The Home Theater Planning Guide

How to plan a home theater you'll actually love: the room, the seats, the screen, the speakers and the wiring, in the order we plan them in San Antonio homes

From KZ Audio & Video, home theater and low voltage specialists serving San Antonio and the Texas Hill Country since 1999.

Why this guide exists

A great theater is planned in a set order: room first, seats next, screen and sound around the seats, the wiring before the walls close, and the gear last. That order is the difference between a real theater and a TV in a spare room, and it costs nothing to follow.

This guide walks you through the plan in that order, the same way we do it in person on a free in-home consultation. Follow it and you'll make decisions you won't have to undo. There's a one-page checklist at the end to keep as you go.

Step 1: Start with the room

The room decides more than any single piece of equipment. Before anything else, get honest about the space.

- **Dedicated room or shared media room?** A dedicated room you can fully darken and control gives you the truest cinema experience. A media room that shares space with the rest of the house is more flexible and more social, and it can still be excellent. Neither is wrong. Decide which one you're building, because everything downstream depends on it.
- **Light control.** Can you get the room truly dark? Windows aren't a dealbreaker, but they change what you should buy (more on that under projector or TV).
- **Shape and dimensions.** Long rectangles are ideal. Note where the door, closet, and any soffits or beams are. Those shape where the speakers and screen can go.
- **Where the equipment will live.** Plan a spot for the electronics now: a closet, a cabinet, or a rack in an adjacent space. Deciding this early keeps wiring clean and the room quiet.

The one thing to do early: if you're building or renovating, plan the theater before the walls are closed. It is far cheaper to plan a theater into a room than to retrofit one later.

Step 2: Plan your seating first

Your seating layout drives the screen size, the speaker placement, and the whole design. So plan it early, not last.

- **How many seats, in how many rows?** One row keeps it simple. Two rows means you'll likely want a riser so the back row can see over the front.
- **How far back do people sit?** This single measurement, the distance from the seats to the screen wall, sets the right screen size. Measure it or estimate it now.
- **Risers.** A second row almost always needs a platform to lift it. Plan for it early because a riser affects wiring, lighting, and sometimes ceiling height.
- **Comfort is part of the experience.** Recliners, love seats, or a big sectional all work. This is a personal choice and a real part of the budget, so decide roughly what you want.

Nail down the seating and the rest of the design almost falls into place.

Step 3: Size the screen to your seats

Bigger is not automatically better. A screen that's too large for the room makes you turn your head to follow the action and puts every flaw on display.

The right size comes from how far back you sit. For a 4K picture, the sweet spot is a seat about 1 to 1.5 times the screen's diagonal away. Flip it around and the math is simple: a seat 10 feet (120 inches) back works with a screen of about 80 to 120 inches diagonal. Closer in that range feels more immersive; farther feels more relaxed. An older 1080p picture needs more room, 1.5 to 2.5 times the diagonal, because you'll see the pixels sitting close.

You don't have to do the math yourself. The point is that screen size flows from your seating distance, which is exactly why we planned the seats first. When we design your room, we size the screen so every seat is a good seat.

Step 4: Projector or TV?

Neither is "better." It depends on your room, and the right answer starts with your lighting.

- **Choose a projector and screen when** you can darken the room and you want that true, large-scale cinema feel. Nothing else gives you a 100-inch-plus picture that fills your vision. A room you can control is where a projector shines.
- **Choose a large TV when** the room has windows or daylight you can't fully block, or when you want maximum brightness and simplicity. Modern large TVs are bright enough to fight daylight, and for a media room that doubles as a living space they're often the smarter call.

Simple test: if you can control the light, lean projector. If you can't, lean TV. Don't put a projector in a sunroom.

Step 5: Design the sound

Sound is where the experience actually lives. A great picture with weak sound feels flat; good sound makes even a modest screen feel cinematic.

- **5.1** is the real entry point to surround: three speakers up front (left, center, right), two surrounds beside and slightly behind your seats, and a subwoofer. This is a genuine surround experience.
- **7.1** adds two more speakers at the back for a fuller, more enveloping sound. Worth it in a dedicated room with seating away from the back wall.
- **Dolby Atmos** adds overhead speakers so sound moves above and around you: rain, aircraft, a voice from upstairs. In a dedicated theater it's a real "wow." It is also the one thing you cannot add cleanly after drywall, so if you're building, at least run the ceiling wire even if you add the speakers later. A layout like 7.2.4 means seven speakers around you, two subwoofers, and four in the ceiling.

Two things to get right: **put real money into the center channel** (it carries most of the dialogue), and **size the subwoofer to the room**, or in a larger room plan for two, because bass is what you feel in your chest during a big scene.

Step 6: Pick your speaker types

The sound format tells you how many speakers. The speaker type tells you how they live in the room. There are five, and most theaters mix two or three.

- **In-wall.** Built into the wall and flush, with a grille you can paint to match. The front left and right usually sit at the left and right edges of the screen wall. Side surrounds in a living room work well at 6 to 7 feet high. Nothing sits on the floor or a shelf, which is why we use them in most dedicated theaters.
- **In-ceiling.** Built into the ceiling. This is where Dolby Atmos height speakers go, about 45 degrees in front of and 45 degrees behind your main seat, not straight overhead. In-ceiling speakers are also the usual choice for music in kitchens, covered patios and bedrooms. If you can't get into the ceiling, Atmos speakers that fire upward off the top of the front speakers are a compromise; a real ceiling speaker does it better.
- **On-wall.** A slim speaker that hangs on the wall surface, so there's no cutout. The wire still runs inside the wall to each speaker spot, so it needs the same prewire. One of our Stone Oak theaters runs Martin Logan on-wall speakers.
- **Bookshelf.** A compact box speaker on a stand, shelf or cabinet. Front left and right go about 3 to 6 feet from the center of the screen. No wall work, and easy to move or upgrade later, but it takes up shelf or floor space.
- **Floor-standing (tower).** A tall speaker that stands on the floor, placed like a bookshelf speaker, 3 to 6 feet from center. The bigger cabinet usually plays deeper and louder than a bookshelf speaker from the same line, and it needs floor space on both sides of the screen.

How to choose. A dedicated theater: in-wall and in-ceiling, so nothing clutters the room. A media room or living room: in-wall or on-wall up front, in-ceiling for Atmos. A room you can't open up, or a system you plan to take with you: bookshelf or tower. Whatever you pick, keep the center channel from the same family as the left and right speakers, so a voice sounds the same as it moves across the screen.

Step 7: Acoustics and lighting

This is the difference between a room with a big screen and an actual theater.

- **Acoustic treatment.** Bare walls and hard floors create echo that muddies dialogue. A little treatment (panels, carpet, soft furnishings) tightens everything up. A dedicated room benefits most.
- **Lighting.** Dimmable, controllable lighting sets the mood and cuts screen glare. Wall sconces and LED cove lighting look fantastic and let you see without washing out the picture. Plan lighting as part of the design, not an afterthought.
- **Wall color.** Darker walls and ceiling reduce reflected light bouncing back at the screen. It's a small choice that noticeably improves contrast.

Step 8: Run the low voltage before the walls close

If you're building or renovating, this is the cheapest and most important moment in the whole project. The low voltage comes first: speaker wire, network and the wire path to the screen go in at rough-in, before drywall. The speakers, projector and screen go in after the walls are finished. Every wire you run now is a wire you never have to fish through a finished wall later.

At minimum, plan to run:

- Speaker wire to every speaker location, including in-ceiling spots for Atmos even if you skip those speakers for now
- Two subwoofer runs in a dedicated theater
- A conduit or wire path from your seating or equipment area to the screen wall
- Projector power and signal to the ceiling mount point
- A hardwired network drop near the equipment
- Power where the screen, projector, and equipment will live

Our free **New Construction Prewire Guide** covers this stage room by room, for the whole house: kzaudioandvideo.com/new-construction-prewire-guide. The most common regret we hear is from a homeowner who "didn't think they'd want it" and now lives with visible cords or an opened wall.

Step 9: Control and automation

A theater you can't easily operate is a theater nobody uses. The goal is one button, or one tap, that dims the lights, drops the screen, fires up the projector, and starts the movie.

- For a simpler setup, a good universal remote ties the pieces together.
- For a media room that's part of a larger smart home, a programmed home control system puts everything, lights, shades, audio and video, onto one screen your family and your guests can actually use.

Decide how hands-on you want to be. Convenience is what turns a room you built into a room you use every week.

Step 10: Calibration, the step that finishes the job

Out of the box, no projector, TV, or speaker system is tuned to your specific room. Calibration adjusts the picture (color, brightness, contrast) and the sound (levels, distances, room correction) so the system performs the way it was designed to.

It's the least visible step and one of the biggest differences you'll hear and see. When you're choosing anyone to do your install, ask them whether they calibrate the picture and the sound, and how.

The mistakes we see most often

1. **Buying gear before planning the room.** Order matters. Room, seats, screen, sound, then gear.
2. **Mounting the screen too high.** The center of the screen should be near seated eye level, not up by the ceiling.
3. **Skipping the low voltage stage.** Adding wire after drywall costs far more than running it early.
4. **Picking speakers before the room.** In-wall and in-ceiling speakers need their wire in place before drywall, so the speaker type is a framing decision, not a shopping decision.
5. **Undersizing the subwoofer.** Bass is felt, not just heard. Don't starve it.
6. **Never calibrating.** The most expensive gear, untuned, underperforms a modest system that's dialed in.
7. **Waiting too long to involve AV.** The earlier we're in the conversation, the more we can plan for, and the less you pay to fix later.

From the field: when a radio station came through the surround sound

In one living room we wired for surround sound, a radio station came through the speakers every time the receiver was on, even with it set to the TV input. It sounded like an AM station, and an AM radio tower stands just outside that neighborhood. In another house there, our tone tester (the tool we use to trace wires) picked up a radio broadcast every time we pressed its button. Yet that house, which we believe sits a little closer to the tower, ran surround sound with no trouble.

What we tried:

- A couple of different receivers
- An electrician's check of the house's ground (it tested good)
- Running it with and without the ground
- Noise filters
- Clip-on ferrite chokes on the speaker wires (they did nothing)

Nothing stopped it. So we changed the system instead of fighting the house: a Sonos soundbar with Sonos rear speakers, surround sound with no receiver at all. That ended it.

A second house: one under-cabinet light. In another home, an older stereo with two tower speakers picked up interference on the radio whenever one under-cabinet light was on. Those lights are low voltage,

and their transformer sat in the attic, where the speaker wires also ran. When the owner streamed music through the same stereo, using a streaming device we added, the noise never showed up. Only the radio did it, and only with that one light on. Clip-on chokes on the speaker wires did nothing there either. The fix was simple: leave that light off while the radio is on.

The lesson: in both houses the clip-on chokes did nothing. What worked was a different system in one and a light switch in the other, not a family living with the noise.

How KZ Audio & Video plans your theater

We've been designing and installing home theaters in San Antonio and the Hill Country since 1999, and every install is done by our own team, never subcontractors.

1. **Free in-home consultation.** We come to you, look at the actual room, and talk through how you want to use it. No pressure, no pitch.
2. **Custom design.** We plan the room, seats, screen, and sound as one system, built around your space and your budget, not a package we're pushing.
3. **Low voltage first.** In a new build, we run the wire at rough-in, before the drywall.
4. **Clean installation.** Wires hidden, everything level, everything labeled.
5. **Calibration.** We tune the picture and the sound to your specific room.
6. **The walkthrough.** We don't leave until everything works and you know how to use it.

We're rated 5.0 stars on Google by San Antonio homeowners.

Ready to plan your theater? Call or text Kelly at **(210) 981-4098**, or visit **kzaudioandvideo.com** to book your free in-home consultation.

Your home theater planning checklist

Keep this handy as you plan.

The room

- ☐ Dedicated room or shared media room decided
- ☐ Light control assessed (can it get dark?)
- ☐ Equipment location chosen

The seating

- ☐ Number of seats and rows decided
- ☐ Seating distance to the screen wall measured
- ☐ Riser planned (if a second row)

Screen and picture

- ☐ Screen size matched to seating distance (4K: about 1 to 1.5 times the diagonal)

- ☐ Projector or TV chosen for your room's lighting

Sound

- ☐ Surround format chosen (5.1, 7.1 or Atmos)
- ☐ Speaker types chosen (in-wall, in-ceiling, on-wall, bookshelf or tower)
- ☐ Center channel and subwoofer prioritized
- ☐ Ceiling wire planned if Atmos is a maybe

Room finish

- ☐ Acoustic treatment considered
- ☐ Dimmable lighting planned
- ☐ Wall and ceiling color considered

Before the walls close (if building)

- ☐ Speaker wire run to every location
- ☐ Two subwoofer runs in a dedicated theater
- ☐ Wire path to the screen wall
- ☐ Network drop and power at the equipment location
- ☐ Read the New Construction Prewire Guide (kzaudioandvideo.com/new-construction-prewire-guide)

Before you hire anyone

- ☐ Confirmed they use their own team, not subcontractors
- ☐ Confirmed they calibrate picture and sound
- ☐ Booked a free in-home consultation with KZ

KZ Audio & Video. In the AV business since 1999. No subcontractors, ever.