

The Room Planning Guide: Home Theaters, Recording Studios and Dolby Atmos Rooms

What to decide, and in what order, before you buy a single piece of equipment.

I have designed and built rooms for artists including Aerosmith and Elton John, and for homeowners who simply want the best seat in the house. The rooms that perform best are planned in the same order every time: the room first, then the format, then the equipment. Most disappointing rooms are planned in reverse.

Use this guide as a working checklist with your architect, builder and family. Every item you settle here saves money and rework later.

David Frangioni

1. Start with the room, not the gear

The room is the largest component in any system. Its size, shape and construction decide how good the finished space can sound, no matter what you install.

- ☐ Measure length, width and height. Avoid a square room or dimensions that are equal or simple multiples of each other; they stack bass problems.
- ☐ Decide the main listening position early. It anchors speaker placement, screen size and seating.
- ☐ Plan isolation if sound must stay in (or out): decoupled walls, solid doors and sealed penetrations cost little during framing and a lot after.
- ☐ Set a background noise target. Quiet HVAC is the most overlooked detail in luxury rooms; aim for NC 25 or lower, and lower still for a studio.
- ☐ Confirm dedicated electrical circuits and conduit paths to every speaker, screen and equipment location.

2. Choose the format: what the speaker numbers mean

Layouts are written as ear-level speakers, then subwoofers, then overhead speakers. A 5.1.2 system has five ear-level speakers, one subwoofer and two overhead speakers. A 7.1.4 system has seven, one and four.

Dolby Atmos home layouts start at 5.1.2. In my experience 7.1.4 is where a reference room begins, and larger rooms benefit from 9.1.6 and beyond so every seat gets an even, convincing overhead field.

- ☐ Count your seats and rows. More rows usually means more surrounds and more overhead speakers.
- ☐ Plan two or more subwoofers. Multiple subs smooth bass across all seats, not just one.
- ☐ Mark overhead speaker locations before the ceiling is closed.

3. If music comes first, plan for two-channel too

Many of my clients listen to music more than they watch movies. A great two-channel system, two excellent speakers in the right positions with the right electronics, is still the most direct way to hear a recording the way it was made. A well-designed room can do both, as long as the stereo pair and the main listening seat are planned together.

- ☐ Decide whether the front left and right speakers will double as your stereo pair.
- ☐ Leave space behind and beside the front speakers; placement matters as much as the model.

4. Size the screen and the picture

From the main seat, the screen should fill roughly 36 to 40 degrees of your field of view, the range THX recommends for an immersive picture. Projection with a dedicated screen gives you size; a large flat panel gives you brightness in rooms with light. Video processing such as madVR Envy can lift a projector well beyond its stock picture.

- ☐ Choose projection or flat panel based on light control, not habit.
- ☐ Confirm seating distance and screen width together.
- ☐ Plan acoustically transparent screen material if speakers will sit behind it.

5. Treat the acoustics

Absorption controls reflections, diffusion keeps the room from sounding dead, and bass trapping handles the low end that causes most problems. Treatment can be invisible: fabric walls, custom panels and finished millwork all work.

- ☐ Treat first reflection points at the side walls and ceiling.
- ☐ Combine absorption with diffusion so the room stays lively.
- ☐ Budget for professional calibration after installation; measurement-based room correction makes a measurable difference.

6. Control, lighting and integration

The best room is the one your family can use without a manual. One-touch control of picture, sound, lighting and shades turns a technical space into a daily one. Systems such as Crestron, Savant and Lutron handle this when they are designed into the project from the start.

- ☐ Define three or four scenes, for example Movie, Music, Game and Clean-up.
- ☐ Locate the equipment rack with ventilation and service access.
- ☐ Plan network capacity for streaming, control and future upgrades.

7. Studios and Dolby Atmos mix rooms

A recording or mix room adds requirements a home theater does not have: accurate monitoring, extremely low noise, isolation between rooms and a layout built around the engineer. An Atmos music room needs a speaker layout and calibration that translate reliably to headphones, cars and living rooms.

- ☐ Define what will be recorded: vocals, drums, full bands or mixing only.
- ☐ Plan monitor positions symmetrically around the mix position.
- ☐ Decide on the immersive format before construction so overhead speakers are designed in, not added later.

8. Questions to ask any integrator or designer

- ☐ Which comparable rooms have you designed, and can I hear one?
- ☐ Who measures and calibrates the room after installation?
- ☐ How are acoustics, isolation and HVAC noise handled in your design?
- ☐ Who supports the system after handover, and how fast?

Ready to plan your room? Request a consultation with Frangioni Media at frangionimedia.com/contact. We design and build home theaters, recording studios and Dolby Atmos rooms across Miami and South Florida.

Further reading

[What do surround sound numbers mean? \(frangionimedia.com\)](https://frangionimedia.com)

[What is 2-channel audio? \(frangionimedia.com\)](https://frangionimedia.com)

[How a classic album gets remixed in Dolby Atmos \(frangionimedia.com\)](https://frangionimedia.com)

[Recording studio design with David Frangioni \(davidfrangioni.com\)](https://davidfrangioni.com)