

THE FIRE ALARM EXPERT

8 Mistakes Electricians Make on Fire Alarm Installs (NYC Code)

Quick-reference guide for electricians crossing into fire alarm | @thefirealarmexpert

QUICK REFERENCE — THE 8 MISTAKES AT A GLANCE

#	Mistake	Quick Fix
1	Class B wiring when Class A is specified	Read the design documents. Class A = 4-wire return loop.
2	Wrong wire type or gauge	Use listed fire alarm cable: FPLP / FPLR / FPL. Check panel manufacturer specs.
3	Device placement by instinct, not NFPA 72	Follow Chapter 17 spacing rules and the approved device schedule.
4	No FDNY filing or S97 certificate	File before work begins. Get S97. Use a licensed fire alarm engineer.
5	Fire alarm wire mixed with power circuits	Dedicated conduit only. NEC Article 760 requires separation.
6	Calling for inspection without full device test	Complete 100% device test and Record of Completion first.
7	No panel programming knowledge	Learn the panel platform. This is not optional to complete the job.
8	Underpricing using electrical templates	Price separately: add commissioning, programming, compliance overhead.

PRE-JOB SELF-ASSESSMENT CHECKLIST

Check every box before starting a fire alarm install in NYC

✓	Pre-Job Checklist Item
☐	My company is registered with FDNY as a fire alarm contractor
☐	I hold a current S97 Certificate of Fitness (or the tech on site does)
☐	Engineered drawings with PE stamp have been filed and approved with FDNY
☐	I have read the approved drawings and confirmed circuit classification (Class A or B) for every circuit
☐	I have confirmed the correct wire type (FPLP/FPLR/FPL) for each area of the installation
☐	I have confirmed conductor gauge meets panel manufacturer specifications for each circuit
☐	I have a dedicated conduit path for fire alarm wiring that does not share runs with power circuits

☐	I understand the device placement requirements from NFPA 72 Chapter 17 and the approved design
☐	I have programming access and credentials for the specific panel being installed
☐	I have a blank NFPA 72 Record of Completion form ready for the acceptance test
☐	My labor estimate includes commissioning, programming, testing, and documentation time
☐	My pricing includes FDNY filing cost, engineering drawing cost, and compliance overhead

CODE AND STANDARDS REFERENCE

Reference	Topic	Key Rule
NFPA 72 Ch. 12	Circuit classification	Class A: loop return required. Class B: end-of-line resistor.
NFPA 72 Ch. 17	Initiating device placement	30-ft smoke spacing; correction factors for slope, beams, HVAC
NFPA 72 Ch. 18	Notification appliance placement	Candela levels, ceiling height, spacing per occupancy type
NFPA 72 Ch. 14	Acceptance testing	100% device test + Record of Completion before final inspection
NEC Article 760	Fire alarm wiring	Separation from power circuits; listed cable required
FDNY Title 3, Rule 8	NYC fire alarm rules	Company registration, S97 COF, engineered drawings required
NYC BC Section 907	NYC Building Code	Local amendments to NFPA 72 for specific occupancy types
Panel Manufacturer	Wiring specs	Gauge, insulation, max circuit resistance — varies by panel model

5 PRO TIPS FROM 25 YEARS IN NYC FIRE ALARM

TIP 1: Always obtain the approved FDNY drawings before you price the job. The circuit classification, device schedule, and cause-and-effect matrix are in those drawings — and they control your labor estimate.

TIP 2: Build your acceptance test into the schedule as a formal phase of the project, not an afterthought. Budget 1 day of testing and documentation for every 100 devices on the job.

TIP 3: Get trained on at least one major panel platform — EST3, Simplex 4100ES, or Notifier NFS2. Panel programming knowledge is the single highest-value technical skill in fire alarm and it is what clients pay a premium for.

TIP 4: In NYC, your relationship with the FDNY inspector matters. Know the process, show up with clean documentation, and never call for inspection until you are 100% ready. A good track record with FDNY makes every project move faster.

TIP 5: When you transition from electrical to fire alarm, do not try to compete on price. Compete on compliance knowledge and documentation. Clients who have been burned by contractors who could not pass inspection will pay more for someone who can.

RESOURCE ROADMAP — YOUR NEXT STEPS

Get Licensed	Get Certified	Build the Business
• FDNY S97 Certificate of Fitness • FDNY Company Registration • NYS 81-Hour Fire Alarm License Course (FireTech Licensing Academy) • NYS Low Voltage License	• NICET Level I — Fire Alarm Systems • NICET Level II (after 1 yr field exp.) • EST3 Rule Architect Training Series (Fridays 7PM — link in bio) • Panel manufacturer training (Edwards, Simplex, Notifier)	• Fire Alarm Business Blueprint (9-step business system) • Secure It Securities — fire alarm monitoring & contracting • Government contracting: MWBE, DBE, 8(a) certification • Skool community for fire alarm business owners