



THX[®] Certified Cinemas

The best cinemas in the world are THX Certified. Working closely with cinema owners, THX helps deliver the finest entertainment experience through unique and rigorous testing, precise loudspeaker integration, and a comprehensive design of the auditorium itself.

A THX Certified Cinema is a promise to moviegoers that they are about to enjoy the highest level of audio and image performance:

- A near-silent theater with no noisy outside distractions
- A big screen displaying perfectly focused, stunning images that emotionally grip
- Amazingly clear speakers that deliver stirring sounds that excite

A THX Certified Cinema delivers an optimal presentation of a movie, exactly as the filmmakers intended.

PERFORMANCE BENEFITS

- ▶ **THX Brand Recognition:** The THX name is world renowned as a signifier of audio and image excellence. Movie enthusiasts know the best place to see a new or favorite movie is in a THX Certified Cinema. Theater owners find that THX certification can positively impact sales by encouraging customer loyalty and providing a marketplace advantage.
- ▶ **Best Seat in the House:** With viewing angle requirements, stepped seating recommendations and careful projection booth placement, audiences can be assured that they are getting the best performance no matter where they sit.
- ▶ **THX Cinema Services:** A nationwide network of THX-trained cinema technicians is available to set up and maintain D-Cinema equipment, audio gear and film projectors, guaranteeing the highest standards of picture and soundtrack performance.

THX CERTIFICATION FEATURES

THX Baffle Wall: For each THX Certified Cinema, THX designs a baffle wall unique to the room and screen size. Approximately the same size as the screen, this wall provides a continuous surface to distribute sound evenly throughout the theater, helping to make the audio more believable and natural. Benefits include an increase in low frequency output, a large sound image, accurate tracking of audio with the image, perfect localized effects and more.

Design, Setup, and Calibration: In addition to creating the initial layout of the theater, THX assists with setup and calibration to ensure optimum theater presentation.

THX Design Office: With the best theater designers and engineers in the business, a cinema certified by the THX team is assured to deliver paramount movie theater audio and image performance.

Silence is Golden: It's hard to enjoy the movie when you can hear the neighboring theater, or the traffic outside. THX Certified Cinemas achieve NC-30 or quieter as a result of applying extensive noise-isolating building requirements.

THX Cinema Certification Process

Architectural Design Package

Step 1: Architectural Information

The THX Design Office conducts room, equipment and site plan evaluation free of charge prior to beginning any work. Theaters submit THX site and screen forms along with architectural drawings for each room under consideration.

Site and Screen Form: Provides the Design Office with contact, equipment and architectural information. Additionally, a THX Certified Studio or Cinema must use equipment from the THX Approved Equipment list, which is available upon request.

Architectural Drawings: Scaled architectural drawings are required to complete the evaluation process. These drawings can be submitted in .dwg, .dxf, or .vwx formats and must include:

- Complete floor plan drawings, including a seating plan
- Elevation drawings of the sidewalls and projection wall
- Architectural detail of the ceiling
- Detail of all isolation wall construction
- All mechanical drawings including HVAC drawings

Step 2: Proposal & License Agreement

When the cinema passes this preliminary review, THX will supply a certification proposal and certification agreement.

Step 3: Design Services

The THX Design Office works directly with the theater's staff, project architects, acoustical consultants, contractors and equipment installers. A unique THX design package of architectural and technical drawings is created specifically for each room.

Step 4: Testing

THX assists in scheduling a certification test date with a qualified representative once the theater is ready for testing. A pre-certification checklist is available to simplify the testing procedure.

Step 5: Certification

After passing all of the audio and image certification performance tests, the theater is fully THX Certified.

Audio Performance Testing

Auditorium Isolation: THX Certified Cinemas are quiet, with specially-designed wall structures to isolate the cinema from the outside world and allow the audience full movie immersion. Certification means no external noises higher than NC-30, and no pure tones audible from adjacent auditoriums.

Reverberation Control: Reverberation, the decay of sound after its source has stopped, often builds as it reflects off walls, floors and ceilings. THX will specify a maximum reverberation time based on the volume of each auditorium to optimize sound quality.

Reflections and Echoes: Discrete and direct reflections from any surface must be inaudible in the seating area of the auditorium otherwise sound fidelity suffers. This includes reflections from walls, doors, fixtures and port windows.

Sound Equipment: THX Approved Equipment, with established superior performance, is required in every THX Certified Cinema. The theater designer has choice of equipment manufacturer and model. Specific quantities are determined by THX and are included in the custom THX design package for each auditorium.

Rattles: Minimizing or eliminating rattles is a vital part of THX certification in order to keep non-movie acoustics at a minimum. Rattles can be caused by: metal lath, wire used to suspend building elements, screen frame or mounting hardware, limply suspended drywall, storage of loose material within the auditorium, HVAC diffusers and grilles, lighting cans, loose seating, doors and more.

Speaker Layout and Baffle Wall: The baffle wall, unique to every THX Certified Cinema, provides a solid, smooth and uninterrupted surface to reinforce sound. Specific speaker locations ensure even response and clearer audio throughout the auditorium.

Installation and Calibration: THX verifies all equipment is installed according to the supplied recommendations and that the sound level and frequency response match exactly to THX and industry specifications.

Image Performance Testing

Screen Placement: The placement of the cinema screen is important in every THX Certified Cinema. To ensure the best possible viewing experience, THX strongly recommends a 36-degree viewing angle from the farthest seat in the auditorium. In addition, THX routinely evaluates the entire seating area to ensure every person experiences optimum sightlines.

Projection Booth Placement: Location of the projection booth in relation to the screen is critical otherwise viewing issues may occur, including a severe keystone or trapezoid effect.

Image Quality: All aspects of the picture must meet THX and industry standards, so the image is as close as possible to what the filmmakers intended. This includes:

- Screen luminance
- Color calibration/accuracy
- Minimal jitter and weave
- Image contrast
- Focus resolution

Screen Performance: The screen must be acoustically transparent yet still accurately reflect the light supplied by the projector in order to present a life-like, bright image that draws in the viewer.

Image Size: In addition to a minimum acceptable viewing angle for those sitting in the back of an auditorium, THX optimizes the size of the image so that image cropping is minimized and viewers see the full image on the screen.

D-Cinema Assistance: THX also offers extensive support of D-Cinema installations, helping preserve image quality in the important digital transition. Services include:

- Installation & support
- Individualized booth analysis
- Site surveys
- Project planning and management
- Equipment rack assembly
- Presentation system maintenance
- Digital advertising system installation and service
- CompTIA Network+ Certified
- Recommendations for system improvements and efficiencies
- Education & training