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Replacing a Legacy Button Intercom — What to Expect

The most common retrofit scenario — documented step by step.
Covers infrastructure assessment, hardware compatibility, installation timeline, and resident onboarding.

14 pages · 11 min read · PDF

INTRODUCTION

Why This Is the Most Common Retrofit Scenario

Of every retrofit scenario a property manager encounters, replacing an old wired "button" intercom — the panel with a call button per unit, wired to a handset or buzzer-phone inside each apartment — is by far the most common. These systems were installed anywhere from 15 to 40+ years ago in a large share of existing apartment and condo buildings, and they typically share the same limitations: audio only, no mobile access, no visitor log, and wiring that has degraded quietly for decades.

Property managers often assume this old wiring is the obstacle to upgrading — that replacing the system means rewiring every unit, which sounds expensive and disruptive enough to keep delaying the decision. In most cases, that assumption is wrong, and understanding why is the key insight of this guide.

THE GOOD NEWS UP FRONT

Modern video and QR-based intercoms typically route the call to a resident's smartphone over WiFi or cellular data — not through the old in-unit wiring at all. That means the decades-old wire running to each apartment is usually irrelevant to the upgrade, even if it's degraded or no longer functional. What actually matters is the wiring and infrastructure at the entrance panel itself, which this guide walks through step by step.

Understanding What You Have

Before any assessment, it helps to understand what a legacy button intercom actually consists of, since that shapes what the retrofit does and doesn't need to touch.

- ✓ **An entrance panel** with a directory and a call button per unit, mounted at the building entrance or gate.
- ✓ **A dedicated wire run to each unit** — typically a low-voltage pair, sometimes telephone-style wiring — connecting the panel to an in-unit handset, wall-mounted intercom station, or simple buzzer-phone.
- ✓ **A door release relay**, triggered either from the panel itself or from the resident's in-unit handset, which unlocks the door or gate.
- ✓ **A basic power supply**, usually a simple step-down transformer providing low-voltage AC to the system — sized for the original audio-only equipment, not for anything more demanding.

Notice that nothing in this list involves video, network connectivity, or mobile access — which is exactly why a straight one-for-one wiring reuse across the whole system usually isn't the plan, and isn't necessary.

STEP 1

Infrastructure Assessment

A proper assessment focuses almost entirely on the entrance panel location and the door hardware, not on the wiring running to each individual unit.

- ✓ **Panel location and backbox condition** — whether the existing backbox can accommodate a new panel's dimensions, or whether an adapter plate or new backbox is needed.
- ✓ **Conduit condition from the panel to a network or demarcation point** — most buildings already have a conduit path here, which can typically carry new network cabling even if it currently carries only the old audio wiring.
- ✓ **Power availability at the panel** — confirming whether existing power is sufficient for new hardware, or whether a new circuit or Power over Ethernet source is needed nearby.
- ✓ **Door strike or gate relay wiring**, which is usually the one piece of existing wiring that does get reused directly, since it's a simple low-voltage circuit largely independent of the audio/video system above it.
- ✓ **Network connectivity options** at or near the panel location, for whichever platform is ultimately selected.

STEP 2

Hardware Compatibility — What Gets Reused

Component	Typically Reused?	Why
Wiring to each individual unit	No	Modern systems route calls to a resident's phone, bypassing in-unit wiring entirely
Entrance panel backbox / mounting location	Often, with an adapter plate	Physical location usually works; exact dimensions may require an adapter
Conduit from panel to a network point	Usually	The physical pathway is typically reusable even if the cable inside it needs upgrading
Door strike / gate relay wiring	Usually	A simple, largely independent low-voltage circuit
Original power transformer	Rarely, as-is	Usually undersized for new hardware; typically upgraded or supplemented

This is why the in-unit wiring condition, which is usually the biggest fear when a property manager considers this project, is rarely the deciding factor in cost or feasibility.

STEP 3

Installation Timeline

For a single-entrance building with one panel, this is typically a one- to three-day physical installation, separate from resident onboarding.

Day	Typical Activity
Day 1	Remove old panel, prepare backbox/adapter, run or verify network cabling to the panel location
Day 2	Install new panel hardware, connect door strike/relay wiring, confirm power
Day 3	Network configuration, platform setup, and testing of the door release and call functions

Properties with multiple entrances or secondary gates should expect proportionally more time, though installation at each additional point is typically faster than the first, since the network and platform configuration work is already done.

STEP 4

Resident Onboarding

Because a legacy button intercom involves no app and no resident-facing technology beyond a wall-mounted handset, this is often residents' first experience with any digital access system — which makes onboarding especially important to get right.

- ✓ **Set expectations before installation day.** Residents should know in advance that the old buzzer-phone in their unit will stop working and be told what replaces it.
- ✓ **Offer in-person activation help,** since residents unfamiliar with app-based systems benefit significantly from a staff member walking them through the first setup.
- ✓ **Explain the new visitor experience clearly** — how a guest will now reach them (video call to their phone, or a QR code sent in advance) since it's a meaningfully different experience than pressing a buzzer.
- ✓ **Identify residents who may need extra support,** particularly older residents or those less comfortable with smartphones, and plan additional one-on-one time for them.

See our Multifamily Operator's Playbook for a full resident app adoption framework that applies directly to this transition.

What Happens to the Old In-Unit Hardware

- ✓ **In most cases, the old handset or buzzer-phone is simply left in place, disconnected,** rather than physically removed from each unit — removal would require entering every apartment, which is rarely worth the disruption for a piece of equipment that's now inert.
- ✓ **The old wiring behind walls is typically abandoned in place** rather than pulled out, following standard low-voltage industry practice, since removal would require opening finished walls with no functional benefit.
- ✓ **If a resident specifically requests removal** of the old unit for cosmetic reasons, this can usually be accommodated as a separate, optional request rather than a default part of the installation.
- ✓ **The old entrance panel itself** is removed as part of the new installation, since it occupies the same physical location as the replacement.

Common Surprises During Installation

- ✓ **Mislabeled or outdated unit directories.** Decades of resident turnover often leave the panel directory out of sync with who actually lives where — this is a good opportunity to correct it during the transition.
- ✓ **A non-functional door strike relay,** discovered only once the new system attempts to trigger it — this is unrelated to the intercom itself and may need separate electrical attention.
- ✓ **Insufficient conduit capacity** if the existing pathway is smaller than expected or already carries other building wiring, which may require a supplemental small conduit run.
- ✓ **Power availability gaps,** if the panel location has no nearby outlet or circuit beyond the original low-voltage transformer.
- ✓ **Weak WiFi or cellular signal** at the panel location itself if the platform depends on it for connectivity — worth testing during the assessment, not after installation.

None of these are unusual or catastrophic — they're simply the reason a proper infrastructure assessment (Step 1) matters more than assuming a like-for-like swap.

Cost Factors Specific to This Scenario

Because most of the in-unit wiring isn't part of the project, the cost of this specific retrofit scenario is driven primarily by conditions at the entrance panel rather than by the number of units in the building.

- ✓ **Backbox or mounting adapter needs**, if the new panel's dimensions differ significantly from the old one.
- ✓ **Network cabling from the panel to a network closet or gateway device**, if the existing conduit needs new cable pulled through it.
- ✓ **Power supply upgrades**, if the original transformer can't support the new hardware's requirements.
- ✓ **Door strike or relay repair**, if this component is found to be non-functional during installation — a pre-existing issue independent of the intercom itself, but often discovered during this project.
- ✓ **Number of separate entrance panels**, since each additional entry point adds its own assessment and installation cost, even though software licensing is usually priced per unit rather than per panel.

TIMELINE

Full Project Timeline at a Glance

Phase	Typical Duration
Infrastructure assessment	1 site visit, results within a few days
Contract and scheduling	1–2 weeks
Physical installation (single entrance)	1–3 days
Platform configuration and testing	Same day as installation, typically
Resident onboarding period	1–2 weeks, with in-person support recommended

Total elapsed time from initial assessment to a fully onboarded resident base is typically 3 to 6 weeks for a single-entrance building, most of which is scheduling and resident onboarding rather than the physical installation itself.

Common Questions About This Retrofit

Q

Do you need to run new wire to every unit?

Almost never. Modern systems route the call to a resident's phone rather than an in-unit handset, so the old per-unit wiring is typically left in place and simply unused.

Q

What if our building's wiring is very old or in poor condition?

Since the in-unit wiring generally isn't reused, its condition rarely affects feasibility. What matters is the condition of the wiring and conduit at the entrance panel itself.

Q

Will residents need to be home for installation?

No — since the work happens at the entrance panel, not inside individual units, residents don't need to be present for the physical installation.

Q

What if a resident doesn't have a smartphone?

Ask any platform you're evaluating whether a physical credential or alternative access method remains available for residents who prefer or need one.

Checklist and Key Takeaways

- ✓ Infrastructure assessment scheduled, focused on the entrance panel and door relay, not in-unit wiring
- ✓ Backbox and mounting compatibility confirmed for the new panel
- ✓ Conduit and network connectivity at the panel location verified
- ✓ Power supply requirements confirmed against the new hardware's needs
- ✓ Door strike or relay tested for function before assuming it will simply carry over
- ✓ Resident communication planned, including clear explanation of the new visitor experience
- ✓ In-person onboarding support scheduled, especially for residents less comfortable with apps
- ✓ Plan for old in-unit hardware confirmed — typically left in place, disconnected

The single most important thing to take from this guide: the decades-old wiring running to each apartment, which is usually what makes a property manager assume this project will be disruptive and expensive, is typically irrelevant to a modern intercom upgrade. The real work happens at the panel.

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