



ACT INSTALLS — FOR BUILDERS & ARCHITECTS

Equipment Room Guide

Sizing, power, cooling, and access standards for the central equipment room that every whole-home system depends on.

An undersized, unventilated, or inaccessible equipment room is the single most common source of change orders and callbacks on high-end technology installs. This guide sets out the sizing, power, cooling, and access standards our engineering team applies during ACT Blueprint™ planning, so the room is specified correctly on the first set of drawings rather than value-engineered after rough-in. Get this room right and everything downstream — Invisible Technology™ throughout the home, reliable networking, quiet mechanical operation — follows.

Use these standards as a starting checklist for schematic design, then loop in your Luxury Technology Advisor for a project-specific review.

Room Sizing Relative to Home Size

Equipment room size should scale with the home's square footage and system complexity — it is not a leftover closet. Plan the room early enough that it can grow with the scope of work rather than constraining it.

- ☐ Entry to mid-size homes: a dedicated room sized for a single free-standing rack enclosure with full clearance on all access sides.
- ☐ Larger homes and ACT Estate™-scale properties: plan for multiple racks, structured wiring panels, and reserved capacity for future expansion.
- ☐ Reserve wall length in proportion to anticipated rack count, not just current scope of work.
- ☐ Avoid combining the equipment room with mechanical or HVAC closets that already run near their heat-load capacity.
- ☐ Locate the room centrally in the home to minimize cable run lengths to distribution points.

Power and Circuits

- ☐ Dedicated 20A circuits for equipment loads, isolated from motor and compressor loads on the same panel.
- ☐ Sufficient duplex outlets spaced around the rack perimeter, not a single outlet strip.



- ☐ Panel space and conduit stub-ups reserved for future circuits as systems expand.
- ☐ Whole-room surge protection at the panel, in addition to point-of-use protection.
- ☐ Battery backup provisions sized to the network and control equipment that must stay online during a power event.

Cooling and Ventilation

Networking, video processing, and amplification equipment generate continuous heat load that passive louvered doors cannot manage at scale. Treat the equipment room as its own conditioned space, engineered for both temperature and sound.

- ☐ Independent HVAC zone or dedicated mini-split sized to the equipment's actual heat output, not the room's square footage alone.
- ☐ Positive airflow path with dedicated intake and exhaust through the rack, not just a ceiling fan.
- ☐ Temperature and humidity monitoring with remote alerting, coordinated through The Estate Network™.
- ☐ Fan and blower selection follows Quiet Technology™ principles so equipment noise doesn't carry into adjacent living space.
- ☐ Sealed room boundary — gasketed door, sealed penetrations — to control dust and humidity infiltration.

Rack Standards

All rack-mounted equipment is specified and organized to The Signature Rack™ standard, which keeps every install serviceable, labeled, and ready for future upgrades without a teardown.

- ☐ Standard rack unit width and depth with clear front and rear service clearance — minimum 30 inches recommended on the service side.
- ☐ Vertical and horizontal cable management panels separating power, low-voltage, and fiber pathways.
- ☐ Dedicated grounding and bonding bar independent of general electrical grounding.
- ☐ Consistent labeling standard for every port, cable, and circuit at both ends.

Access and Door Clearance

- ☐ Door width sufficient to move a fully assembled rack enclosure in and out without disassembly.



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- ☐ Solid-core door where sound isolation is the priority; vented or louvered only where the cooling plan accounts for it.
 - ☐ Dedicated overhead lighting on its own switch, independent of the home's automated lighting scenes.
 - ☐ Static-dissipative, sealed flooring — avoid carpet.
 - ☐ Room location away from plumbing runs, water heaters, and other moisture sources overhead or adjacent.

Questions on a specific floor plan or room location — reach out to ACT Installs and we'll review it with you.