

AVS FORUM

Home Theater of the Month: The Manor TV & Gaming Room

by Mark Henninger on July 26, 2020



For August 2020, another incredibly special Home Theater of the month! For the first time ever, two Home Theater of the Month-winning builds are in the same home. And once you read about this month's winner, I suspect you'll agree that this theater is one of the most outstanding personal recreational spaces ever conceived.

This past March, I took a trip to England to experience this astonishing home theater. The Manor TV & Gaming Home Theater is the work of Nigel from Absolute Ultimate AV, and it provides the environment needed to achieve ultimate immersion in gaming and also appreciate modern 4K HDR content under optimal viewing conditions.

This AVS Forum Home Theater of the Month is closely related to last month's winner. Indeed, The Manor TV & Gaming Room is located in the same house and it shares some key features like Steinway Lyngdorf audio gear and the use of the world's most light-absorptive black felt material for the walls as [The Manor Dedicated Home Theater](#). But rather than a dedicated projection-based theater room, this room is built for gaming and TV-related activities. It features an 85" Sony Z9G with a 13.4.7 Lyngdorf with M&K speakers audio system featuring the "Phantom Line Source LCR" solution for non-acoustically transparent displays such as TVs and micro-LED screens.

Just like The Manor Dedicated Home Theater, I had a chance to experience The Manor TV & Gaming Room by Absolute Ultimate AV, including checking out some video game content, and I can attest to the pure excellence of the result. This is a room built around an 85" TV and optimized for intense audio/visual experiences like gaming. Like the dedicated movie theater, the TV & Game theater is an exercise in maximizing the capabilities of some truly excellent gear, resulting in a true reference-quality experience. Except in this theater the seating is limited to just 3 comfy chairs. Of course, that leaves one seat that's the "captain's chair" so to speak, that is one of the finest perches imaginable for playing video games.

In this theater design, Nigel from The Absolute Ultimate AV tackled the issue of getting great front stage sound when accommodating a large TV like the 85" Sony Z9G. The solution is "Phantom Line Source LCR" which, as you can see in the photos of the space, consists of top-bottom pairs of speakers for the L/C/R channels. The result is phantom vertical imaging that puts the sounds where you are supposed to hear them in front of the screen.

The whole mood here is futuristic with a purpose. Yes, it looks like the room belongs in the world of Tron, but it's very much so a "form follows function" scenario. When you turn out the lights in this room, you are left with a floating 85" HDR image that's more intense than anything a projector can produce. Perfect for experiencing the latest games, but also for seeing 4K UHD HDR movies (including Dolby Vision) presented very close to how they are mastered.



KEY FEATURES:

- 13.4.7 Dolby Atmos audio system by Lyngdorf and M&K Sound (300 Series).
- Lyngdorf MP60 Processor; with additional custom DSP.
- 10 x Lyngdorf SDA-2400 Digital Stereo Power Amplifiers.
- RoomPerfect room correction; and my own custom-programmed Lyngdorf 'Voicings'.
- 20 x M&K Sound MP300s; affixed to, floating off the walls, and toed-in via custom made ebonised solid oak timber hardwood wedges.
- Front soundstage comprises "Phantom Line Source LCR" plus Wides; plus four M&K Sound X12 Subwoofers in the front left and right corners.
- 85" SONY ZG9 TV.
- Source equipment comprises:
 - OPPO 203 4K UHD Blu-Ray Player
 - Panasonic DP-UB9000 4K UHD Blu-Ray Player
 - ROKU Premiere; streaming Netflix, Amazon Prime, Disney+, Youtube, etc...
 - SKY Q
 - Playstation 4 PRO
 - XBOX One X Scorpio Edition
- In-room lighting by Gradus, the same brand of lighting that features within commercial Dolby Cinemas and IMAX theaters.
- Automated control system by Control4. Custom programmed according to our particular specifications by Pro Media Solutions. Featuring control via dockable iPad plus Phone App.
- Perfectly optimized blacked out environment. The entire room has been finished in the blackest least light reflective fabric material in the world, and the blackest least light reflective carpet and rugs, yielding a total absence of environmental reflections for maximum immersion and optimum video performance. Fabric walling by Quiet Interiors. Fiber Optic Star Ceilings with Shooting Stars by Wiedamark.
- Silenced room. Door comprises the same acoustic doorset that is used for sound-proofing in professional recording studios. The background noise floor of the room is so deathly quiet that it literally cannot be measured, because it is below the minimum threshold of professional SPL meters.
- Audio system represents a design solution for use with non-acoustically transparent displays of any size, with ZERO compromise with respect to the audio sound quality performance. Specifically intended for use with giant screen TVs and modular video walls.



INTERVIEW:

AVS Forum: What were your primary design goals for this theater? (e.g., sound isolation, decor, number of audio channels, acoustic treatment, size and shape of screen, number of seats, etc.)

Nigel: The target objective in this instance was/is to create the ultimate TV & Gaming Room. In this regard, as always the goal is to achieve the absolute ultimate with respect to the audiovisual performance, in its own right, but also in particular from the AV equipment that is being used; as well as achieving optimum immersion with respect to the experience. Consequently, in order to achieve the perfect environment and thereby the best possible video performance and optimum immersion with respect to the viewing experience the room has been designed such that a complete absence of environmental reflections is achieved. Similarly, with respect to the audio aspect the targets in this instance included achieving a background environmental noise floor which is as low as possible; as well as eliminating entirely any and all environmental resonance, and minimizing the need for acoustic room treatment.

AVS Forum: What are some unique aspects or features of your home theater?

Nigel: The particular audio system that features within this Home Theater is my design solution for giant sized non-acoustically-transparent displays, including modular video walls and giant screen TVs. It can be scaled accordingly to accommodate a non-acoustically-transparent display of any size, with zero compromise with respect to the audio performance.

Further to this, some other unique aspects and features include the fact that usage of acoustic room

treatment has been kept to a minimum, and the entire room has been finished in the blackest least light reflective fabric material in the world, as part of eliminating environmental reflections, and creating an optimally immersive environment.

The in-room aesthetics are provided via the dramatic contemporary lighting by Gradus, who are the same company who supply and install the lighting into Dolby Cinemas and IMAX Cinemas worldwide; as well as having all of the speakers on show as a design feature. The latter is likely to be somewhat controversial, in that some people might not like having all of the speakers exposed in this regard, but personally I think it looks badass having 20 number M&K Sound MP300 speakers on show, in addition to the 4 number M&K Sound X12 active subwoofers. So much so that we contracted the services of a carpenter to custom-manufacture bespoke solid oak timber wedges that have been ebonised, which are used to float the speakers off the walls and toe them in precisely towards the listening position. And tying in with this design feature we had the same carpenter custom-manufacture a bespoke solid oak furniture sideboard that houses 19-inch racking into which all of the AV equipment is installed, which also have been ebonised so as to match the speakers' oak hardwood timber wedges.

AVS Forum: How long was the planning phase?

Nigel: 3 months

AVS Forum: How long was the building phase?

18 months.

AVS Forum: What construction materials and techniques did you use?

Nigel: I wanted a live room that's also devoid of audible vibration / resonance. Hence the usage of wood and wood panelling was kept to a minimum, and where it was used it was either bonded to concrete or infilled accordingly. The same goes for acoustic room treatment. The entire room is essentially a concrete box. The shell comprises high density concrete blocks with the inner surface having 1" hardwood plywood screwed and glued to it. The floor is also concrete. The raised flooring platform is a hardwood timber framework in-filled with a fiber reinforced polymer compound that sets as hard as concrete. The ceiling includes a figure-of-eight bulkhead that runs around the perimeter of the room and across the middle. This is constructed using a timber framework and finished in 1" hardwood plywood and the whole thing infilled with a specialist acoustic expanding foam, so as to eliminate any and all potential for audible vibration / resonance.

AVS Forum: What was the total cost (AV equipment, acoustic treatments, construction materials, contractors)?

AVS Forum: How much was true DIY (with your own hands and those of friends and family) and how much was contracted out? If you contracted some of the work out, who or what company was the designer, installer, etc.? Who did the acoustic design, audio/video calibration?

Nigel: I am going to answer the both of these questions together because my answers apply to both. I personally carried out all of the design work and project managed the whole thing from conception to finish. I personally installed all of the cabling, as well as the AV equipment, and carried out the setup and calibration of the audio and video equipment as well. The construction was carried out by my property company's workforce under my management and supervision. I personally installed all of the speakers and the starfield ceilings with their assistance. I designed all of the control systems but

contracted out the installation, setup, and programming to a third party (Pro Media Solutions). I designed the lighting. Gradus installed all of the Gradus lighting. I selected the choice of carpet (Westex Jet Black) and fabric (Whaley's Black Velvet Devore) for the room finishes; however these were installed by subcontracted third parties. I also installed the seating (Classic by FrontRow Cinema Seating). I sourced the acoustic doorset and this was installed by my workforce under my supervision.



AVS Forum: What were your biggest challenges? How did you meet them?

Nigel: A number of the aspects of this particular home theater are bespoke, and hence these required bespoke solutions. Firstly, I wanted to toe-in all of the respective speakers such that they are all pointing directly at the primary listening position. Because there does not exist an off-the-shelf product for which I was happy with the aesthetic I contracted a carpenter to custom-manufacture solid oak timber hardwood wedges, made to precisely the respective angle degrees, with a black ebonised wood stain finish. The speakers are then hung off these creating a very smart aesthetic wherein the speakers are floating off the walls. In addition to this, I had the same carpenter custom-manufacture a bespoke oak hardwood timber side board furniture unit to house the equipment 19" racking, situated at the back of the room. This can be moved forwards and backwards, and the rear is open, thereby providing easy access to the backs of all of the AV equipment as needed. Another challenge was achieving a solution to the issue wherein the speaker configuration is beyond the native capabilities of the particular AV processor; wherein, this was solved via implementation of some additional custom DSP.

AVS Forum: What were the greatest moments in the process?

Nigel:

Powering on the completed system for the first time.

Changing the minds of the Doubting Thomases who did not believe that this my design solution for giant sized non-acoustically-transparent displays wherein the objective is zero compromise with respect to the audio sound quality and performance, would actually work.

Demoing the home theater to your good self.

AVS Forum: Does your theater have a name? If so, what is it, and why did you choose that name?

Nigel: The Manor TV & Gaming Room. Because it's designated purpose is that of a TV & Gaming Room, and it is situated within a manor house estate.

AVS Forum: What is the URL for your build thread?

Nigel: <https://www.avsforum.com/forum/19-de...l#post59980130>

AVS Forum: What is your profession?

Nigel: I am an AV professional. My company is Absolute Ultimate AV and specializes in ultra-high-end AV.