

**Fire Chief Brian Rich  
Dunstable Fire Department  
(978) 649-6661**

**Guidelines for Smoke and Carbon Monoxide Alarm Requirements – One and Two Family Dwellings**

	Before 1975	1975 - AUG 27, 1997	AUG 27, 1997 – 2007	JAN 2008 – FEB, 2011	FEB 2011 – Present
<b><i>SMOKE DETECTOR POWERED BY:</i></b>					
Battery Operated	10yr Sealed non-rechargeable / non-replaceable battery	Not Allowed	Not Allowed	Not Allowed	Note Allowed
Hardwired, Interconnected	Allowed	Required	Not Allowed	Not Allowed	Not Allowed
Hardwired, Interconnected w/ Battery Back – Up	Recommended	Recommended	Required	Required	Required
<b><i>TYPE OF SMOKE DETECTOR</i></b>					
Outside 20 feet of kitchen or full bathroom	Photoelectric	Photoelectric Or Ionization	Photoelectric Or ionization	Photoelectric or Dual Detector*	Photoelectric
Within 20 feet of a kitchen or full bathroom	Photoelectric	Photoelectric Or Ionization	Photoelectric	Photoelectric	Photoelectric
<b><i>CO DETECTORS: MUST BE IN THE HALLWAY, OUTSIDE THE SLEEPING AREA, WITHIN 10 FT OF EACH BEDROOM DOOR</i></b>					
Battery or Plug-In w/ Battery Back-up	Allowed	Allowed	Allowed	Not Allowed	Not Allowed
Hardwired, Interconnected w/ Battery Back-Up	Allowed	Allowed	Allowed	Required	Required
<b><i>LOCATIONS REQUIRED: ALL SMOKE DETECTORS MUST BE CEILING MOUNTED</i></b>					
Finished or Habitable basement	Smoke / CO	Smoke / CO	Smoke / CO	Smoke / CO	Smoke / Co
Every Habitable Level	Smoke / CO	Smoke / CO	Smoke / CO	Smoke / CO	Smoke / CO
Base of Stairs	Smoke	Smoke	Smoke	Smoke	Smoke
Outside each sleeping area (Hallway)	Smoke / CO	Smoke / CO	Smoke / CO	Smoke / CO	Smoke / CO
Inside Every Bedroom	Not required	Not required	Smoke	Smoke	Smoke
Finished Attic (Habitable)	Smoke / CO	Smoke / CO	Smoke / CO	Smoke / CO	Smoke / CO
Garage (Attached)	Not Required	Not Required	Not Required	Heat Detector	Heat Detector

**Key Points**

- A dual detector consists of one detector with both photoelectric and ionization technology
- Low Voltage fire warning systems are exempt from the dual detector technology requirement
- **COMINATION SMOKE AND CARBON MONOXIDE ALARMS MUST HAVE VOICE FEATURES.**
- **REMINDER: ALL DETECTORS MUST BE LESS THAN 10 YEARS OLD**

## Detector Information

Photoelectric Smoke Detector



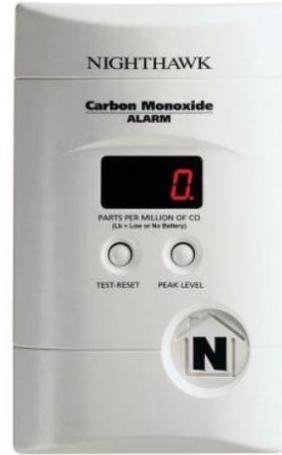
Smoke Detector: Battery Operated



Heat Detector



Carbon Monoxide Detector (CO)



Combination Smoke / CO Detector



### Useful Information to Keep in Mind:

- Garage heat detector: Must be hardwired and interconnected with or without battery backup.
- The use of Fake smoke during a test is not recommended
- FMO recommends test smoke / CO monthly and replace batteries twice a year (change the clocks)

### Forms

- FP-7c: Application for certificate of compliance for smoke detectors and carbon monoxide alarms.
- FP-6: Application for permit

### Definitions:

- Ionization: Use radiation to detect smoke. More effective in detecting flaming fires. Increased risk of nuisance alarms caused by steam or cooking smoke (Will have Americium or the radiation symbol)
- Photoelectric: Use light to detect smoke. More effective in detecting smoldering fires, which have been attributed to more fires involving death.
- Heat Detector:
  - Fixed temperature operates when the heat sensitive eutectic alloy reaches the eutectic point changing state from a solid to a liquid. Approx. 117°F – 136.4 °F
  - Rate of rise: Operate on a rapid rise in element temperature of 120°F - 150°F increase per minute, irrespective of the starting temp.