# GENTEX

# 8000 SERIES



## A Smarter Vision®

### PHOTOELECTRIC TYPE OPEN AREA SYSTEM DETECTORS

#### Installation Instructions - Owner's Information READ CAREFULLY AND SAVE

#### **INTRODUCTION 8000 SERIES**

The 8000 Series smoke detector is an open area photoelectric system smoke detector, engineered to provide reliable early warning against smoke. Each smoke detector is provided with a standard Form A/FormC relay for alarm and auxiliary functions.

Supplied with each detector is a quick-disconnect wiring harness and universal mounting bracket.

#### **MODELS AVAILABLE**

(SEE BACK OF SMOKE DETECTOR FOR EXACT MODEL) 8240/8243......24VDC 8100/8103.....120VAC, 60 HZ

#### **OPTIONS, SELECTIONS**

* P	BUILT-IN PIEZO HORN
T	INTEGRAL 135°F THERMAL SENSOR
**H	ISOLATED 135°F THERMAL SENSOR
Υ	NON-LATCHING/SELE-CLEARING

- \* All detectors with the piezo horn option include smoke detector reverse polarity horn activation. Relay contacts are not activated with the application of reverse polarity power.
- \*\* The H Series 135°F normally open isolated thermal is not wired into the detection circuit. It is for remote connection to the auxiliary annunciation circuit. The "H" thermal is supervised with two wires in and two wires out.

The 8240P/8100P models produce a non-temporal audible alarm and are therefore not intended for locations where the desired action of the occupant(s) is evacuation.

The 8243P/8103P models produce a temporal 3 audible alarm. Per NFPA 72, the *American National Standard Audible Emergency Evacuation Signal* as defined in ANSI S3.41, is required whenever the intended response is to evacuate the building.

0400

### ELECTRICAL SPECIFICATIONS

8240	8100		
24VDC	120VAC		
18VDC	110VAC		
30VDC	130VAC		
	60Hz.		
Current consumption at Normal Operating Voltage			
6mA	70mA		
60mA	70mA		
NOTICE: FOR "P" OPTION (HORN), ALARM CURRENT CONSUMPTION IS			
RITY CURRE	ENT IS 15MA.		
	Rated Load (Resistive)		
	1 Amp at 24 Volt DC		
	0.5 Amp at 120 Volt AC		
Auxiliary Relay Contact: 1 Form CRated Load (Resistive			
	1 Amp at 24 Volt DC		
	0.5 Amp at 120 Volt AC		
	40°F-100°F(4.4°C-37.8°C)		
	10%-93% Relative Humidity		
	5.7"W x 5.7"H x 2.8"D		
	24VDC 18VDC 30VDC  verating Volta 6mA 60mA N), ALARM		

#### **HOW YOUR SMOKE DETECTOR WORKS**

The 8000 Series smoke detector operates on the photoelectric light scatter principle. The unit's sensing chamber houses a light source and a light sensor.

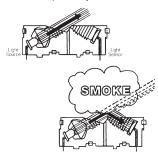
The darkened sensing chamber is exposed to the atmosphere and designed to permit optimum smoke entry from any direction while rejecting light from outside the detector.

The light source is an infrared (invisible) LED which pulses every 4 to 8 seconds. The light sensor is a photodiode matched to the light frequency of the LED light source.

Under normal conditions, the light generated by the pulsing infrared LED is not seen by the light sensor. When smoke enters the sensing chamber, light from the pulsing LED light source is reflected by the smoke particles onto the photodiode light sensor. At the first sighting of smoke, the smoke detector is put into a pre-alarm mode. This is indicated by a rapidly flashing LED on the face of the smoke detector.

Once the light sensor confirms smoke for 2 consecutive pulses inside the chamber, the light sensor produces the signal necessary to trigger the alarm.

This technique of verifying the smoke condition, combined with a 5-to-1 signal-tonoise ratio, substantially reduces the possibility of nuisance alarms.



#### PLACEMENT OF SMOKE DETECTORS

THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION'S

STANDARD 72 (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269).

For your, information, the National Fire Protection Association's Standard 72, 2010 Edition, Chapter 17 states the following:

17.7.3.1.1 The location and spacing of smoke detectors shall be based upon the anticipated smoke flows due to the plume and ceiling jet produced by the anticipated fire, as well as any pre-existing ambient airflows that could exist in the protected compartment.

17.7.3.1.2 The design shall account for the contribution of the following factors in predicting detector response to the anticipated fires to which the system is intended to respond:

- (1) Ceiling shape and surface
- (2) Ceiling height
- (3) Configuration of contents in the protected area
- (4) Combustion characteristics and probable equivalence ratio of the anticipated fire involving the fuel loads within the protected area
- (5) Compartment ventilation
- 6) Ambient temperature, pressure, altitude, humidity, and atmosphere
- 17.7.3.1.3 If the intent is to protect against a specific hazard, the detector(s) shall be permitted to be installed closer to the hazard in a position where the detector can intercent the smake

17.7.3.1.4 If the intent is to initiate action when smoke/fire threatens a specific object or space, the detector shall be permitted to be installed in close proximity to that object or space

#### 17.7.3.2 Spot-Type Smoke Detectors

17.7.3.2.1 Spot-type smoke detectors shall be located on the ceiling or, if on a sidewall, between the ceiling and 12 in. (300 mm) down from the ceiling to the top of the detector. 17.7.3.2.2 To minimize dust contamination, smoke detectors shall be in accordance with 17.7.3.2.3.1 through 17.7.3.2.3.5.

17.7.3.2.3.1 In the absence of specific performance-based design criteria, smooth ceiling smoke detector spacing shall be a nominal 30 ft (9.1 m).

17.7.3.2.3.2 In all cases, the manufacturer's published instructions shall be followed. 17.7.3.2.3.3 Other spacing shall be permitted to be used depending on ceiling height, different conditions, or response requirements.

17.7.3.2.3.4 For the detection of flaming fires, the guidelines in Annex B shall be permitted to be used.

**17.7.3.2.3.5** For smooth ceilings, all points on the ceiling shall have a detector within a distance equal to 0.7 times the selected space.

**17.7.3.2.4** For solid joist and beam construction, spacing for spot-type smoke detectors shall be in accordance with 17.7.3.2.4.1 through 17.7.3.2.4.6.

17.7.3.2.4.1 Solid joists shall be considered equivalent to beams for smoke detector spacing guidelines.

17.7.3.2.4.2 For level ceilings, the following shall apply:

- (1) For ceilings with beam depths of less than 10 percent of the ceiling height (0.1H), smooth ceiling spacing shall be permitted. Spot-type smoke detectors shall be permitted to be located on ceilings or on the bottom of beams.
- (2) For ceilings with beam depths equal to or greater than 10 percent of the ceiling height (0.1H), the following shall apply:
  - (a) Where beam spacing is equal to or greater than 400 percent of the ceiling heights (0.4 *H*), the following shall be permitted for spot detectors:
    - Smooth ceiling spacing in the direction parallel to the beams and at one-half smooth ceiling spacing in the direction perpendicular to the beams
    - ii. Location of detectors either on the ceiling or on the bottom of the beams
- (3) For beam pockets formed by intersecting beams, including waffle or pan-type ceilings, the following shall apply:
  - (a) For beam depths less than 10 percent of the ceiling height (0.1*H*), spacing shall in accordance with 17.7.3.2.4.2(1).
  - (b) For beam depths greater than or equal to 10 percent of the ceiling height (0.1*H*), spacing shall be in accordance 17.7.3.2.4.2(2).
- (4) For corridors 15ft (4.6 m) in width or less having ceiling beams or solid joists perpendicular to the corridor length, the following shall apply:
  - (a) Smooth ceiling spacing shall be permitted
  - (b) Location of spot-type smoke detectors on ceilings, sidewalls, or the bottom of beams or solid joists.
- (5) For rooms of 900 ft<sup>2</sup> (84 m<sup>2</sup>) or less, the following shall be permitted: (a) Use of smooth ceiling spacing
- (b) Location of spot-type smoke detectors on ceilings or on the bottom of beams 17.7.3.2.4.3 For sloping ceilings with beams running parallel up slope, the following shall apply.
- (1) Spot-type detector(s) shall be located on the ceilings within beam pocket(s).
- (2) The ceiling height shall be taken as the average height over slope.
- (3) Spacing shall be measured along a horizontal projection of the ceiling
- (4) Smooth ceiling spacing shall be permitted within beam pocket(s) parallel to the beams.
- (5) For beam depths less than or equal to 10 percent the ceiling height (0.1 H), spot-type detectors shall be located with smooth ceiling spacing perpendicular to the beams.
- (6) For beam depths greater than 10 percent of the ceiling height (0.1 H), the following shall apply for spacing perpendicular to the beams:
  - (a) For beam spacing greater than or equal to 40 percent of the ceiling height (0.4 H), spot-type detectors shall be located in each beam pocket.
  - (b) For beam spacing less than 40 percent of the ceiling height (0.4 H), spot-type detectors shall not be required in every beam pocket but shall be spaced not greater than 50 percent of smooth ceiling spacing.
- 17.7.3.2.4.4 For sloping ceilings with beams running perpendicular across slope, the following shall apply:
- (1) Spot-type detector(s) shall be located at the bottom of the beams
- (2) The ceiling height shall be taken as the average height over slope
- (3) Spacing shall be measured along a horizontal projection of the ceiling
- (4) Smooth ceiling spacing shall be permitted within beam pocket(s).
- (5) For beam depths less than or equal to 10 percent of the ceiling height (0.1 *H*), spot-type detectors shall be located with smooth ceiling spacing.
- (6) For beam depths greater than 10 percent of the ceiling height (0.1 H), spot-type detectors shall not be required to be located closer than (0.4 H) and shall not exceed 50 percent of smooth ceiling spacing.
- 17.7.3.2.4.5 For sloped ceilings with beam pockets formed by intersecting beams, the following shall apply:
- (1) Spot-type detector(s) shall be located at the bottom of the beams.
- (2) The ceiling height shall be taken as the average height over slope.
- (3) Spacing shall be measured along a horizontal projection of the ceiling.
- (4) For beam depths less than or equal to 10 percent of the ceiling height (0.1 H), spot-type detectors shall be spaced with not more than three beams between detectors and shall not exceed smooth ceiling spacing
- (5) For beam depths greater than 10 percent of the ceiling height (0.1 H), spot-type detectors shall be spaced with not more than two beams between detectors, but shall not be required to be spaced closer than (0.4 H), and shall not exceed 50 percent of smooth ceiling spacing.
- 17.7.3.2.4.6 For sloped ceilings with solid joists, the detectors shall be located on the bottom of the joist
- 17.7.3.3 Peaked. Detectors shall first be spaced and located within 36 in. (910 mm) of the peak, measured horizontally. The number and spacing of additional detectors, if any, shall be based on the horizontal projection of the ceiling.
- **17.7.3.4 Shed.** Detectors shall first be spaced and located within 36 in. (910 mm) of the high side of the ceiling, measured horizontally. The number and spacing of additional detectors, if any, shall be based on the horizontal projection of the ceiling.
- 17.7.3.5 Raised Floors and Suspended Ceilings. Spaces beneath raised floors and above suspended ceilings shall be treated as separate rooms for smoke detector spacing purposes. Detectors installed beneath raised floors or above suspended ceilings, or both, including raised floors and suspended ceilings used for environmental air, shall not be used in lieu of providing detection within the room.

- 17.7.3.5.1 For raised floors, the following shall apply:
- Detectors installed beneath raised floors shall be spaced in accordance 17.7.3.1, 17.7.3.1.3, and 17.7.3.2.2.
- (2) Where the area beneath the raised floor is also used for environmental air, detector spacing shall also conform to 17.7.4.1 and 17.7.4.2.
- **17.7.3.5.2** For suspended ceilings, the following shall apply:
- Detector spacing above suspended ceilings shall conform to the requirements of 17.7.3 for the ceiling configuration
- (2) Where detectors are installed in ceilings used for environmental air, detector spacing shall also conform to 17.7.4.1 and 17.7.4.2.

#### **INSTALLATION OF 8000 SERIES**

#### **MOUNT ROUGH-IN BOX & RUN WIRING**

**IMPORTANT:** INSURE THAT ALL FLUORESCENT LIGHTING FIXTURES ARE PROPERLY GROUNDED.

 Use a 2" x 3" switch box or a 4" square or octagon junction box. Mount a box for each smoke detector and run the system fire detection circuit plus the power circuit to all smoke detector locations. See Wiring Diagrams, FIGURES A and B, for Latching Models, and FIGURES C and D for Self Clearing Models.

NOTICE: THE WIRING TO BE USED SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 300.3(B) OF THE NATIONAL ELECTRICAL CODE, NFPA 70, AS WELL AS ARTICLE 210.

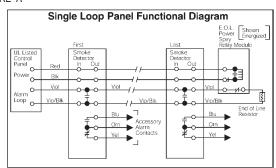
**CAUTION:** Break wire runs to provide supervision for connections made to each wire pair.

#### NOTICE:

120 AC VOLTAGE (8100 & 8103 SERIES): HOT (BLACK) WIRE: PIN 3 AND PIN 6 NEUTRAL (WHITE) WIRE: PIN 12 AND PIN 15

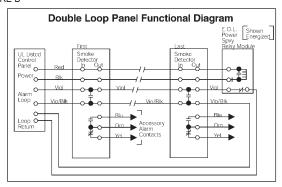
24 DC VOLTAGE (8240 & 8243 SERIES): POSITIVE (RED) WIRE: PIN 3 AND PIN 6 NEGATIVE (BLACK) WIRE: PIN 12 AND PIN 15

#### FIGURE A



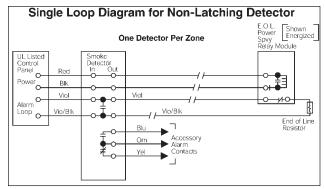
CLASS B PANEL WIRING DIAGRAM

#### FIGURE B



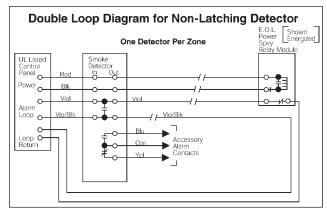
CLASS A PANEL WIRING DIAGRAM

#### FIGURE C



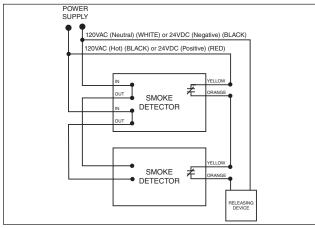
CLASS B PANEL WIRING DIAGRAM - ONE SMOKE DETECTOR PER ZONE

#### FIGURE D



CLASS A PANEL WIRING DIAGRAM - ONE SMOKE DETECTOR PER ZONE

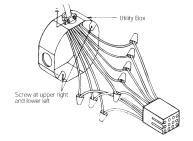
#### FIGURE E



RELEASING DEVICE WIRING DIAGRAM

If wall mounting is desired, be sure the box screws are oriented to upper right and lower left corners, FIGURE F. The volume of the box is determined by the number of conductors entering and exiting the box. Use 1-3/4 cubic inches per conductor (#16 AWG).

FIGURE F

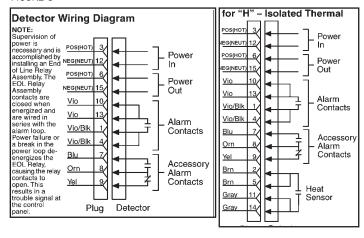


#### **INSTALL MOUNTING PLATE & CONNECT WIRES**

- 1. Remove the plug and wire assembly from the shipping container and wire it in junction box as follows:
- Major Circuits (power in, power out, and alarm contacts) have two wires, one for the incoming circuit and one for the outgoing circuit. Auxiliary relay contacts are single wire circuits. Make connections as detailed on wiring diagrams, FIGURE G.
- Lace the connector through the provided mounting plate and secure the plate to the junction box.

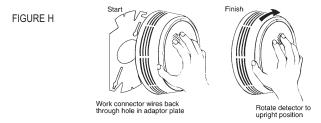
NOTICE: FOR TROUBLE AREAS WHERE THERE CAN BE A LARGE VOLUME OF AIR BLOWING OUT THROUGH THE ELECTRICAL JUNCTION BOX. YOU MUST FIRST INSERT THE CARDBOARD SHIELD PACKAGED WITH YOUR SMOKE DETECTOR TO THE BACKSIDE OF THE SMOKE DETECTOR BEFORE SECURING IT TO MOUNTING PLATE.

#### FIGURE G



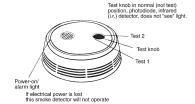
#### SECURE SMOKE DETECTOR TO MOUNTING PLATE

- 1. Plug the wire connector into the detector base.
- Place the smoke detector up to the mounting plate, rotating it clockwise until smoke detector firmly snap locks into place. Keep the smoke detector parallel to the mounting plate so upper and lower tabs on plate seat correctly into detector, FIGURE H.



#### **CHECKOUT & TROUBLESHOOTING**

- Turn test knob on each unit to the NORMAL position and supply power to the system Control Unit.
  - a. If the fire alarm sounds, one or more smoke detector connections to the fire detection circuit may be reversed. Check wire color codes and trace.
- b. If the trouble buzzer sounds, the fire detection circuit may be reversed or disconnected at the Control Unit.
- 2. Testing with the Test Knob.
  - a. Rotate the test knob on the front of the unit to TEST 1 position (counterclockwise). See FIGURE I. The alarm should sound in less than 20 seconds.
  - b. To reset the system, return the knob to its NORMAL position and use the reset switch on the system Control Panel. Hold in reset for 5 or more seconds.
  - c. To test smoke detector for high sensitivity, rotate test knob clockwise to the TEST 2 position. Alarm should remain silent. Return test knob to normal position. If your smoke detector alarmed during TEST 2, the smoke detector's sensitivity has become too high and may cause false alarms. This may mean your smoke detector is dirty and should be cleaned as described in the below maintenance procedure.
  - d. If your detector still alarms in TEST 2 position following washing and recommended drying time, return it to Gentex Corporation for service. The test knob actually tests the sensitivity of the unit by using the same principle involved as when smoke enters the smoke detector. When you turn the test knob to the TEST 1 position, you are scattering the detector's LED light to the equivalent of 3.4% actual smoke. TEST 2 position is equivalent to 0.85%.



- e. The test knob is not an electrical switch, nor is it connected in any way to the alarm horn. Therefore, when you test with the test knob, you are simulating the smoke condition in the detector and testing all elements of the smoke detector that are necessary for the detection of actual smoke. To check for proper smoke entry into your smoke detector's sensing chamber, Gentex recommends using the Home Safeguard Smoke Detector spray or CHEKKIT® SMOKE Detector Tester from SDI. This test should be performed once a year and should be sprayed from a distance no closer than 12 inches from smoke detector (refer to NFPA 72 for
- 3. A trouble buzzer will sound if any detector is removed from its socket in supervised circuits. CAUTION: When a smoke detector is removed it may cause other smoke detectors to have a loss of power and become inoperative. If this happens, reconnect the smoke detector until a replacement can be installed, or use a jumper plug which can be ordered separately from the factory.
- 4. Power-On- Alarm Light. The LED on the face of the smoke detector blinks every 15-30 seconds, indicating electrical power is being supplied, see FIGURE I. If the smoke (or test knob) persists for about 20 seconds, the LED will be on continuously for latching models or flash rapidly for non-latching models to indicate the alarm condition of the smoke detector. It will stay on until the system is reset.

After your smoke detector has been in operation for a period of time or if it was installed prior to the completion of all building construction, your smoke detector may have become more sensitive due to dirt build-up in the smoke detector's optic sensing chamber. This could cause nuisance alarms or cause the smoke detector to activate from small amounts of smoke build-up. If this should occur, following this simple washing procedure will restore your smoke detector back to its original condition.

For further information regarding frequency of maintenance and testing, refer to NFPA 72, NFPA, Batterymarch Park, Quincy, MA 02269.

NOTICE: FAILURE TO FOLLOW FULL CLEANING INSTRUCTIONS COULD RESULT IN DAMAGE TO THIS SMOKE DETECTOR.

- 1. Turn off electrical power to the detector.
- 2. Twist the smoke detector counter-clockwise to remove it from its mounting plate.

MARNING The fire alarm system shall remain active during all maintenance. Therefore, while servicing one smoke detector, either use a replacement smoke detector or jumper plug to keep the fire alarm system operative. Contact your local Gentex distributor for the proper jumper plugs to use with your fire system.

- 3. Unplug the connector from the back of the smoke detector. Do not remove the wire connection; leave the connector for your replacement smoke detector or jumper plug.
- 4. Select three (3) standard size wash buckets and fill them each with one gallon of normal tap water (distilled or de-ionized treated water is recommended as a final rinse if water is extremely hard in your area).
- 5. Add 1/8 cup of Ivory® dishwashing liquid to the first bucket of water and allow it to mix thoroughly, then place dirty smoke detector in the soap water mixture until it becomes completely covered or submerged. NOTE: If the smoke detectors are exceptionally dirty, you may wish to first wipe off any excess dirt before washing smoke detector so as not to dirty the wash water too quickly.

MARNING DO NOT open smoke alarm for cleaning. IF SMOKE ALARM IS OPENED DURING CLEANING, PRODUCT WARRANTY BECOMES VOID.

NOTICE: ONLY IVORY® DISHWASHING LIQUID IS TO BE USED. OTHER BRANDS ARE NOT RECOMMENDED AND MAY CAUSE YOUR DETECTOR TO

- 6. Allow smoke detector to soak for approximately 10 minutes (longer if extremely dirty). Then agitate for 5 or 10 seconds to flush out any remaining dirt left inside detector's housing.
- 7. Remove detector from wash water and transfer directly to one of the first rinse buckets containing clear water. Again, allowing smoke detector to become completely submerged, agitate once more for 5 or 10 seconds to remove soap
- 8. Finally, transfer detector to your second and final rinse bucket, repeating method found in Step 7, then remove smoke detector to a clean dry area for a period of 48 hours to allow it to thoroughly dry.

IMPORTANT: It is recommended to change wash and rinse water after five (5) smoke alarms. If your devices are extremely dirty, water should be changed more frequently.

NOTICE: SMOKE DETECTORS ARE TO AIR DRY ONLY. DO NOT PLACE SMOKE DETECTOR IN OVEN OR USE A HOT AIR BLOWER TO ACCELERATE DRYING TIME. THIS COULD RESULT IN DAMAGE TO YOUR SMOKE DETECTOR. In the event you experience difficulty in the cleaning of your smoke detectors or if you have any questions, please contact Gentex Corporation or your local Gentex distributor

MARNING If the smoke detector does not work properly, do not try and fix it yourself. This will void your warranty. See "To Return a Smoke Detector" for instructions to return smoke detectors that do not operate properly. DO NOT TRY TO FIX IT YOURSELF.

IMPORTANT: Gentex recommends smoke detectors be tested a minimum of once a week.

MARNING Never use an open flame of any kind to test your smoke detector. You may ignite and damage the smoke detector as well as the surrounding area. The test feature of your smoke detector accurately simulates smoke conditions and tests the smoke detector's functions as required by **ANSI/UL 268.** 

MARNING Do not cover, tape, or otherwise block the openings of your smoke alarm. These openings are designed to allow air to pass through your smoke detector, thus sampling the air around the smoke detector.

MARNING Smoke detectors are not to be used with detector guards unless the combination has been evaluated and found suitable for that purpose. NOTICE: FAILURE TO REGULARLY CLEAN THIS SMOKE DETECTOR MAY RESULT IN NUISANCE ALARMS. A BUILD UP OF DUST CREATES AN OBSCURATION THAT \SIMULATES SMOKE. THIS MEANS THE UNIT MAY GO INTO ALARM WITHOUT A SMOKE CONDITION.

#### TO RETURN A SMOKE DETECTOR

Should you experience problems with your smoke detector, proceed as follows:

- 1. Turn off electrical power to the detector.
- 2. Rotate the detector counter-clockwise to remove it from its mounting plate.
- 3. Unplug the connector from the back of the detector. Do not remove the wire connection; leave the connector for your replacement detector. If the system is to remain active while the detector is removed, a jumper plug must be installed. Contact factory for part.
- 4. Carefully pack (the manufacturer cannot be responsible for consequential damage) and return to the manufacturer. Include complete details as to exact nature of difficulties being experienced and date of installation.
- 5. Return to: Gentex Corporation, 10985 Chicago Drive, Zeeland, Michigan 49464. Prior to returning, call 1-800-436-8391 or e-mail FP\_RMA@gentex.com to obtain a RMA number from our return department.

#### LIMITED WARRANTY

For a period of 24 months from the date of purchase, or a maximum of 20 months from the date of manufacture. Gentex warrants to you, the original consumer purchaser, that your Smoke Detector will be free from defects in workmanship, materials, and construction under normal use and service. If a defect in workmanship, materials, or construction should cause your Smoke Detector to become inoperable within the warranty period, Gentex will repair

vour Smoke Detector or furnish you with a new or rebuilt replacement Smoke Detector without charge to you except for postage required to return the Smoke Detector to us. Your repaired or replacement Smoke Detector without charge to you except for postage required to return the Smoke Detector to us. Your repaired or replacement Smoke Detector will be returned to you free of charge and it will be covered under this warranty for the balance of the warranty period. This warranty is void if our inspection of your Smoke Detector shows that the damage or failure was caused by abuse, misuse, abnormal usage, faulty installation, improper maintenance, or repairs other than those performed by us. ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, APPLY ONLY FOR THE WARRANTY PERIOD SPECIFIED ABOVE. PLEASE NOTE THAT SOME STATES DO NOT ALL OW! INITIATIONS ON HOW PERIOD SPECIFIED ABOVE. PLEASE NOTE THAT SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

GENTEX WILL NOT BE LIABLE FOR ANY LOSS, DAMAGE, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING IN CONNECTION WITH THE SALES, USE OR REPAIR OF THIS SMOKE DETECTOR.
PLEASE NOTE THAT SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR
CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

If a defect in workmanship, materials, or construction should cause your Smoke Detector to become inoperable within the warranty period, you must return the Smoke Detector to Gentex postage prepaid. You must also pack the Smoke Detector to minimize the risk of it being damaged in transit. You must also enclose a return address. Smoke Detectors returned for warranty service should be sent to: Gentex Corporation, 10985 Chicago Drive, Zeeland, MI

If we receive a Smoke Detector in a damaged condition as the result of shipping, we will notify you and you must file a claim with the Shipper.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS

WHICH VARY FROM STATE TO STATE.

hese materials have been prepared by Gentex Corporation ("Gentex") for informational purposes only, are necessarily summary, and are not purported to serve as legal advice and should not be used as such. Gentex makes no representations and warranties, express or implied, that these naterials are complete and accurate, up-to-date, or in compliance with all relevant local, state and federal laws, regulations and rules. The materials do not address all legal considerations as there is inevitable uncertainty regarding interpretation of laws, regulations and rules to a profit of particular fact patherns. Each person's activities can differently affect the obligations that under applicable laws, regulations or rules. Therefore, these materials should be used only for informational purposes and should not be used as a substitute for seeking rofessional legal advice. Gentex will not be responsible for any action or failure to act in reliance upon the information contained in this material.

550-139-LAC

9-29-97