CAPABILITIES

Vol. 01

Schaeffer *Audio*

Bespoke high-fidelity systems and listening-room engineering

NEW YORK · HAMPTONS · LOS ANGELES · MIAMI

BY REFERRAL AND INQUIRY

§ FOREWORD

We design, measure, install, and tune bespoke high-fidelity systems for a small number of private clients each year.

Single rooms. Full residences. Dedicated listening environments.

ORIGIN

A practice of Schaeffer Engineering Group, New York.

§ 01 THE PRACTICE

An engineering firm, applied to *private rooms.*

Schaeffer Audio is the private-residential practice of Schaeffer Engineering Group. The parent firm builds audio, lighting, and acoustic systems for hospitality and nightlife in New York. The residential practice carries the same engineering methodology to a different client and a different room.

We take on a small number of engagements each year. New work is by referral and direct inquiry. Components are specified by program — by what the room and the listener actually need — rather than by allegiance to a manufacturer or a fixed set of dealer relationships.

PRACTICE FOUNDED	RESIDENTIAL ENGAGEMENTS	GEOGRAPHIES
2015	By Referral	NY · Hamptons · LA · Miami

§ 02 MEASUREMENT

The room, *measured first.*

Every engagement begins with measurement. Before a single component is specified, we characterize how the room actually behaves — modal response, decay times, isolation between adjacent spaces, structure-borne transmission, ambient noise floor at the listening position.

The same methodology used to answer to municipal code in hospitality is deployed in a residence to answer a different question: what is the room doing to the music before the music reaches you?

Recommendations are room-first — design changes, treatment, isolation strategy — before they are component-first. Speakers and electronics are specified to the room, not selected from a brand catalog.

MEASUREMENT CAPABILITIES

CLASS	IEC 61672-1 Class 1 sound level metering
MODAL	Room mode mapping; RT60 across octave bands
ISOLATION	Airborne and impact transmission; structure-borne
TUNING	Impulse response, time-aligned multi-source calibration
OUTPUT	Written report with prioritized recommendations

§ 03 DISCIPLINES

Six disciplines, *one room at a time.*

01 Dedicated Listening Rooms

02 Whole-Residence Audio

03 Home Theater

04 Acoustic Treatment & Room Design

05 Integration with Existing AV

06 Calibration & Ongoing Tuning

§ 03 DISCIPLINES · 01–03

01

Dedicated Listening Rooms

Purpose-built rooms engineered around the listener. Modal analysis, treatment, and component specification developed together as a single design — the room and the system as one instrument.

FROM PLAN STAGE

02

Whole-Residence Audio

Distributed systems designed to disappear into the architecture. Zoned playback, source management, and discreet integration with millwork, ceilings, and wall assemblies. No visible kit unless you want it visible.

NEW BUILD & RENOVATION

03

Home Theater

Immersive playback environments built to commercial reference standards — calibrated screen geometry, controlled-acoustic enclosures, theatrical-grade processing. Sized for the room, not the brochure.

REFERENCE / IMMERSIVE

§ 03 DISCIPLINES · 04–06

04

Acoustic Treatment & Room Design

Treatment integrated into the architecture — diffusers behind veneer, bass traps in millwork, absorbers in soffits. Coordinated with your architect and interior designer so the acoustic work reads as design, not equipment.

DESIGN COORDINATION

05

Integration with Existing AV

Audio brought up to a separate, higher standard alongside an existing Crestron, Control4, or Savant ecosystem. We coordinate with your integrator; we do not replace them. Audio remains its own signal path and its own engineering responsibility.

COORDINATION SCOPE

06

Calibration & Ongoing Tuning

Annual measurement and re-tuning. Rooms change — furniture moves, drapery is added, gear is swapped. We return on a schedule and keep the system performing the way it did at handover. By retainer.

CONTINUING SERVICE

§ 04 TECHNOLOGY · AUDIO QUALITY

The recording, *at its native resolution.*

Digital audio quality starts with two numbers — bit depth and sample rate. Bit depth sets dynamic range and noise floor; sample rate sets the highest frequency the file can carry. CD-quality is 16-bit at 44.1 kHz. High-resolution recordings extend both substantially, with 24-bit at 96 or 192 kHz now common in mastering and release.

Whether the additional resolution survives the chain between the file and the listener is the audible question. In practice it often does not — most playback paths re-sample the signal at a fixed lower rate before the converter sees it. We design the chain to be bit-perfect from source to digital-to-analog conversion, so the recording arrives at the DAC at its native rate, with no unrequested processing.

DSD, native PCM at 192 kHz, and lossless streaming pass through unaltered. Digital signal processing — room correction, time alignment, crossover work — happens at intentional points only, at known precision, with documented parameters.

RESOLUTIONS HANDLED NATIVELY

PCM	16/24-bit at 44.1, 48, 88.2, 96, 176.4, 192 kHz
HIGH-RATE	24/32-bit at 352.8 and 384 kHz where source supports
DSD	DSD64, DSD128, DSD256 (DoP and native, depending on DAC)
STREAMING	Qobuz Hi-Res, Tidal Max, Apple Music Lossless — at source rate
PATH	Bit-perfect transport; intentional DSP only; documented and recoverable

§ 04 TECHNOLOGY · REMOTE SERVICE

Service without *a service visit.*

Once a system is installed and tuned, ongoing service rarely requires anyone in your home. We deploy a hardened, encrypted access path to the audio system that lets us read measurement data from in-room calibration microphones, adjust DSP and digital room-correction settings, diagnose component faults, and apply manufacturer firmware updates — all without disturbing the system or the household.

For clients whose homes are not casual environments — where every visit is a coordination — this is the difference between an annual tuning being a one-week project and a one-hour remote session. It is also the difference between a small problem becoming a large one and a small problem being resolved before you notice it.

The remote path reaches only the audio system.
Nothing else in the residence is visible to us.

REMOTE CAPABILITIES

DIAGNOSIS	Component status, fault detection, predictive monitoring
TUNING	DSP parameters, room correction, level and EQ at the seat
UPDATES	Firmware and processor updates, applied during low-use windows
ACCESS	Hardware-authenticated; logged and reviewable on request

§ 05 COMPONENTS

Specified by program, *not by allegiance.*

We are not a dealer. We do not sell brands. We have working relationships with the manufacturers whose products best serve a given room, and the relationship list changes as the work demands.

Reference-grade loudspeakers, electronics, sources, and acoustic products are specified case by case. The right room may call for horn-loaded efficiency. The next may call for full-range planar. Most call for something in between, with a careful electronics chain matched to the speaker's character and the room's behavior.

Where a client has existing components they want carried forward, we measure them in the new room and design around them honestly. Where new components are specified, we provide the rationale in writing — what was considered, why it was selected, what it does for the room and the program.

The room is the first component.

Everything else is in service of it.

§ 06 SELECTED WORK

Recent engagements, *held in confidence.*

■ 01 CONFIDENTIAL

Townhouse Listening Room

Upper East Side · New York

SCOPE	Dedicated room, full design
TREATMENT	Millwork-integrated
DISCIPLINE	Acoustics · Audio
YEAR	2024

■ 02 CONFIDENTIAL

Oceanfront Residence

East End · Long Island

SCOPE	Whole-residence, six zones
TREATMENT	Architectural integration
DISCIPLINE	Audio · Theater
YEAR	2024

■ 03 CONFIDENTIAL

Hillside Estate

Bel Air · Los Angeles

SCOPE
Reference theater, listening room

TREATMENT	Custom enclosure
DISCIPLINE	Theater · Acoustics
YEAR	2025

■ 04 CONFIDENTIAL

Bayside Penthouse

Sunset Harbour · Miami

SCOPE
Distributed audio, terrace zone

TREATMENT
Marine-rated, weatherized

DISCIPLINE	Audio · Integration
YEAR	2025

PROJECT DETAILS, PHOTOGRAPHY, AND REFERENCES PROVIDED IN CONVERSATION.

§ 07 ENGAGEMENT

How a project *begins.*

STEP 01

Inquiry

A short conversation. We discuss the room or residence, the program, the architectural context, and the timeline. If we are the right fit, we schedule a site visit. If we are not, we say so and recommend who is.

STEP 02

Site Visit & Measurement

A half-day to full-day visit. Measurement, photography, and conversation with you, your architect, and your interior designer if relevant. Output is a written report with findings and a fixed-scope proposal for the engagement.

STEP 03

Design, Install, Tune

Design and component specification, coordination with your build team, on-site installation and commissioning, and final calibration at the listening position. Continuing service is offered by retainer.

§ 08 INQUIRY

Begin a *conversation.*

We take on a small number of residential engagements each year. New work is by referral and direct inquiry. The first conversation is always private and carries no expectation.

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Schaeffer
Audio

COLOPHON

Schaeffer Audio is a private-residential practice of Schaeffer Engineering Group, Brooklyn, New York. Capabilities document, Vol. 01.

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