

**CITY OF SACRAMENTO**

1231 I Street, Sacramento, CA 95814

Permit No: 0311856

Insp Area: 4

Thos Bros: 277 C6

Site Address: 2632 MILLCREEK DR SAC

Parcel No: 225-0440-019

Sub-Type: RES

Housing (Y/N): N

CONTRACTOR

OWNER

ARCHITECT

CASTRO HELEN & MIGUEL  
2632 MILLCREEK DR  
SACRAMENTO CA 95833

Nature of Work: FIRE ALARM FOR RESIDENTIAL CARE FACILITY

**CONSTRUCTION LENDING AGENCY :** I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name \_\_\_\_\_ Lender's Address \_\_\_\_\_

**LICENSED CONTRACTORS DECLARATION:** I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class \_\_\_\_\_ License Number \_\_\_\_\_ Date \_\_\_\_\_ Contractor Signature \_\_\_\_\_

**OWNER-BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00);

I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

I am exempt under Sec. \_\_\_\_\_ B & PC for this reason: \_\_\_\_\_

Date 8/11/03  Owner Signature 

**IN ISSUING THIS BUILDING PERMIT,** the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 8/11/03  Applicant/Agent Signature 

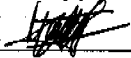
**WORKER'S COMPENSATION DECLARATION:** I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier \_\_\_\_\_ Policy Number \_\_\_\_\_ Exp Date \_\_\_\_\_

(This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date 8/11/03  Applicant Signature 

**WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.**

**THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.**

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION  
OFFICE OF THE STATE FIRE MARSHAL  
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM  
**LISTING SERVICE**

LISTING No. 7257-0569:117

Page 1 of 1

CATEGORY: Single/Multiple Station Smoke Detectors-Photoelectric

LISTEE: Gentex, 10985 Chicago Dr., Zeeland MI 49464  
Contact: Lisa Lantz (616) 392-7195 Fax (616) 392-4219

DESIGN: Models 9120, 9120T, 9120H, 9120F, 9120TF, 9120HF, 9123, 9123T, 9123H, 9123F, 9123TF and 9123HF single and multiple station photoelectric type, 120 VAC with non-rechargeable 9VDC battery backup, smoke detectors. Refer to listee's data sheet for additional detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model designation, electrical rating and UL label.

APPROVAL: Listed as single or multiple station photoelectric smoke detectors.

\*Models 9123, -T, -H, -F, -TF and -HF can generate a distinctive temporal code pattern fire alarm signal (for evacuation) in accordance with NFPA 72, 1999 Edition. These units are intended for use in occupancies that require total evacuation.

\*Models 9120, -T, -H, -F, -TF and -HF are non-temporal and are intended for use in occupancies that do not require total evacuation but perhaps relocation or notification.

NOTE: \*The photoelectric type detectors are generally more effective at detecting slow, smoldering fires which smolder for hours before bursting into flame. Sources of these fires may include cigarettes burning in couches or bedding. The ionization type detectors are generally more effective at detecting fast, flaming fires which consume combustible materials rapidly and spread quickly. Sources of these fires may include paper burning in a waste container or a grease fire in the kitchen.

\*Rev. 06-26-99



This listing is based upon technical data submitted by the applicant. CSFM Fire Engineering staff has reviewed the test results and/or other data but does not make an independent verification of any claims. This listing is not an endorsement or recommendation of the item listed. This listing should not be used to verify correct operational requirements or installation criteria. Refer to listee's data sheet, installation instructions and/or other suitable information sources.

Date issued: **JUNE 15, 2003**

Listing Expires June 30, 2004

Authorized By: **DIANE K. AREND, Senior Deputy  
Program Manager**

CITY OF SACRAMENTO  
NORTH PERMIT  
CENTER

AUG 11 2003  
**RECEIVED**

**ISSUED**  
City of Sacramento

AUG 11 2003

NORTH PERMIT  
CENTER

*Floor Plan on Microfilm*

# GENTEX

# 9000/9003

## Photoelectric Smoke Alarm

## SERIES

For 120 VAC and 220 VAC W/9 VDC Battery Back-Up  
Single Station, Tandem and Specialty Applications

### Applications

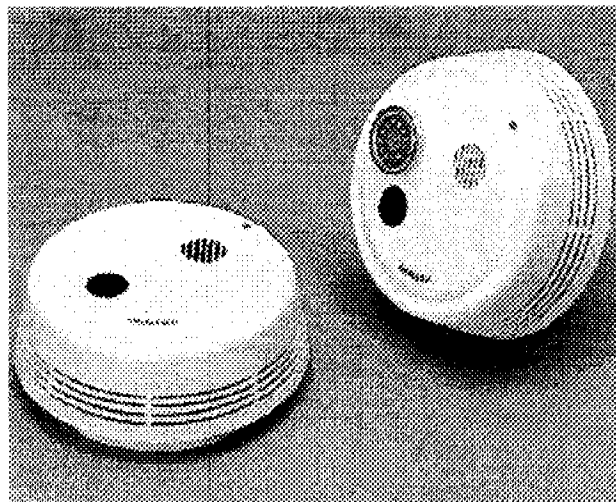
The 9000/9003 Series of photoelectric smoke alarms is designed for residential applications, including homes, apartments, hospitals, hotels and offices, in compliance with UL 217, applicable UBC/UFC Standards and NFPA 74 / NFPA 72, Chapter 2. Available in many different models, the 9000/9003 Series is engineered to virtually eliminate nuisance alarms and deliver outstanding performance wherever reliable fire protection is required.

The 9000/9003 Series is provided with a 9 VDC alkaline battery for back-up in the event building power is lost. The battery impedance is verified and the detector provides a low or missing battery warning.

The Gentex 9000/9003 Series provides an exclusive patented three position test feature that simulates a 0.85% and 3.5% actual smoke condition in full compliance with NFPA 74/NFPA 72, Chapter 2 and UL Standards. The Series can also be interconnected to the Gentex 7000 Series.

Options include self-restoring 135°F integral or isolated thermals, and Form A/Form C dry contacts for remote annunciation. Tandem interconnection of up to 12 units is available on several models; tandem interconnection of up to 6 units is available on "F" models, which activate the dry contacts from a remote alarm through the tandem wire or a local alarm.

The 9003 Series provides the temporal 3 evacuation tone as a standard feature. When testing the 9003 Series it may take up to 16 seconds longer to go in or out of alarm.



### Approvals



- BFP (City of Chicago)
- BS+A/MEA #285-91-E
- CSFM #7257-569:117
- UL 1730
- NFPA 74 Requirements / NFPA 72, Ch. 2  
2.4.5.5 integral test means to check sensitivity.
- UL 217
- ULC (except temporal models)
- MSFM Listing #1929

Also UL1730 listed for Commercial Residential and Commercial Residential Multiple-station Smoke Alarms.

### Standard Features

- 90dBA Solid-State Piezo Horn
- Temporal 3 Evacuation Sounding Device (9003 Series)
- Nominal 2.5% Sensitivity
- 5-to-1 Signal-to-Noise Ratio
- Pulsing LED Sensing Chamber
- Fully Insect Screened
- Functional Test Switch — Patented Three Position Test — Compliance to 4.5.5 (NFPA 74) or 2.4.5.5 NFPA 72, Ch. 2
- Red LED that pulses every 30 seconds, and green LED for AC power on.
- Relays Operate on Battery Back-Up
- Quick-Disconnect Wiring Harness
- 9 VDC Alkaline Battery
- Can interconnect to 7100 Series and the HD135 Heat Detector

- Mounting Hardware Adapts to Standard Junction Boxes
- Dust Cover to Prevent Contamination During Installation
- On-Site Maintenance Washing Program
- Low or Missing Battery Indicator
- 1 Year Warranty From Date of Purchase
- UL listed for 30 foot spacing (Refer to NFPA 72 for proper smoke detector placement.)
- Horn Frequency 3100 Hz (Nominal)

## 9120/9220 Series

Model Number	Part Number	Voltage	OPTIONS						
			Local 90dBA Piezo	Integral 135°F Thermal	Isolated 135° Thermal	Tandem Up To 12 Units	Tandem Up To 6 Units	Form A/C Contacts	9 VDC Battery Back-Up
9120	917-0001	120 VAC/9 VDC	•			•			•
9120T	917-0002	120 VAC/9 VDC	•	•		•			•
9120H	917-0003	120 VAC/9 VDC	•		•	•			•
9120F	917-0004	120 VAC/9 VDC	•				•	•	•
9120TF	917-0009	120 VAC/9 VDC	•	•			•	•	•
9120HF	917-0005	120 VAC/9 VDC	•		•		•	•	•
9220	917-0026	220 VAC/9 VDC	•			•			•
9220F	917-0029	220 VAC/9 VDC	•	•		•			•
9220H	917-0028	220 VAC/9 VDC	•		•	•			•
9220T	917-0027	220 VAC/9 VDC	•				•	•	•
9220HF	917-0030	220 VAC/9 VDC	•	•			•	•	•
9220TF	917-0031	220 VAC/9 VDC	•		•		•	•	•

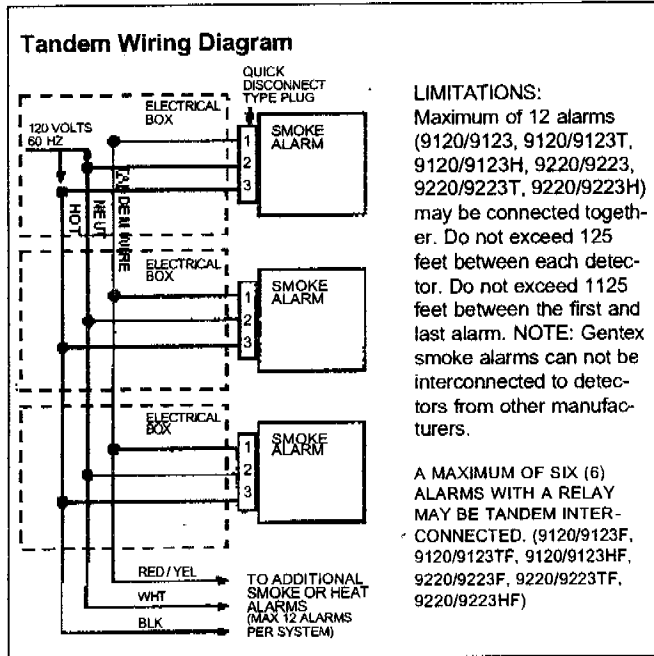
## 9123/9223 Series (Temporal 3 Sounder)

Model Number	Part Number	Voltage	OPTIONS						
			Local 90dBA Piezo	Integral 135°F Thermal	Isolated 135° Thermal	Tandem Up To 12 Units	Tandem Up To 6 Units	Form A/C Contacts	9 VDC Battery Back-Up
9123	917-0012	120 VAC/9 VDC	•			•			•
9123T	917-0013	120 VAC/9 VDC	•	•		•			•
9123H	917-0014	120 VAC/9 VDC	•		•	•			•
9123F	917-0015	120 VAC/9 VDC	•				•	•	•
9123TF	917-0017	120 VAC/9 VDC	•	•			•	•	•
9123HF	917-0016	120 VAC/9 VDC	•		•		•	•	•
9223	917-0032	220 VAC/9 VDC	•			•			•
9223F	917-0035	220 VAC/9 VDC	•	•		•			•
9223H	917-0034	220 VAC/9 VDC	•		•	•			•
9223T	917-0033	220 VAC/9 VDC	•				•	•	•
9223HF	917-0036	220 VAC/9 VDC	•	•			•	•	•
9223TF	917-0037	220 VAC/9 VDC	•		•		•	•	•

### NOTES:

Available in round configuration only.

### Wiring Diagrams



### Electrical Specifications

Operating Voltage (9120/9123)	120 VAC, 60Hz
Operating Voltage (9220/9223)	220 VAC, 50Hz
Operating Current	.045 amps
Operating Current (Relay Options)	.070 amps
Operating Ambient Temp Range	40°F to 100°F
Alarm Horn Rating	90dBA at 10 ft.
Nominal Sensitivity	2.5% Obscuration
"F" Auxiliary Relay	1 Form A & 1 Form C (0.6 amp)
"T" Integral Thermal (Self-Restoring)	135°F at 50 ft.
"H" Isolated Thermal Form A (Self-Restoring)	135°F at 50 ft.
Size	Diameter: 6.5 in. OA (5.75 in. at Ceiling) Depth: 2.625 in.
Secondary Power Source	Alkaline 9 VDC Battery

### Architect & Engineering Specifications

The Photoelectric Smoke alarm shall be a Gentex Model or approved equal which shall provide at least the following features and functions.

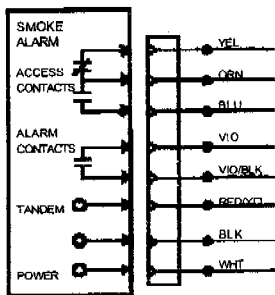
- Nominal sensitivity shall be 2.5%.
- The alarm shall utilize an infrared LED sensing circuit which pulses in 4 to 5 second intervals when subjected to smoke. After 2 consecutive pulses in smoke, the alarm will activate.
- The alarm shall have a 9 VDC alkaline battery as a back-up in the event building power is lost.
- The 9 VDC battery impedance shall be verified by the circuit of the smoke alarm.
- The alarm shall provide an indicator when the battery is low in power or high impedance or is missing.
- The alarm shall provide minimum 5-to-1 signal-to-noise ratio in the optics frame to assure stability of operation in environments of high RF and transient conditions.
- The sensing chamber shall be fully screened to prevent entrance of small insects, thus reducing the probability of false alarms.
- A solid state piezo alarm rated at 90dBA at 10ft.
- A visual LED monitor (condition indicator) will slow pulse in normal operation and rapid pulse in alarm.
- An easily accessible test knob shall be provided. The test knob in the TEST position will simulate an actual smoke condition of approximately 3.5% causing the detector to alarm within 20-36 seconds. It will also have the capability of testing to 0.85% as a required minimum. A magnetic switch closure or other switch closure, or smoke generating equipment which does not scatter the light beam or test sensitivity is not sufficient, as indicated in National Code.
- The detector shall have tandem interconnect capability of up to 12 units or 6 units with relay.
- Can be interconnected with AC alarms, Gentex 7000/7003 Series and the HD135 heat detector.
- The manufacturer shall provide other compatible alarm models with the following optional features: a) 135°F isolated thermal with normally opened contact for remote connection to local alarm or annunciator; b) 135°F integral thermal; c) auxiliary Form A/Form C relay contacts for initiating remote functions and annunciation; d) relay option that is capable of activation by tandem interconnect wire. Thermal sensor shall be self-restoring.
- Unit must be UL 217 listed for both wall and ceiling mount.
- Unit shall also meet all requirements of the State of California Fire Marshal.

All equipment shall be completely factory assembled, wired and tested, and the contractor shall be prepared to submit a certified letter testifying to this condition.

Alarms which do not meet all of the requirements of this specification will not be considered.

### Relay Models

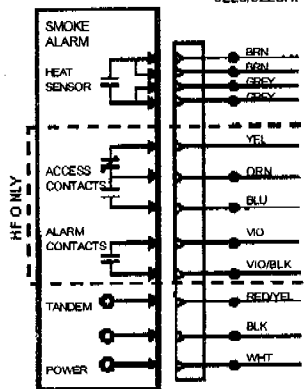
Models  
 9120/9123F  
 9120/9123TF  
 9230/9223F  
 9220/9223TF



**CAUTION:**  
 RED/YELLOW wire to be capped when not in use. This wire is for tandem connection only. Do not connect to any other circuit.

### Isolated thermal with optional accessory contacts.

Models  
 9120/9123H  
 9120/9123HF  
 9220/9223H  
 9220/9223HF



RELAY CONTACTS  
 RATED LOAD RESISTIVE  
 1.0 AMP @ 24 VDC  
 0.6 AMP @ 125 VAC MAX  
 0.3 AMP @ 220 VAC MAX

24 units per carton  
 34 pounds per carton

# GENTEX CORPORATION

Fire Protection Products: [www.gentex.com](http://www.gentex.com)  
 10985 Chicago Dr., Box 310, Zeeland, MI 49464  
 616/392-7195 1-800/436-8391 FAX: 616/392-4219

Gentex corporation reserves the right to make changes to the product data sheets at their discretion.



Printed on Recycled Paper

GX0601-2

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION  
OFFICE OF THE STATE FIRE MARSHAL  
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM  
**LISTING SERVICE**

Page 1 of 1

**LISTING No.** 7135-0785:118

**CATEGORY:** Audible Devices

**LISTEE:** Wheelock Inc., 273 Branchport Ave., Long Branch NJ 07740  
Contact: Luy Nguyen (732) 222-6880 Fax (732) 222-5607

**DESIGN:** Model MT-12/24, MT-115 and MT4-12/24, and MT4-115 multi-tone audible devices followed by R, W, S, or X to indicate package color.

Models MT-12, MT4-12, MT-24, MT4-24 multi-tone audible/strobe signals followed by A, B, G, R or W to indicate lens color, followed by S (15 cd), H (15 cd) or M (117 cd) to indicate strobe intensity, and other suffixes to designate orientation, lens lettering and plate color.

Models MT-115-WH and MT4-115-WH multi-tone audible/visual devices (Rated 15 cd).

Refer to listee's data sheet for additional detailed product description and operational considerations.

**RATING:** Suffix -12: \*8-17.5 VDC  
-24: \*16-33 VDC  
-115: 120 VAC

**INSTALLATION:** In accordance with listee's printed installation instructions, NFPA 72, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction. Models MT series are surface mount and suitable for outdoor with Model IOB back box. Models MT4 series are flush mount and suitable for outdoor with model WBB back box.

**MARKING:** Listee's name, model number, electrical/candela rating and UL label.

**APPROVAL:** Listed as audible and audible/visual signaling devices for use with separately listed electrically compatible fire alarm control units. Not suitable for the hearing impaired application.

These appliances can produce a distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NFPA 72, 1999 Edition. Refer to manufacturer's Installation Manual for details.

\*Rev. 12-22-2002KK



This listing is based upon technical data submitted by the applicant. CSFM Fire Engineering staff has reviewed the test results and/or other data but does not make an independent verification of any claims. This listing is not an endorsement or recommendation of the item listed. This listing should not be used to verify correct operational requirements or installation criteria. Refer to listee's data sheet, installation instructions and/or other suitable information sources.

Date Issued:

**JUNE 16, 2003**

**Listing Expires June 30, 2004**

Authorized By:

**DIANE K. AREND, Senior Deputy  
Program Manager**



# wheelock INC.

## Description

Wheelock's 115 VAC Series MT4 and MT4 Strobe Series Multitone electronic signals offer a choice of eight (8) nationally and internationally recognized alerting sounds: Horn, Bell, March Time Horn, Code-3 Tone, Code-3 Horn, Slow Whoop, Siren or H/L/O Tone. Our Code-3 horn and tone patterns are engineered to comply with NFPA/ANSI Temporal Pattern specifications without requiring additional coding means. With Series MT4 and MT4 Strobe Signals, one alarm appliance meets most of your signaling needs.

Each Series MT4 and MT4 Strobe appliance has two user selective sound output levels: STANDARD dBA and HIGH dBA. Separate input terminals for strobe models are provided, shunt wires are included to enable both tone and strobe to operate simultaneously from a single input.

The Multitone Strobe Signals are UL Listed for private mode indoor and outdoor use, ceiling and wall mount, under Standard 1638 for Visual Signaling Devices (where UL 1971 is not required) and Standard 464 for Audible Signal Appliances. They use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum reliability for effective visible signaling.

## Features

- MT4 Series Signals have IN and OUT wiring terminations that accept two #12 to #18 American Wire Gauge (AWG) wires at each terminal.
- One alarm appliance with (8) eight selective signals to provide superior sound penetration for various ambient and wall conditions with two field selectable sound output levels.
- Code-3 Horn and Tone meet ANSINFPANBO temporal pattern for standard emergency evacuation signaling.
- Audible and strobe can operate from a single signaling circuit with any of the (8) eight audible signals.
- Designed to meet or exceed NFPA/ANSI Standards.
- Low current draw to reduce power consumption and wiring costs.
- MT4 Strobe models available with 15 candles rating for independent or single input activations.
- Low cost installation via standard electrical boxes, indoor or outdoor mounting.
- Compliance with RFI limits in FCC Part 15, Class B for compatibility with sensitive detection and communication circuits.
- Listed under UL Standard 1638 for private mode visual signaling devices and UL 464 for audible devices.
- Underwriters Laboratories Listings, Factory Mutual, California State Fire Marshal, New York City NEMA and Chicago SFP approvals on all models.
- The MT4-WH strobe model is UL 1638 Listed at 15 cd and is designed for surface mounting indoor or outdoor with weatherproof backbox.

## Specification Information

Model Number	Rated Input Voltage (VAC)	Rated Average Current (AMPS)	Rated Strobe Candles (UL 1638 cd)
MT4-115-WH-VFR	115	.060	15.0 cd
MT4-115-WH-VNS	115	.060	15.0 cd

<sup>1</sup> 115 VAC models have been UL tested to operate from 98 VAC to 132 VAC.  
<sup>2</sup> Strobe candles at -35° Caringradh is reduced to 7.5 candles.

## SERIES 115 VAC MT4 and MT4 STROBE MULTITONE ELECTRONIC SIGNALS



SERIES MT4 STROBE



SERIES MT4

## Specifications

Tone	Rated Average Input Current (AMPS)		Typical Anechoic dBA at 10 Feet		Rated Reverberant at 10 Feet Per UL 464	
	HI	STD	HI	STD	HI	STD
Horn	0.050	0.040	100	95	88	82
Bell	0.040	0.038	94	89	82	75
March Time Horn	0.050	0.040	100	95	85	79
Code-3 Horn	0.050	0.040	100	95	85	75
Code-3 Tone	0.042	0.038	97	92	79	75
Slow Whoop	0.050	0.040	100	95	85	82
Siren	0.045	0.040	99	94	85	82
H/L/O	0.041	0.038	95	90	82	79

\* Non-strobe versions only dBA specifications for strobe versions may differ (typically 1-2 dB less). See the installation instructions.

Anechoic dBA is measured on axis in a non-reflective (free field) test room using fast meter response. For peak dBA (measured with peak meter response), add 5 dBA to typical anechoic values shown in Table 2. Reverberant dBA is a minimum UL rating based on sound power measurements in a reverberant test room. Rated Input Voltage: 115 VAC. Multitone Signals are UL tested to operate over a voltage range from 98 VAC to 132 VAC at 60 Hz.

## Alarm Tones

TONE	ALARM TONES
	PATTERN DESCRIPTION
HORN	BROADBAND HORN (Continuous)
BELL	1500 Hz MODULATED (0.07 sec. ON/Repeat)
MARCH TIME HORN	HORN (0.25 sec. ON/0.25 sec. OFF/Repeat)
CODE-3 HORN	HORN (ANSI S3.41 Temporal Pattern)
CODE-3 TONE	500 Hz (ANSI S3.41 Temporal Pattern)
SLOW WHOOP	500-1200 Hz SWEEP (4.0 sec. ON/0.5 sec. OFF/Repeat)
SIREN	600-1200 Hz SWEEP (1.0 sec. ON/Repeat)
H/L/O	1000/800 Hz (0.25 sec. ON/Alternate)

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION  
OFFICE OF THE STATE FIRE MARSHAL  
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

## LISTING SERVICE

LISTING No. 7150-0447:138

Page 1 of 1

CATEGORY: Boxes

LISTEE: ESL/Sentrol, 12345 SW Leveton Drive, Tualatin, OR 97062  
Contact: Gene Hukkanen (503) 691-7369 Fax (503) 691-7575

DESIGN: Model 103-20, 103-21, 103-22, 103-23, 103-24, 103-31, 103-32, 103-42, and 103-60 non-coded manual pull stations. Refer to listee's data sheet for additional detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating and UL label.

APPROVAL: Listed as fire alarm manual pull stations for use with separately listed compatible fire alarm control units. Model 103-60 is suitable for outdoor use.

XLF: 7150-1039:101

12-17-96



This listing is based upon technical data submitted by the applicant. CSFM Fire Engineering staff has reviewed the test results and/or other data but does not make an independent verification of any claims. This listing is not an endorsement or recommendation of the item listed. This listing should not be used to verify correct operational requirements or installation criteria. Refer to listee's data sheet, installation instructions and/or other suitable information sources.

Date Issued:

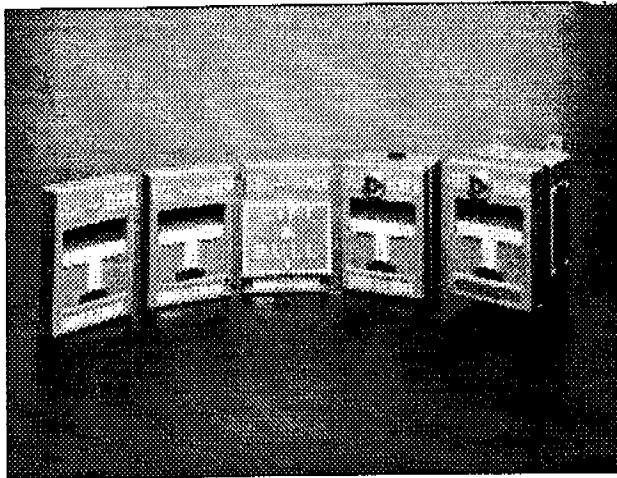
**JUNE 14, 2003**

*Listing Expires June 30, 2004*

Authorized By:

**DIANE K. AREND**, Senior Deputy  
Program Manager





## **103 SERIES**

### **Manual Fire Alarm Stations**



- **Single action**
- **Dual action**
- **Terminal connections**
- **Die cast aluminum alloy**
- **Semi-flush or surface mounting**
- **Weatherproof models available**
- **UL Listed**

**Model 103-20 manual fire alarm** is a manually operated non-coded device for initiating fire alarm signals. The pull handle latches until the station is reset by opening the station cover.

Operation of the pull handle closes a single-pole or double-pole switch. Two wire barrier terminals are provided, each accommodating two conductors, #14 AWG or smaller. Opening the cover also closes the alarm initiating switch to allow testing.

Both 103-22 (Hex key reset) and 103-42 (cat 30 key reset) are dual action stations that are provided with a cover which must be lifted to expose the pull handle. A break-glass rod is included with each station for optional use.

For outdoor or harsh environment applications, use the 103-60 (water/weatherproof single action station).

continued

# Sentrol 103 Series Manual Fire Alarm Stations

## Application

The 103 Series manual fire alarm stations are intended for use as fire alarm initiating devices, with any fire alarm initiating circuit to be operated by a contact closure rated not more than 10 amperes, 125 VAC.

## Installation

The 103 Series manual fire alarm stations mount to standard single-gang electrical boxes or to a plaster ring. The maximum depth of the equipment is 1 1/4".

Model 103-25 surface mounting box is available. The box is 5" high x 3 1/4" wide x 2 3/4" deep.

All stations should be installed in compliance with the applicable NFPA standards, local building codes, and plans and specifications.

## Product Data

Contact Ratings ..... 10A @ 125 VAC  
 Mounting ..... Flush Standard Outlet Box with one device cover at least 1 3/4" deep  
 Surface Model 103-25 ..... Surface Box  
 5"H x 3 1/4"W x 2 3/4"D  
 Material ..... Die cast aluminum alloy—enameled finish  
 Color ..... Red housing—white handle  
 Operation ..... General alarm—single or dual action  
 Pre-Signal—Key Operated ..... Removable in either position  
 Shipping Weight  
 Station ..... 20 oz.  
 Surface Box ..... 14 oz.

## Ordering Information

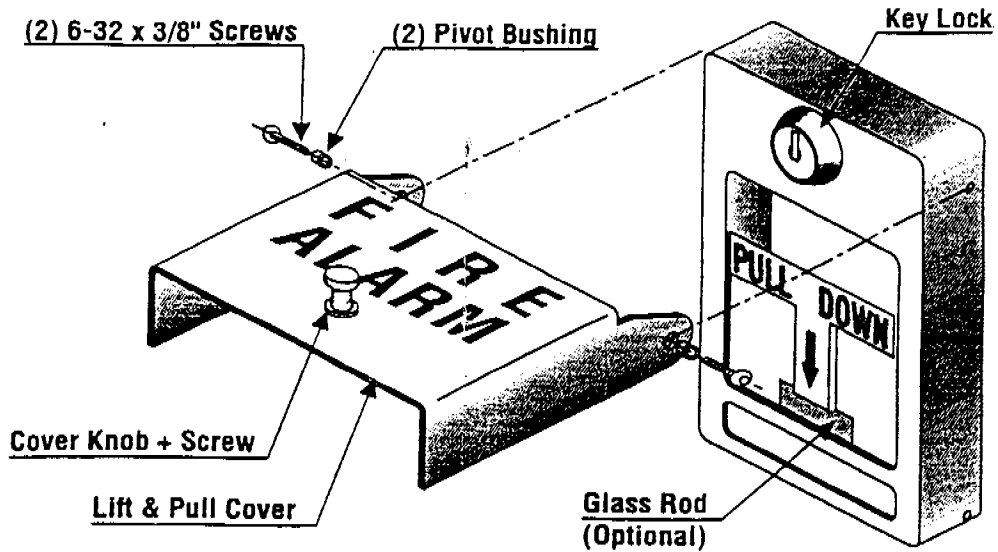
Model	Description
103-20	Single action manual fire alarm station, hex key reset, non-coded SPST
103-21	Same as above except DPST
103-22 (s)*	Dual action manual fire alarm station, hex key reset, non-coded SPST (s)* with NY stripe
103-23	Same as above except DPST
103-25	Surface mounting box
103-26	Replacement break-glass rod
103-31	Single action (SPST) with key reset
103-42	Dual action manual fire alarm station, cat 30 key reset, non-coded SPST
103-60	Water/weatherproof, single action (SPST) with key reset



PH 503.692.4052  
 USA & Canada: 800.547.2556  
 Technical Service: 800.648.7424 FaxBack: 800.483.2495  
 www.sentrol.com www.interlogixsecurity.com

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# Installation and Service



## Installers Note:

The stations are supplied with glass rod removed. It is recommended that the station be activated and tested prior to installation of the glass rod.

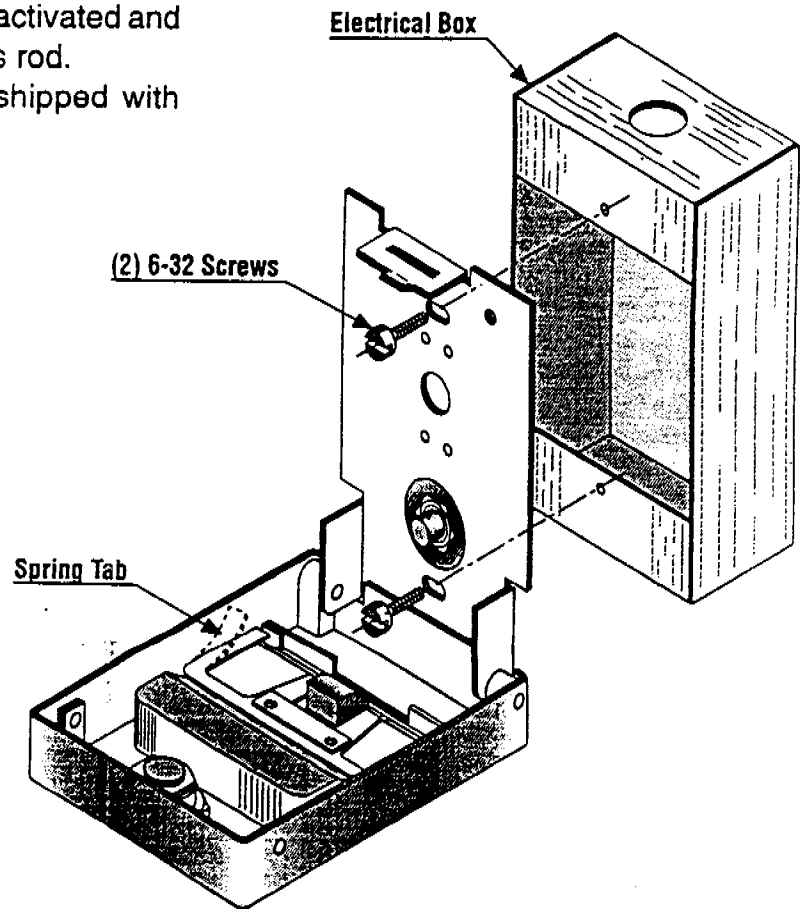
- Glass Rods and Hardware are shipped with station in box.

## Replacement of Glass Rod:

If broken, remove debris, then reset T-Handle to Normal Position. Insert one end of new Glass Rod under Spring Tab, then with one finger, lift other end of Spring Tab allowing Glass Rod to slip into place.

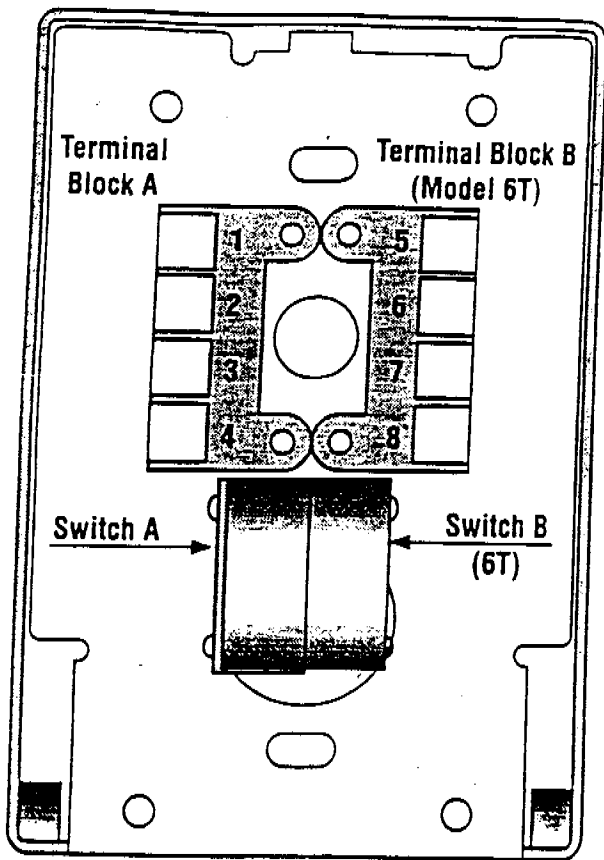
## To Close Station:

If hex Screw Model, simply push station closed.  
If Key Lock Model, hold station closed then turn key counterclockwise.

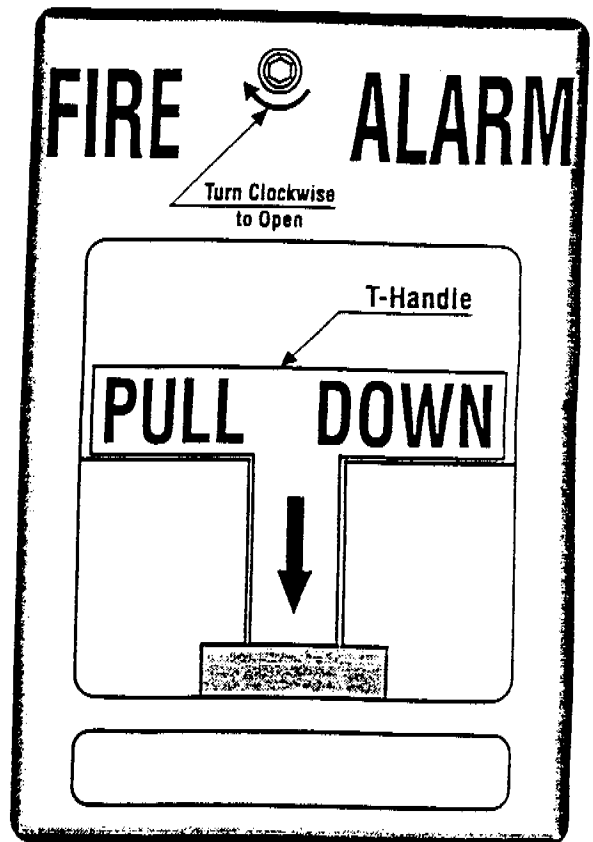


Wiring Instructions on Reverse Side

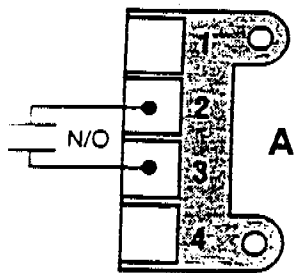
## Rear View



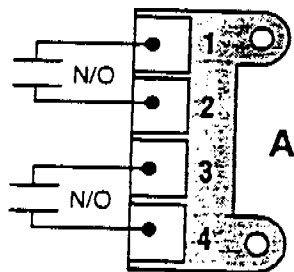
## Front View



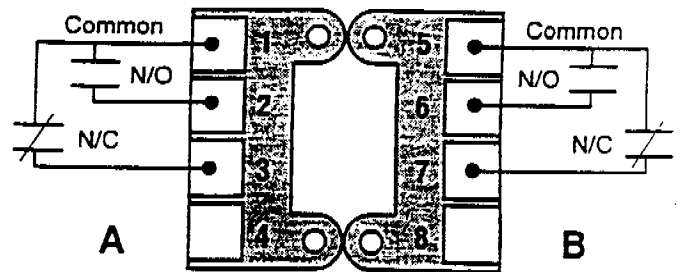
## Electrical Wiring



Model 1T  
SPST N/O



Model 2T  
DPST N/O



Model 6T  
DPST N/O - N/C - COM

Model	Terminal Block	Terminal Connecting	Switch Function	Terminal Connections			Contact Rating
				LED	Switch	Phone Jack	
1P	None	None	SPST	Leeds	Leeds	Leeds	10 amp @125 vac
1T	A	2 & 3	SPST	1(+) & 4(-)	1 & 4	1 & 4	10 amp @125 vac
2T	A	1&2 - 3&4	DPST	5(+) & 6(-)	5 & 6	5 & 6	10 amp @125 vac
3T	A	1,2, & 3	SPDT	5(+) & 6(-)	5 & 6	5 & 6	10 amp @125 vac
6T	A & B	1,2,3,5,6,7	DPDT	4(+) & 8(-)	4 & 8	4 & 8	10 amp @125 vac

Phone Jack: 1/4 • Key Switch: 3Amp@125Vac • Led: T1-3/4@24Vdc

Note: all contact ratings shown apply to closed station

Mounting Instructions on Reverse Side