

# Computer Models For Fire and Smoke

<i>Model Name:</i>	ALARM
<i>Version:</i>	1.0
<i>Classification:</i>	Economic optimization of code compliance measures
<i>Very Short Description:</i>	<i>ALARM</i> , Alternative Life Safety Analysis for Retrofit Cost Minimization, is a personal computer software tool that helps building managers and fire safety officers achieve cost-effective compliance with the widely-used <i>Life Safety Code</i> . This first version of <i>ALARM</i> supports analysis of health care occupancies.
<i>Modeler(s), Organization(s):</i>	National Institute of Standards and Technology
<i>User's Guide:</i>	ALARM 1.0 Decision Support Software for Cost-Effective Compliance with Fire Safety Codes
<i>Technical References:</i>	N/A
<i>Validation References:</i>	N/A
<i>Availability:</i>	NFPA One-Stop Data Shop One Batterymarch Park PO Box 9101 Quincy MA02269-9101
<i>Price:</i>	\$9.95 [NFPA members]
<i>Necessary Hardware:</i>	Any MS-DOS compatible machine
<i>Computer Language:</i>	Clipper (compiled dBase) and Fortran 77
<i>Size:</i>	<1.0 MB
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*Detailed Description:*

*ALARM*, Alternative Life Safety Analysis for Retrofit Cost Minimization, is a personal computer software tool that helps building managers and fire safety officers achieve cost-effective compliance with the widely-used *Life Safety Code*. This first version of *ALARM* supports analysis of health care occupancies. Through use of an equivalency provision in the code, *ALARM* implements a goal-oriented, or performance-based approach to code compliance. *ALARM* generates a set of alternative code compliance strategies and their estimated costs. These strategies offer decision support by providing a set of alternatives from which to select the most appropriate code compliance strategy based on both cost and design considerations. The software offers an integrated code compliance optimizer, full-screen data editor, and file manager. The optimization method used in *ALARM* has been field tested in nearly 100 hospitals since 1981. Cost savings have been found to average between 30 and 35 percent of the cost of prescriptive compliance strategies. *ALARM* could be tailored to other building occupancies in the future.