



# Enter the Matrix

The owners of this home cinema are big sci-fi fans, and chose to reference *The Matrix* and *Cube* in this impressive eight-seater Wavetrain design.

**B**efore he opens the door to this home cinema, the owner uses the Control4 app on his smartphone to select a specific lighting scene inside. Visitors enter to walls of *Matrix*-style digital rain, parting at the front to reveal a perspective image with silhouettes of the owner's own family. A spectacular bar area outside the room shines under the illumination of purple LEDs — but wait, when we walked through a minute ago, hadn't that bar been red?

"He gets his greatest pleasure seeing the reaction of other people when they walk in here," says Kirt Duryea of Instinct Electrical, the company responsible for the installation of lighting, automation and AV equipment throughout this whole home on Sydney's North Shore. "He's the most advanced client we've ever worked with in terms of video knowledge — he held back the cinema construction until the main home was complete so he could be closely involved. So while there wasn't the usual 'instant awe' reveal for the client here — he'd seen the evolution of it — yes, he's ecstatic with it."

The design house responsible for the cinema space is Wavetrain Cinemas, winners of multiple awards for their reference-level home theatre designs, including the Cableman theatre that won the 2015 Sound+Image Award for Home Cinema Installation of the Year. Instinct was responsible for all the systems throughout the home, with a Control4 system running C-Bus lighting, Ness security, video distribution, and Sonos for multiroom audio. But with the home cinema being such a high priority for the owners, Instinct contacted Wavetrain to oversee the creation of a suitable venue and performance level that would satisfy the client's love of the science-fiction genre.

"We are known for being acoustic engineers, but the reality is that we are a design house," says Wavetrain's David Moseley. "While we sometimes work with architects and interior designers, we are mostly designing the cinema from concept to final construction drawings."

The owner himself was also instrumental in selecting some of the equipment, the method of serving movies in particular. And he understood when it was suggested that some of the original ideas for the

room might need amending to achieve the best possible performance. After all, as Morpheus says in *The Matrix*, "I didn't say it would be easy... I just said it would be the truth."

**"We're willing to wipe the slate clean, give you a fresh start..."**

"Initially the cinema was a much larger room," explains David Moseley. "The client had conducted a lot of research prior to undertaking the project, and when he visited our showroom we went through all the possibilities."

Wavetrain is fastidious about designing its rooms and sound systems to achieve the industry's top standards for cinema design.

"The standards are the same for commercial cinemas and home cinemas," says David. "Not listening at the industry reference levels is to not hear the sound as the director intended. And in the originally proposed larger space of this cinema, the budget to achieve that properly would have been much higher than had been allowed."





BEHIND THE RAIN: the digital rain motif on the walls is printed on acoustically-transparent material (left) which conceals the side speakers and disguises the significant acoustic treatment to the room (above)

**Bending the spoon**

So Wavetrain suggested making the cinema smaller, and using the remaining space to create a bar at the back of the room. With this agreed, the cinema room design was settled quickly, referencing *The Matrix* with that digital rain printed on acoustically-transparent fabric. The front image is printed on a roman blind that descends in front of the screen to line up with the wall panels. It's a sensational overall look.

**Take the blue pill**

Meanwhile the bar offered an opportunity to reference another of the owners' favourite films, the *Cube* series of Canadian sci-fi thrillers.

"The bar needed to stand alone as a piece of architecture, not just a theme," says David. "We used the circuit-board design of *Cube*, with the walls cycling through nine LED colours selected by the client from the thousands possible. These change slowly, every five minutes and blending over 10 seconds — the owner refers to it as an 'amazingly mysterious experience'."

The joinery here is impeccable in the way it intersects with the bar's colour-backed glass and the stainless-steel bar, under the ever-shifting colours of the circuit-board design on the walls.

"This was the hardest part of the whole design to get right, with the change in levels and needing also to drop the ceiling in this area for the air-conditioning plant," says David. "And to allow enough space for the AV equipment. It was all very tight!"

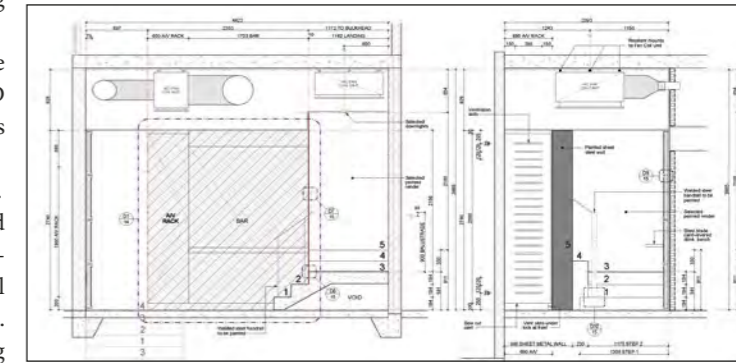
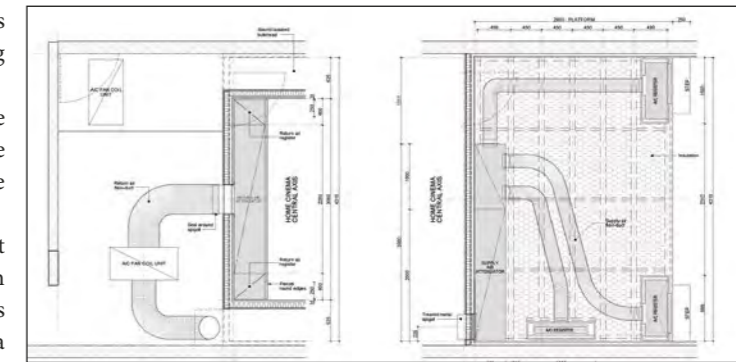
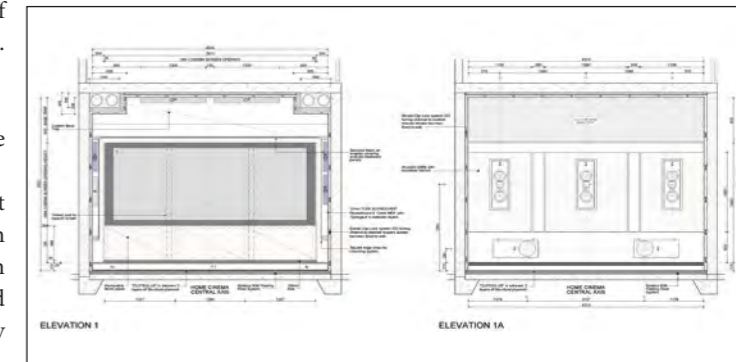
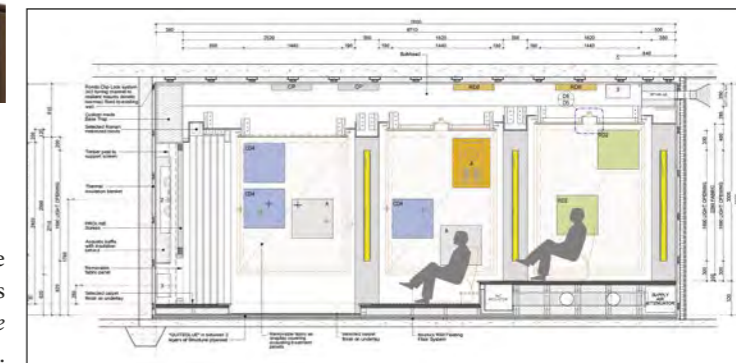
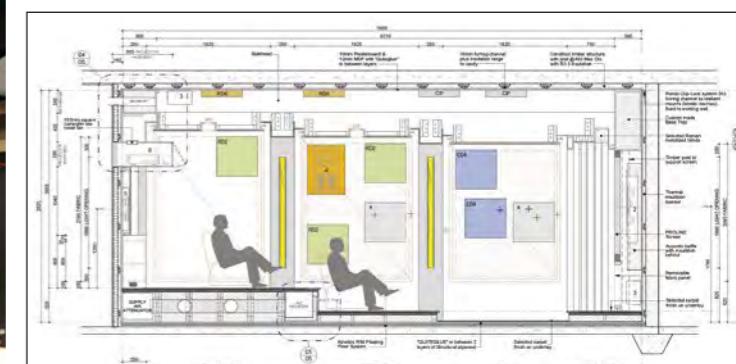
Sonic performance is, of course, at the heart of this cinema. Instinct was responsible for the supply and install of the AV equipment, with Wavetrain specifying the Cary Audio amplification and Triad speakers required to achieve those industry-reference sound pressure levels — a combination of four subwoofers is used to balance the room's standing waves and deliver an even bass response across the cinema.

Sources include a choice of AppleTV, Plex media serving and one component new to us, chosen by the owner — a Dune HD Base 3D Media Player capable of full-HD 3D playback, with various extensions to deliver a clean interface with full metadata available.

And there is, of course, extensive acoustic treatment in the cinema.

"All our cinemas are fully engineered acoustic systems," says David Moseley. "To deliver a balanced acoustic environment we use a combination of our custom-engineered products — bass traps and general treatments, a ventilated projector 'hush box', and MSR acoustic panels. The entire cinema is sound-isolated from the home using floating flooring products, dampening, and our own sound isolation doors."

A stunning result visually, then, and a background of silence for reference-level movie performance. You hear that Mr. Anderson? That is the sound of inevitability...



ABOVE — PLANNING FOR PERFECTION: Wavetrain's detailed construction diagrams consider every element before construction commences — seating positions (top), equipment positioning, isolation and support, whisper-quiet air-con, and of course the details of the sci-fi theming

**Kit list +++ kit list**

**AUDIO-VISUAL**

- Dune HD Base 3D media player
- AppleTV media player
- Denon AV receiver as pre-amplifier
- Cary Audio Cinema 7.250 power amplifier
- Triad Gold/6 inwall LCR front speakers x 3
- Triad Gold/4 onwall side surround speakers x 2
- Triad Silver/6 rear surround speakers x 2
- Triad Cinemaplus subwoofers x 4
- Sim2 NERO 3D projector with T2 lens
- Xlet Cylindrical Anamorphic lens
- Cineslide lens sled
- Screen Excellence Reference 140-inch fixed woven AT screen with Enlightener 4K material
- Middle Atlantic AV racks

**ACOUSTIC TREATMENT**

- CinemaWorks custom curved diffuser/baffle walls
- CinemaWorks ceiling absorber panels x 4
- MSR Convex 4-inch diffuser x 6
- MSR Randomiser 2-inch diffuser x 10
- General absorption panels x 2

**CONTROL SYSTEM**

Control4

**PHOTOGRAPHY & WALL ART**

Warren Macris

**HOME CINEMA DESIGN**

All design work including interior concepts, engineering, A/C design, material selection, lighting design by Wavetrain Cinemas.

**WAVETRAIN CINEMAS**

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**CUSTOM INSTALLATION**

Supply and installation of all AV equipment, lighting and automation by Instinct Electrical

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