolby Digital SR.D and the cheaper, but less popular, DTS (Digital Theatre Systems). Both provide improved sound quality over predecessors and also offer extra soundtracks. Whereas analogue Dolby Stereo encodes four audio channels (left, centre, right and surround) the digital formats provide six, or more specifically 5.1. These are left, centre, right, left surround, right surround and sub-woofer. It's called 5.1 because the sub-woofer soundtrack only has one tenth of the bandwidth of the others. In the case of Dolby Digital (SR.D) audio is picked up from information contained in data blocks between the film's sprocket holes, but with DTS the soundtrack is provided on a CD-Rom disc with a time code reader ensuring that audio stays in time with the movie. Once processed (the Empire also has a Dolby digital converter), the signal is sent to a THX crossover unit where bass is divided from HF (high frequency) and then to a bank of 15 JBL power amplifiers. These are capable of providing up to an astonishing 15,000 watts of power - enough to satisfy even the heaviest of heavy metal fans.

But does this impressive sound system make any difference to your enjoyment of a movie? The answer has to be an unequivocal 'Yes'. As an experiment I went to see Wayne's World 2 at the Empire and then a couple of days later saw it again at a local Odeon cinema. Although I still

enjoyed it second time around the experience was marred by the poor sound, especially noticeable during songs (there just wasn't enough power) but also during dialogue which was sometimes unintelligible. Across the Atlantic, it seems, no expense is spared in providing cinemagoers with the best possible sound available. Over here we're lagging behind as ever. Only a handful of cinemas are geared up for digital sound, but more worrying is that many haven't replaced their speaker systems in decades. It's a great pity. ●


HAVE YOU EVER SAT in an old cinema, heater system rattling in your left ear, trying desperately to make out the dialogue between two American guys speaking in deep southern accents? If so, then you'll appreciate the Empire, Leicester Square, undoubtedly one of the best sounding cinemas in the UK. It's one of only four that has achieved THX certification - the ultimate accolade in cinema sound circles.

The Empire was upgraded for THX sound in 1989. Each night after the last show had finished, the screen had to be pulled down while a 'baffle' wall was constructed at the back of the stage. A massive vertical floor to near-ceiling construction, the baffle helps to contain low frequency bass sound, pushing it through the perforated cinema screen and so improving movie dialogue. It took a team of engineers several weeks to construct the wall and also to ensure that the high levels of echo in the 1,300 seat cinema were minimised.

"Modifying existing cinemas, like the Empire, is an absolute nightmare."



Star Wars led to the development of THX



The cheapest
THX speaker
package so far
courtesy of JBL

THX IN YOUR LIVING ROOM

THX represents the ultimate in home cinema sound. But it doesn't come cheap. Tim Frost looks at the most affordable THX speaker package - a mere snip at £2,500.

SPENDING £20,000 ON A THX SYSTEM may sound crazy but it's perfectly possible. Fortunately JBL - who manufacture the most expensive home cinema systems - have come up with a more affordable THX approved speaker package.

Come on guys, get real, THX should be for the mega-rich! Not so, say the doyens of cinema-sound and to prove it they've come up with the HT-1. What you get for your money is three identical front speakers (the HT1fs), a pair of sub-bass boxes (HT1s), and a pair of surround dipole

speakers, the HT1ds. Unlike many THX main speakers the HT1s are compact because they haven't got to handle huge amounts of bass. Instead that's dealt with by the sub-bass boxes. Added to this is the development over the years of super-high power driver technology, which means that the main speaker drivers can be quite tiny and still produce enormous amounts of level without distorting.

However JBL have taken this principle to extreme, loading the HT1fs with a pair of 5 inch drivers - about the same size as you would get inside a good TV. These are relent-

THX DECODERS

There are currently two THX processors available in the UK, the £2,000 Harman Kardon AVP1 and the £3,000 Lexicon CP3 - and since these are processors, not complete amplifiers, each requires about half a dozen channels of additional power amplification, depending on the specific speaker configuration being used.

Lexicon CP3 - Music biz cognoscenti will know Lexicon as a small specialist company dedicated to producing the finest digital reverb units in the world. The CP3 simply builds on the experience gained through equipping all the best recording studios to create the ultimate surround sound processor. It's beautifully presented and finished, with a lovely large dot-matrix display to tell you what's going on. This is very necessary, since the CP3 is immensely flexible, and flexibility is inevitably closely linked to complexity. It may not actually sit up and beg when you whistle, but there are so many functions Lexicon supplies two handsets - a complex one for when your brain is fully in gear, and a much simpler one for those technologically challenged moments. The only downside to the CP3 is that it is so resolutely digital throughout, and there are plenty of high-end hi-fi enthusiasts out there (self included) who would much rather listen to signals processed by analogue techniques.

Harman AVP1 processor - The perfect alternative choice. It's not as precise or flexible as the Lexicon, but it's fundamentally analogue, and thereby creates a kinder and somehow warmer and more friendly subjective experience. It doesn't look or feel as good as the CP3, but then it's a whole lot cheaper. And although it doesn't have the same range of digital programmability, it's still generously over-endowed with as many sockets and set-up options as you, I or Old Nick are ever going to need, or get around to trying this side of eternity.



lessly heavy duty, high technology, drivers that can handle more power than most speakers twice their size. The high frequencies are handled by a pair of titanium-domed drivers, straight out of JBL's studio monitor development program and so are designed to take a lot of hammering. The somewhat unusual diamond surround and ridged surface of the tweeter's dome is not there for decoration - it is a computer developed three dimensional design. The two tweeters are stacked one above the other, giving the speaker its essential THX broad horizontal spread and narrow vertical spread and giving you a nice wide seating area while keeping the sound off the ceiling and floor. Money has been spent on the construction - which is out of 20mm thick wood, with a simple rear port. The looks of the HT1f - like the rest of the boxes - is very plain, which is the trend generally for home cinema systems so that when you turn the lights off they can't be seen. The dipole design of the HT1d surrounds basically means that there are two set of speakers in the one box, one set facing forward and one set facing back. The sound for the surround detail is bounced off the walls, giving a good general atmosphere. The front and back facing panels each have a single 5in mid/bass and a single tweeter. These are the same types as are used on the front speakers - so the overall sound is much the same as the front speakers. Measuring 14in tall by 8in deep the rear boxes are smaller than the fronts but they're not the slimmest you can get. The strange thing about both the HT1 fronts and the dipole boxes is that they're not suitable for direct wall mounting, as neither have mounting bolt holes or key-hole hanging points.

Finally there's the sub-bass. Each box is a straightforward 4 cubic feet tuned port box, loaded with a high power 12in big brother of the 5in mid/bass used in the main speakers. The HT package comes with two subs as standard, a prin-

ciple which is gaining credibility in the home cinema market. It's not only a matter of spreading the bass power load, but with two boxes and careful placement it is possible to get a smoother extreme bass than you can with a single box.

Running up the system with HK's AVP1 and the Lexicon CP3 processor (see box) and HK's Signature 2200 amps, the system sounds a great deal bigger than it looks. It coped easily with my range of window-shakers, showing no distress at the bottom end, although lacking just a fraction in punch, a little surprisingly considering the use of the smaller, fast moving 12in bass driver. However the whole thing holds together exceptionally well and there's no feeling that you're listening to separated bass and mid/high boxes. This was a system that I was prepared to be disappointed by - and, I wasn't. It delivers the goods and providing you don't really mind its unprepossessing looks and you've 'only' got £2500 to spend on THX speakers, then this is it. ●

PRICE -£2499

FEATURES - Complete seven speaker THX package with three front speakers; two dipolar surrounds and two sub-bass. Will work with any good processor/amp combination but designed primarily to be used with THX electronics.

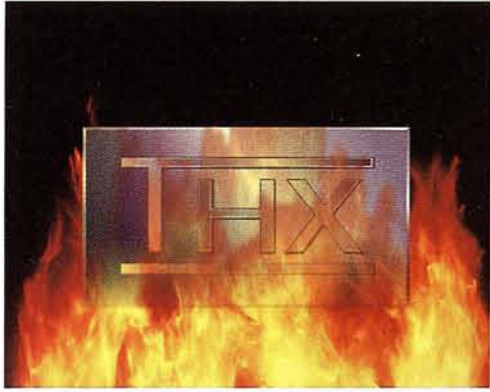
PROS - Great cinema sound, breezes through everything you can throw at it.

CONS - Not super-elegant; cheap by THX standards, but still a lot of money.

RATING

performance	9
looks	7
value	6
total	22/30





JBL HT-1 THX Speaker System

YOU'VE ASKED FOR IT; NOW YOU'RE GOING TO GET IT. LAYDEEZ AND GENTS, THE CHEAPEST COLLECTION OF THX BOXES IN THE WORLD. WELL, SORT OF...

At last June's Chicago Consumer Electronics Show, JBL laid on two elaborate demos of its high-end THX *Synthesis* systems. One, at £27,500, was seriously expensive; the other was in effect a small cinema compressed into the volume of, well, a small cinema — and with a suitably cinematic price: £40,000. Electronics were included in both cases. At that stage, JBL expressed no interest in producing THX for the proletariat. But here it is anyway...

The *HT-1* system is simple but adequate in design and construction. Simplicity helps account for the attractive pricing, and plays an important part in the sound. In THX most LCR (left-centre-right) speakers use three tweeters to ensure THX compliance; deploying two (as in this

REAR SPEAKERS:
Hi-tech titanium tweeter
but no wall-mounting
hardware.

case) represents a useful simplification and cost-saving. Compact rare-earth magnets allow the tweeters to be placed very close to each other, which reduces 'phasiness' (a hard, grating distortion) when listening from just above or below the normal axis.

Comparable simplifications have been made elsewhere. Side speakers use a similar drive units, with just one tweeter in each

case; and in a neat design twist the rear-facing section of the speaker is inverted.

Acoustic paths to the ceiling are thus of different length



That slimline budget THX system in full. And no, you can't part-exchange your furniture...

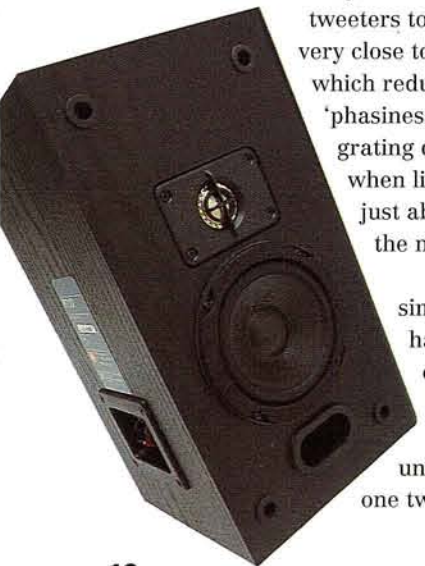


from front and back, which makes for smoother lower-midband sound.

The sub-woofers are not fully independent. Their internal crossover connects to the main L-R speakers, which in turn are designed to sit on top of the subs — a trick copied in anticipation by B&W. This means that only one channel of amplification is required to drive each subwoofer and main left or right speaker, and only five channels are required to drive the complete system, which represents a major saving. The one compromise that hasn't been made, however, is in size. Measuring 55x64x45cm, the subs consume

considerable chunks of real-estate.

Further cost-savings have been made by omitting all speaker mounting points. In many typical American homes, the LCR speakers would naturally be placed on a room divider or shelving unit, but this kind of furniture is less popular here. The optimum and most likely solution for the centre speaker in particular (and of course for the two high-mounted surround speakers) is to attach them to solid wall brackets, which in practice means that the enclosures would have to be drilled.



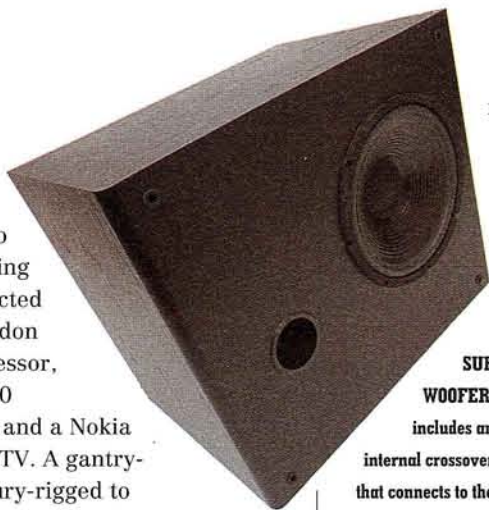
How the system was used

The HT system was plumbed into a large-ish listening room, and connected to a Harman/Kardon AVP-1 THX processor, Pioneer CLD-2850 LaserDisc player and a Nokia 16:9 widescreen TV. A gantry-type stand was jury-rigged to suspend the centre speaker just above the screen, angled down. Rear speakers were placed on two-metre-high stands, initially with their backs hard against the side walls, flanking the main listening position; but in the light of experience moved slightly forward of the listening plane and angled slightly back. The subs, topped by the main LR units, were placed alongside the TV so that all front speakers were in a single plane. Power amps purloined for the task included models from Counterpoint and Musical Fidelity (which use a hybrid of valves and bipolar transistors). Not THX designs, admittedly, but more than compatible in terms of power and quality.

Performance

From the outset, JBL's HT-1 exceeded expectations. Though less analytical and sometimes less obviously dramatic than outfits that have preceded it through the Gold test

system, the HT-1 produced a style of sound which was instantly comfortable. There are



SUB WOOFER: includes an internal crossover that connects to the l/r boxes.

many individual system characteristics responsible for this: good integration between the subwoofers and the rest of the system (despite a technically-inferior passive crossover); consistency of sound from one speaker to the next (side to rear, for instance); and so on. Much of the good showing, however, is attributable to the fundamentally sound combination of midband driver and tweeter in the main LCR speakers. Using two instead of three drivers also helps deliver a sweeter top.

The system has tremendous 'shape': sound filled the room in a convincing, solid way. The action took up the whole space in front of the listening seat, rather than being confined simply to the plane of the speakers. The bass was tremendously full and deep; and although it lacked the start-and-stop-on-a-sixpence quality of some THX systems, it avoided boom or overhang. A leaner transistor power-amp — *NAD208* for example — could be used to tauten the bass further, but this would lead to a less approachable sound. The

Meet the HT-1F left-centre-right unit. The secret's in the paired 13cm woofers (allegedly).

HT-1's other strong quality (which should be true of all THX systems, but this one excels), is the ability to play loud without drilling through your skull. The sound was consistently dramatic where material demanded, without being stressful.

Alvin Gold



WHO FANCIES A POP?

The THX competition for JBL's HT-1.

Altec THX system £3,325

This speaker package is the closest competitor for the JBL in terms of cost, though its Unique Selling Point is minimal size. And here's another interesting fact: all the cabinets are fabricated not from wood but fibreglass-filled ABS, a strong synthetic material. Has been noted for having a slightly 'brighter' tonal balance than other systems, though it's also less sensitive. Subwoofer gives out plenty of level, but won't shake windows like some of the bigger boxes.

☎ Zebra (081) 688 2491

B&W THX system £4,395

This is the closest competitor for the JBL in terms of aspiration. By all accounts it's selling by the truckload, and not just in this country. It costs a few grand more, takes up a little more space, and ideally needs an extra two channels of amplification. At the same time, B&W has gone to some length to make its system domestically acceptable, and to date, theirs remains the only THX system which might be described as stylish without a chorus of hollow laughs. Like the JBL it exudes an easy, comfortable style, and unusually it is also successful for audio-only replay. Above all, however, it has more raw energy and a greater dynamic range than the HT-1, without ever sounding quite so authentically cinematographic.

☎ B&W (0903) 750750

IN ANOTHER LEAGUE (where the prices are heavyweight!)

Fosgate THX system £7,000

This costs a cool seven grand for speakers alone, and is unarguably the most authentically cinematographic of them all. However, it's rough and dirty by hi-fi standards, and about as attractive as a lorry-load of breeze-blocks. All right then, breeze-blocks with an exciting matt-black vinyl wrap.

☎ Harman UK (081) 207 5050

McIntosh THX system £13,160

A sophisticated piece of kit; but very costly indeed, and even by THX standards it is not widely stocked. With the processor, pre- and power-amps all built into a single box, interconnectability and upgradeability were not high on the agenda; and in effect we're talking about a system that is technically worthy, but which, like Bang & Olufsen in different product categories, stands apart from the mainstream. Precise, effortless bi-i-g sound — at a price.

☎ MPI Electronics (061) 777 8522

VERDICT

JBL HT-1 THX Speaker System (seven-piece) £2,499

+ The most affordable THX speaker array so far. Fine detail and transient response are somewhat compromised, but the system is eminently listenable, and gives a large scale, well-focused sound at realistic volume levels.

- No provision for mounting on wall brackets, or safety straps — safety can only be ensured by drilling the enclosures. The subs should be tapped for spikes, and a similar arrangement provided between subs and main speakers.

Sound Quality	▶▶▶▶▶
Build Quality	▶▶▶▶▶
Value For Money	▶▶▶▶▶
Compatibility	▶▶▶▶▶

Harman UK, Unit 2, Boreham Wood Industrial Estate, Rowley Lane, Borehamwood, WD6 7PZ. ☎ (081) 207 5050



JBL

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