

**ADEMCO**

# INSTALLATION INSTRUCTIONS

**No. 5775  
PASSIVE INFRARED  
MOTION DETECTOR/TRANSMITTER**

MARGIN LINES INDICATE PRINCIPAL CHANGES  
IN THIS ISSUE

## GENERAL INFORMATION

The No. 5775 Passive Infrared Motion Detector/Transmitter is a battery operated, wireless device intended for use as part of a 5700 Series Wireless Alarm System, and provides wide angle coverage with 9 detection zones, with a range of up to 35 feet.

This document provides installation instructions for the No. 5775, but it is recommended that the installer also be familiar with the Installation Instructions for the 5700 Series Receiver/Control.

## FEATURES

- A dual element pyro-electric sensor provides positive protection while minimizing false alarms.
- Alternate polarity pulse count option offers greater stability in adverse environments.
- Walk Test LED for added ease of system checkout.
- Removable battery compartment drawer for easy battery replacement without the need to remove the unit's cover.
- Convenient wall or corner mounting options
- Wireless operation for fast and easy installation.
- Pet alley mounting option.

## SYSTEM DESCRIPTION

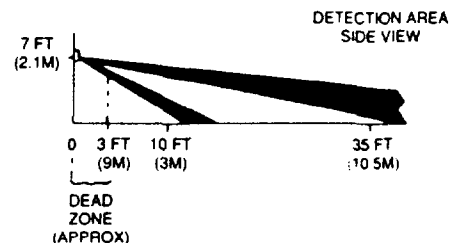
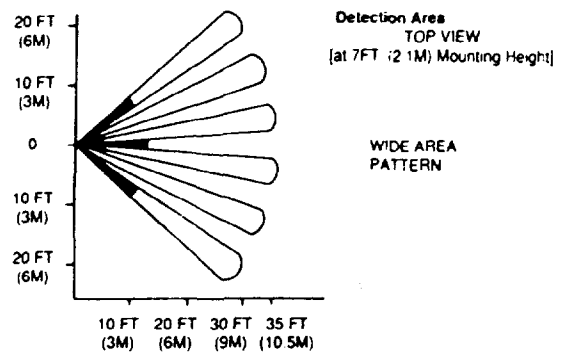
**Optical System:** The No. 5775 uses a computer designed optical system which divides the protected area into a series of six wide-angle zones, spanning a total angle of 84° from the detector, and three downward angled zones, which provide overlapping coverage to the floor level (refer to diagrams 1 & 2). A dual element pyro-electric sensor within the No. 5775 measures the level of infrared energy in each zone, and detects any changes therein. When an intruder crosses or enters any zone, the resulting change in infrared energy triggers an alarm. The alarm is then transmitted to the system's Receiver Control where it is processed. Since far infrared energy does not penetrate most building materials (including window glass), the No. 5775 responds only to movements inside the room or protected area.

**Radio Transmitter:** The built-in transmitter serves only as the communication link to the system's Receiver/Control. It is *not* used for detection purposes. Thus, more than one detector can be used in the same area. Radio messages sent from the detector's transmitter to the system's Receiver/Control uniquely identify the detector, and also contain appropriate alarm, supervisory or low battery information. A DIP switch located on the main PC board is used to program the required "House ID" and "Transmitter ID" numbers (described in the system's Installation Instructions). To conserve battery life, no more than one transmission sequence will occur within any three minute period. During the "cover off" test mode, however, transmissions are not time restricted.

**Alternate Polarity Pulse Count Option:** The No. 5775 provides two DIP switch selectable detection response modes: Instant Response and Alternate Polarity Pulse Count. When set for Instant Response, any detected change in infrared energy will trigger an immediate alarm. This mode is recommended when the detector is used to monitor a hallway or long corridor, where it will detect an intruder's presence immediately upon entry. Instant mode is also useful during installation walk tests.

The Pulse Count option can be used in protected areas where periodic changes in infrared energy levels are normal (a forced air heating duct, for example). When selected, a detected change in infrared energy is first verified before an alarm is triggered. The verification process requires that the sensor detect at least two consecutive changes in infrared energy within a given time period, before generating an alarm.

**IMPORTANT!** If the Pulse Count option is desired, be sure to walk test the unit while it is set for Pulse Count operation to ensure the proper operation of the unit while in this mode.



Diagrams 1 & 2. PROTECTION PATTERNS

## INSTALLATION PRECAUTIONS

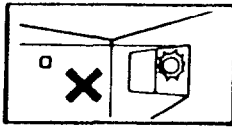
Refer to the *Preliminary Location Considerations* section of the 5700 Series System Installation Instructions for additional information concerning precautions for the system's Receiver/Control.

**Unprotected "Dead Zone":** The optical system is designed to give proper coverage based on a typical mounting height of 7 feet (2.1 m). There is, however, an area from the mounting wall to about three feet (0.9 m) away, within which motion goes undetected (shown in diagrams 1 & 2). This area is known as a dead zone. Be sure to consider this area when deciding on mounting locations.

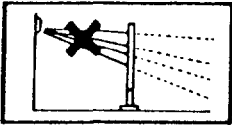
**Finding Suitable Locations:** Since the No. 5775 responds to an intruder's movements into or out of a protected zone, best protection will be obtained by selecting a mounting site where an intruder's motion will most likely be across a number of zones.

A strong radio transmission path to the Receiver/Control is vital to the security of the system. Before deciding on permanent mounting locations, be sure that the location is completely suitable by performing the *Radio Transmission Path Check* described later in this document.

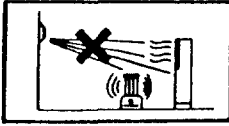
Passive infrared detectors are remarkably resistant to false alarms, but since they are designed to respond to rapid changes in infrared energy levels, the precautions shown below should be taken for optimum performance.



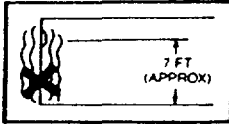
Do not install where the detector is exposed to direct sunlight or directly above strong sources of heat.



Make sure the detection area does not have obstructions (curtains, screens, large pieces of furniture, plants, etc.) which may block the pattern of coverage.



Avoid locating a unit in areas which contain objects likely to produce a rapid change in temperature, such as central heating, radiators or ducts (or heaters of any kind), air conditioners, open flame, etc.



Install the detector at a height of approximately 7 feet (2m) from floor. Do not mount on an unstable surface.

### PRELIMINARY SETUP PROCEDURES

#### DIP Switch Setting and Battery Installation:

1. Remove the No. 5775 front cover by prying it with a coin or screwdriver at the notch shown in diagram 3.
2. Set the DIP switch located on the PC board within the unit for the assigned "House ID" and "Transmitter ID" numbers as described in the Receiver/Control Installation Instructions. Refer to diagram 3.
3. Remove the battery compartment drawer by sliding it out from the bottom of the unit and install one fresh 9 volt battery (see *Specifications and Note for Lithium Battery Users* sections for battery types).
4. Replace the battery compartment drawer, but do not replace the front cover at this time. After approximately two minutes, the detector will be activated, and will transmit upon detection of motion. The Walk Test LED will also light.

#### Selecting Pulse Count Operation:

If Pulse Count operation is desired, set DIP switch 10 to the ON position as shown in diagram 3. Alarms will be triggered *only* if the sensor detects multiple changes in infrared energy (i.e. After an intruder has taken 3 or 4 steps within the protected area). The OFF position provides Instant Response (i.e. Alarms trigger the instant an intruder is detected).

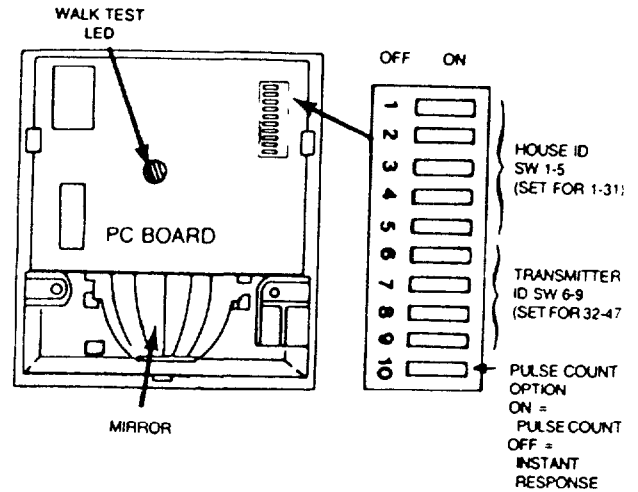
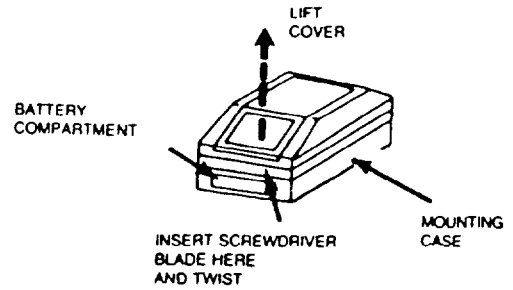
### MOUNTING THE NO. 5775

**Radio Transmission Path Check:** Verify that a strong transmission path between the No. 5775 and the system's Receiver/Control exists *before* making permanent installation. This is accomplished by performing the *Preliminary Programming/Location Test* described in the system's Receiver/Control Installation Instructions. The No. 5775 will transmit when sensing motion (waving arm or walking into area). Sometimes, moving the detector only a few inches means the difference between a strong and weak transmission path. Experiment until you are satisfied that the location provides the strongest transmission path, while still being practical for the protection pattern desired. This test also serves to verify correct DIP switch settings. **IMPORTANT!** Do not install a No. 5775 permanently, until a strong radio transmission path to the Receiver/Control has been achieved.

#### Normal Mounting:

1. Determine a suitable location which provides best protection coverage *and* strong radio transmission to the Receiver/Control.
2. Remove the battery compartment drawer. Remove the No. 5775 from its mounting case by gently spreading both sides of the case (a screwdriver can be used) and lifting the module out.
3. Three knockouts are provided for flat wall mounting; four are provided for corner mounting (refer to the *Inverted Mounting Spacer* diagram). Punch out the appropriate knockouts for the mounting desired.
4. Mount the case to a firm, vertical surface (flat wall or corner) at the desired location using #4 panhead screws. **IMPORTANT!** Make sure the PIR's case is flush against the wall (when flat or corner mounted), *and do not over-tighten the mounting screws.* Failure to observe this precaution may cause the case to distort and result in the PIR's module becoming dislodged later.
5. Snap the No. 5775 into the mounting case and replace the battery drawer.
6. With the front cover removed, perform the walk test described in the *Walk Test* section.

Remove front cover by inserting a screwdriver blade in the groove between cover and base at the location shown, rotating the blade to override snap fit, and then lifting cover off.



I.D. #	HOUSE ID SWITCH POSITIONS				
	1	2	3	4	5
1	on	on	on	on	OFF
2	on	on	on	OFF	on
3	on	on	on	OFF	OFF
4	on	on	OFF	on	on
5	on	on	OFF	on	OFF
6	on	on	OFF	OFF	on
7	on	on	OFF	OFF	OFF
8	on	OFF	on	on	on
9	on	OFF	on	on	OFF
10	on	OFF	on	OFF	on
11	on	OFF	on	OFF	OFF
12	on	OFF	OFF	on	on
13	on	OFF	OFF	on	OFF
14	on	OFF	OFF	OFF	on
15	on	OFF	OFF	OFF	OFF
16	OFF	on	on	on	on
17	OFF	on	on	on	OFF
18	OFF	on	on	on	OFF
19	OFF	on	on	OFF	OFF
20	OFF	on	OFF	on	on
21	OFF	on	OFF	on	OFF
22	OFF	on	OFF	OFF	on
23	OFF	on	OFF	OFF	OFF
24	OFF	OFF	on	on	on
25	OFF	OFF	on	on	OFF
26	OFF	OFF	on	OFF	on
27	OFF	OFF	on	OFF	OFF
28	OFF	OFF	OFF	on	on
29	OFF	OFF	OFF	on	OFF
30	OFF	OFF	OFF	OFF	on
31	OFF	OFF	OFF	OFF	OFF

Diagram 3. No. 5775 DIP SWITCH/PULSE COUNT OPTION

### PET ALLEY MOUNTING OPTIONS

If small pets have access to protected areas, one of the following mounting options should be used to prevent pet activated false alarms. Each of these options alters the pattern of protection such that small animals will not be detected.

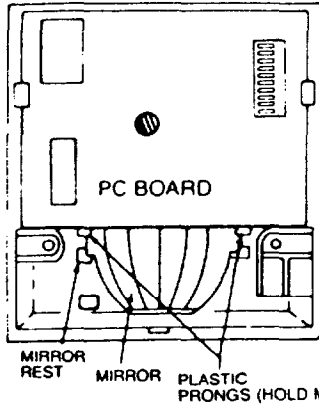
**WARNING!** When using the pet alley options, a crawling intruder will also be undetected.

**Normal mounting with masked mirror option:** The detector can be mounted normally at 6 feet (1.8m) from the floor with the downward pointing portion of the mirror masked

**IMPORTANT!** This option is valid *only* for rooms up to 15 ft. X 15 ft (4.5m x 4.5m) in size.

1. Mask the mirror using electrical or masking tape as shown in diagram 4
2. Mount the detector using normal mounting procedures at a height of 6 ft (1.8m).
3. Check that no motion is detected within 3 1/2 ft (1m) of the floor.

**Using the No. 1875PA Pet Alley Mirror:** This option mirror can be used in lieu of masking the existing mirror. Refer to its installation instructions for details. To replace the mirror:



1. Spread either or both plastic prongs holding the wide angle mirror and remove the mirror.
  2. Insert one side of the No. 1875PA mirror under a prong and snap the other side under the other prong. Make sure that the mirror sides are squarely in their corner rests and are held securely under the prongs.
- NOTE:** Mirror surface should be free of dirt, foreign matter and fingerprints. Use a clean dry soft cloth to wipe mirror surfaces if required.

**Inverted Mounting Option:** The detector can be mounted approximately 3 ft. to 3.5 ft. (0.9 - 1m) from the floor in an inverted position (PIR window at top), with spacers attached to the mounting case. When installed in this manner, the portion of the mirror which normally provides a downward beam of protection now provides an upward pointing beam.

**Before mounting inverted, note the following:**

- Be sure that furniture and other objects do not block the detector's pattern of protection.
- If possible, install a detector so that it is not directed at ceiling areas that include heating or air-conditioning ducts, vents, ceiling fans or lighting fixtures. If these sources of infrared energy or turbulence cannot be avoided, the upward pointing beams must be masked to avoid the possibility of false alarms. To mask the mirror, remove the front cover and apply electrical tape or masking tape as shown below:

- Verify that the location provides a strong radio transmission path to the Receiver Control as described earlier.

1. Attach the spacers to the detector as follows:
  - a. If mounting to flat wall: Assemble the two spacers, one above the other, and affix the combination to the area of the mounting case shown in diagram 4.
  - b. If mounting in a corner: affix one spacer to the rear of each of the corner mounting sides of the mounting case, as shown in diagram 4.
2. Mount the detector mounting case upside-down approximately 3 1/2 feet (1m) above the floor using the procedure described earlier.
3. Check that no motion is detected within 3 1/2 feet (1m) of the floor.

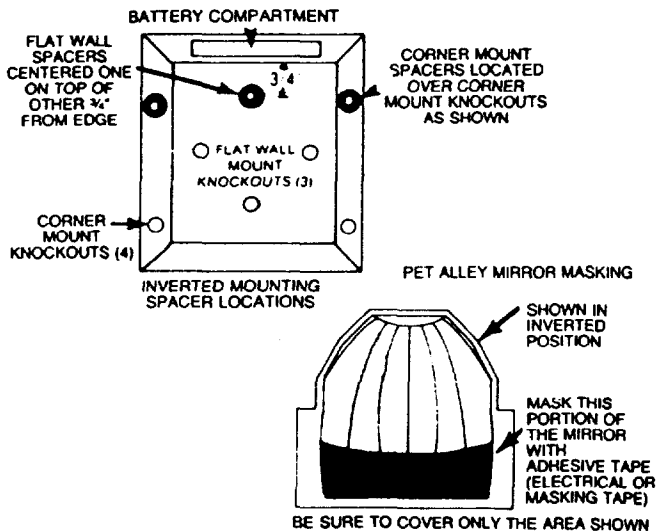


Diagram 4. INVERTED/PET ALLEY MOUNTING

## WALK TEST

(Refer to the Location Test section of the system's Installation Instructions for additional information)

**NOTE:** The No. 5775 requires a two-minute "warmup" period after applying power.

1. Remove the front cover from the No. 5775 (to permit more than one transmission every 3 minutes). Set unit to Pulse Count mode if that option is to be used.
2. Place the system's Receiver Control into Test Mode.
3. Walk into the protected area. The Walk Test LED will light when the detector senses your motion, and the Receiver Control will signal the detector's alarm transmission (typically by sounding audible beeps at the Keypad).
4. Replace cover and verify operation at the keypad.  
**Note:** LED will not light with cover in place, but the transmitter ID will be displayed at the keypad when the detector is faulted.

## MAINTAINING PROPER OPERATION

In order to maintain the detector in proper working condition, it is important that the following be observed by the user.

1. Power must be provided at all times. A 9V Alkaline battery should supply enough power for up to 1-1/2 years\* of operation normally. A 9V Lithium battery may last up to 4 years.\* Refer to the Specifications section for factors affecting actual battery life in an installation. However, a battery must be replaced within 30 days of a low battery indication at the Receiver/Control's console.
2. The No. 5775 should never be re-aimed or relocated without the advice of the alarm service company.
3. The physical surroundings of the protected area will affect the pattern of protection if changed after the time of installation. For example, if furniture is moved, or air-conditioning or additional heating is installed, the system may have to be readjusted by the alarm service company to ensure proper protection.
4. Walk tests should be conducted frequently (at least weekly) to confirm the proper coverage by each detector. This is accomplished by selecting the Test Mode at the Receiver Control's console, walking through the protected area, and noting the alarm condition displayed at the Receiver/Control's console.

Note that with the No. 5775 front cover in place, only one alarm transmission will be transmitted within every three minute period.

\*UL Listed installations are currently approved for 1 year battery life c

## TROUBLESHOOTING

PROBLEM	PROBLEM CAUSE	REMEDY
Unit Goes into Alarm For No Apparent Reason.	Rapid change in infrared energy levels in one of the protected areas. Some of these sources are electric or gas heaters, open flames, electric arcs, or any objects which may be partially in a zone and can change temperature rapidly.	Identify the source of the infrared energy or temperature change. Re-position the detector so that the source is no longer in a protected zone, if the source cannot be moved.
	Birds or other small animals are entering the area.	Eliminate all possible entry points for birds, cats, dogs, rodents, etc. Contact exterminator if necessary.
Area of Coverage Has Changed	User has re-positioned furniture in a protected area.	Caution user that changes in layout can affect coverage. Re-aim or relocate the detector according to installation instructions. Be certain that the detector has not been tampered with.
	Mounting surface is unstable. A few degrees vertical shift can change range substantially.	Mount the detector on a stable surface.
Unit Does Not Appear To Be Operating	Unit is not receiving power.	Check for appropriate battery voltage. Install new battery if necessary. If using lithium batteries, see Note for Lithium Battery Users below.

### Note for Lithium Battery Users

The manufacturer has advised us that lithium batteries have a normal tendency to show low voltage after storage (to prolong shelf life), due to an increase in capacitance from non-use. Once a battery is put into use, or the battery terminals are shorted for about 5 seconds, preferably with a 10 ohm wire round resistor (a coin or paper clip will suffice), the voltage restores to about 9.5 volts.

## SPECIFICATIONS

Dimensions:	3' 1/2" W x 3' 1/2" H x 2' 1/2" D (78cmW x 97cmH x 59cmD)
Weight:	7.0 oz (200 grams) with battery 5.4 oz (150 grams) without battery
Detection Method:	Passive Infrared
Coverage:	35 ft (10.6m) x 45 ft (13.7m); 84° angle
Detection Zones:	9 zones (6 long, 3 short)
Pulse Count:	Installer option
Detectable Walk Rate:	0.5 - 5 ft second (0.15 - 1.5m/sec)
Mounting Height:	7 ft nominal (2.1m)
Transmit Frequency:	345MHz (U.S.) 315MHz (Canada)
Transmission Range:	100 ft (30m) nominal
Input Voltage:	One 9V Alkaline battery, Ademco No. 464, Eveready 522, Duracell MN1604 (providing up to 1-1/2 years of life), or one 9V Lithium battery, Ademco No. 465 (providing up to 4 years of life). ** See Note for Lithium Battery Users below Troubleshooting section.

Operating Humidity: Up to 95% RH (max.) non-condensing  
Operating Temperature: 32°F to 122°F (0°C to 50°C)

\*\* Longevity of batteries will depend upon the environment and usage. External factors such as humidity, high or low temperatures, as well as large swings in temperature, may all reduce the actual battery life in a given installation. UL Listed installations are currently approved for 1 year battery life only.

### IMPORTANT! PLEASE NOTE THE FOLLOWING:

Before any equipment is returned to ADEMCO for service, a Return Authorization Number should first be obtained from the nearest Ademco Distribution Center.

If it becomes necessary to return a unit for repair, the optical head and reflector assembly within the unit should be cushioned by surrounding it with soft packing material (such as tissue, newspaper, foam or plastic bubbles) to protect it from undue stress during shipment. Take care not to touch the reflector or sensor surfaces.

### TO THE INSTALLER

Regular maintenance and inspection (at least annually) by the installer and frequent testing by the user are vital to continuous satisfactory operation of any alarm system.

The installer should assume the responsibility of developing and offering a regular maintenance program to the user as well as acquainting the user with the proper operation and limitations of the alarm system and its component parts. Recommendations must be included for a specific program of frequent testing (at least weekly) to insure the system's proper operation at all times.

THIS DEVICE COMPLIES WITH PART 15 OF FCC RULES. ANY INTERFERENCE THAT MAY BE CAUSED SHOULD BE REPORTED TO ADEMCO, CUSTOMER SERVICE, 165 EILEEN WAY, SYOSSET, N.Y., 11791, (516) 921-6704.

### WARNING THE LIMITATIONS OF THIS PASSIVE INFRARED MOTION DETECTOR

While the Intrusion Detector is a highly reliable intrusion detection device, it does not offer guaranteed protection against burglary. Any Intrusion Detection device is subject to compromise or failure to warn for a variety of reasons:

- Passive Infrared Motion Detectors can only detect intrusion within the designed ranges as diagrammed in this installation manual.
- Passive Infrared Motion Detectors do not provide volumetric area protection. They do create multiple beams of protection, and intrusion can only be detected in unobstructed areas covered by those beams.
- Passive Infrared Detectors cannot detect motion or intrusion that takes place behind walls, ceilings, floors, closed doors, glass partitions, glass doors, or windows.
- Mechanical tampering, masking, painting or spraying of any material on the mirrors, windows or any part of the optical system can reduce the detection ability of the Passive Infrared Motion Detector.
- Passive Infrared Detectors sense changes in temperature; however, as the ambient temperature of the protected area approaches the temperature range of 90° to 105°F (32° to 40° C), the detection performance can decrease.
- This Passive Infrared Detector will not operate without appropriate DC power connected to it, or if the DC power is improperly connected (i.e., reversed polarity connections).
- Passive Infrared Detectors, like other electrical devices, are subject to component failure. Even though they are designed to last as long as 10 years, the electronic components could fail at any time.

We have cited some of the most common reasons that a Passive Infrared Motion Detector can fail to catch intrusion. However, this

does not imply that these are the only reasons, and therefore is recommended that weekly testing of this type of unit, in conjunction with weekly testing of the entire alarm system, be performed to ensure that the detectors are working properly.

Installing an alarm system may make one eligible for lower insurance rates, but an alarm system is not a substitute for insurance. Homeowners, property owners and renters should continue to act prudently in protecting themselves and continue to insure the lives and property.

We continue to develop new and improved protection devices. Users of alarm systems owe it to themselves and their loved ones to learn about these developments.

## ADEMCO LIMITED WARRANTY

Alarm Device Manufacturing Company, a Division of Pittway Corporation, and its divisions, subsidiaries and affiliates ("Seller", 165 Eileen Way, Syosset, New York 11791, warrants its product to be in conformance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for 18 months from the date stamp on the product or, for products not having an Ademco date stamp for 12 months from date of original purchase unless the installer instructions or catalog sets forth a shorter period, in which case the shorter period shall apply. Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for material or labor, any part which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than Ademco factory service. For warranty service, return product transportation prepaid, to Ademco Factory Service, 165 Eileen Way, Syosset, New York 11791.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO CASE SHALL SELLER BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, OR UPON ANY OTHER BASIS OF LIABILITY WHATSOEVER, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE SELLER'S OWN NEGLIGENCE OR FAULT.

Seller does not represent that its product may not be compromised or circumvented; that the product will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained alarm may only reduce the risk of a burglary, robbery or fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE OR OTHER LOSS BASED ON A CLAIM THE PRODUCT FAILED TO GIVE WARNING. However, if Seller is held liable, whether directly or indirectly, for any loss or damage arising under this Limited Warranty or otherwise, regardless of cause or origin, Seller's maximum liability shall not in any case exceed the purchase price of the product, which shall be the complete and exclusive remedy against Seller.

This warranty replaces any previous warranties and is the only warranty made by Seller on this product. No increase or alteration, written or verbal, of the obligation of this Limited Warranty is authorized.

# ADEMCO

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