

## **FUNCTIONAL 'SYSTEM' TESTING**

A system test should be done by physically walking across the coverage pattern while the system is fully armed. Allow time for the Sleep Cycle Timer to expire before testing and always notify the Central Monitoring Station prior to performing any testing.

## **BATTERIES**

The unit requires 2 x CR123A Lithium batteries. The estimated service life is 5 to 7 years in a typical residential installation with the Battery Saver sleep set to the 120sec setting. To clear a sensor low battery trouble condition, remove both old batteries and **WAIT AT LEAST 20 seconds before installing new batteries**. Once the new batteries are installed, trip the sensor a couple of times. This should send an "all good" and clear the low battery trouble.

## **BATTERY REPLACEMENT**

Use only approved 3V Lithiums. Replace both batteries at the same time and with same date code if possible. Replacements can be obtained from alarm distributors.

1. Remove sensor from back housing.
2. Remove both old batteries from sensor.
3. **WAIT AT LEAST 20 SECONDS** before installing new batteries. **Observe correct polarity** when installing new batteries. Do not bend or damage the metal battery holder contacts. Approved 3.0 Lithium Batteries are: Panasonic CR123A, Duracell DL123A, Varta CR123A,
4. Re-test sensor operation with the control.

**BATTERY WARNING: Risk of fire, explosion and burns. Do not attempt to recharge or disassemble. Do not incinerate or expose to heat above 212° F (100° C). Dispose of used batteries properly. Keep away from children.**

## **FCC COMPLIANCE STATEMENT:**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ELK-6032 Wireless Outdoor PIR

CONTAINS: FCC ID: TMAELK-ALRT

NOTE: ELK PRODUCTS IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

## **LIMITATIONS**

While the 6032 Passive Infrared (PIR) Motion 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:

PIR Detectors can only detect movement within a specific coverage area as diagrammed in this manual. To detect movement, the PIR Detector senses the infrared energy that is emitted from an intruder moving across the sensor's field of view.

PIR Detectors do not provide volumetric area protection. They create multiple beams of protection. Intrusion can only be detected in unobstructed areas covered by those beams.

PIR Detectors cannot detect motion or intrusion that takes place behind walls, ceilings, floors, closed doors, glass partitions, glass doors, or windows.

The radio transceiver only provides communications. It does not have anything to do with detecting motion.

The 6032 PIR is not a Life Safety device.

## **LIMITED WARRANTY**

The 6032 Wireless Outdoor PIR Sensor is warranted to be free from defects and workmanship for a period of 2 years from date of manufacture. Batteries used with wireless devices are not warranted. Elk makes no warranty, express or implied, including that of merchantability or fitness for any particular purpose with regard to batteries used with wireless devices. Refer to Elk's website for full warranty statement and details.

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# ELK-6032 Wireless Outdoor PIR Sensor

## **APPLICATION & OVERVIEW**

The 6032 Wireless Outdoor PIR Sensors is a cooperative effort with Optex Corporation, combining their newest VXI-R Battery Operated Detector with Elk's Two-Way Wireless Radio Transmitter. The 6032 is designed for use with control/transceivers that accept Elk's two-way technology. It is intended for residential and light commercial installations and incorporates many features designed to ensure its reliable performance.

When the outdoor PIR sensor detects a violation, the two-way radio transmitter will transmit that event to the control/receiver. In addition to alarms, the 6032 also transmits tamper detect, low battery, and supervision checkins. The transmitter has a unique TXID identification number which must be enrolled into the control during installation.

With its two-way capability, the 6032 expects each transmission to be positively acknowledgment by the control and transceiver. This is to ensure that all messages are delivered, and it helps make the sensor energy efficient by not having to waste energy repeating any transmissions unless they have not been acknowledged.

The 6032 includes a battery saver timer designed to extend the life of the battery. This timer can be set for 5 sec. or 120 sec. Upon an initial violation the sensor will activate the transmitter and start the timer. No additional activations will be detected or transmitted while this timer is running.

## **WIRELESS FEATURES AND SPECIFICATIONS**

**(please refer to attached Optex instruction manual for Sensor specifications)**

- Wireless two-way communication
- Periodic (64 min.) Supervisory check-in
- Power Input: 3.0 VDC
- Battery Type & Size: 2 x Lithium CR123A (supplied)
- Low battery trouble signal
- Standby (Quiescent) Current Draw including sensor: ~12µA
- Current Draw: Max. ~6mA (Walktest, LED on, Transmitting)
- Operating Temperature: 14° to 104° F (-10° to 40°C) \* (see note below)
- Relative Humidity: 5-95% Non-Condensing
- Frequency: 902 - 928 Mhz channel hopping Sensitivity

\* Operating Temperature of the Elk Wireless Transmitter takes precedent over that of the Optex Sensor.

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## 1. GUIDELINES FOR SETUP AND USE

The 6032 Wireless Outdoor Sensor should be mounted no greater than 200 to 250 feet from the M1 Control or the M1XRFTWM Transceiver, whichever is closer. Open-air range beyond 250 feet is possible but not guaranteed. Environmental factors can significantly reduce the effective transmission range. Be aware that small changes to the sensor's mounting or orientation can make a big difference in the transmission range.

Install sensor on a solid and stationary wall or pole. Follow the steps and procedures in the supplied Optex Installation Instructions regarding sensor mounting location, height, positioning, setup, etc. Sections 2-1 (wiring) and 2-2 (Preparing the transmitter) may be skipped over since the ELK transmitter is already installed and connected inside the sensor back housing. For reference the wiring color code is: Red to +3V, Blk to Neg, Yel to ALM, Wht & Grn to Neg, Blu to TMP

**DIP Switches on the Elk Transmitter board:** **IMPORTANT!** Leave BOTH these switches in the OFF position.

**DIP Switches on the Optex Sensor:** Switch #1 = Walk Test Mode, Switch #2 = Battery Saving Timer, Switch #3 = Alarm & Trouble Output - this switch MUST always be ON, SWITCH #4 = LED operation.

**For maximum battery life (lower current draw) always turn OFF Optex Switches 1, 2 & 4.**

**The 6032 Sensor may be enrolled into the Control using one of the following methods.**

### 2. SENSOR ENROLLMENT FROM KEYPAD

2.1 Be sure the M1XRFTWM Transceiver is powered up and enrolled with the M1 Control.

2.2 Enter **M1 Keypad Installer Programming** and navigate to Menu: **14-Wireless Setup**, then press the right arrow to Select this menu.

2.3 Scroll to sub-menu:**3:Learn Sel Wireless Transmtr** and **Select**.

2.4 Scroll to an unassigned **WZone** (wireless zone) and press the right arrow **Learn** to enroll.

2.5 Insert 1 of the 2 batteries into the 6032 transmitter board while the keypad is displaying "**Push Transmitter Button**" Upon successful enrollment the Keypad should chime and briefly display the 6 digit TXID printed on the transmitter board. If the TXID of the sensor is not displayed then enrollment was not successful. **To attempt enrollment again you must remove the batteries and wait 20 seconds before re-inserting.**

WARNING: The M1 rapid-enroll feature will advance to the next vacant wireless zone so another sensor may be enrolled. If the 6032 is allowed to transmit while its tamper cover is open it may be accidentally enrolled twice. To prevent this place the sensor face down of in a box so it cannot detect motion.

2.6 After all wireless sensors are enrolled, press the left arrow or ELK key to end the Rapid-Enroll function.

2.7 Set Loop ID. Scroll to the pertinent wireless zone and press the left arrow (HW) button. The decimal equivalent of the 8 digit TXID number will display followed by Loop = 0. Move the cursor to the right by pressing the RIGHT arrow key and **enter a "2" for the Loop ID.** Press the left arrow or ELK key to return back to the wireless zone display. Loop ID tells M1 how to process the input transmission. The 6032 MUST always be set to Loop "2". NOTE: The M1 default for all wireless zones is Loop "0".

2.8 Set Supervision Type to "1" (Normal Supervision). Press the ELK or the Select Wireless key to locate Sub-Menu: **2:Xmit Transmitter Opt.** Scroll to the desired wireless zone and press right arrow to select. Scroll to Option **2: Supervision Type** and set it to "1". The control will now expect a supervisory check-in report every 64 minutes. If you want the sensor to be unsupervised then set this option to "0". NOTE: A separate M1 option sets the number of missed supervisory check-ins before a sensor is declared missing.

2.8 PIR Auto Restore - DO NOT Enable. This option is needed for other brands of wireless PIRs which do not transmit restorals. The 6032 PIR is designed to transmit its own restore following an alarm.

2.9 **PROGRAM THE ZONE DEFINITION** - This must be done from Keypad Menu **5 - Zone Definitions**

### 3. SENSOR ENROLLMENT FROM ELKRP

3.1 Launch the ElkRP PC software and open the desired Customer Account file.

3.2 Click the "+" next to Zones (Inputs) to expand the view. To create a wireless group, right click on **Zones (Inputs)** and click **New Wireless Zones**. Place a check mark in the box to be added, starting at Group 2. Click OK. Repeat if more wireless groups are required. See important note below.

NOTE: **M1XRFTWM Two-Way Transceivers (max. of 4) should only be enrolled as databus addresses 2, 3, 4, and 5. And the 1st M1XRFTWM MUST be enrolled at address 2.** Expanded zones in the M1 are defined by ElkRP in groups of 16. Group 2= Zones 17-32, Group 3 = Zones 33-48, etc. Wireless Zones MUST start at Group 2. With a maximum of 144 wireless zones in an M1, the last wireless zone would be Zone 160. Care must be taken to avoid enrolling any Hardwired Expanders at a databus address that conflicts with any wireless zones.

3.3 Double click on **Wireless - Group \_** (the group just added) and double click one zone at a time to define the Zone Name, Definition, Type, Attributes, etc.

3.4 To manually enter the sensor's TXID number click the **Wireless Setup** button. NOTE: You can also use the separate Wireless Setup menu accessed from the folders column.

3.5 For each sensor place a check mark in the **Enabled** box.

3.6 Set Supervision type to "1" (Normal Supervision). A setting of "0" tells the control to not supervised the sensor by expecting a periodic check-in transmission. See previous page for more details on Supervision.

3.7 Skip the block titled: "This device is a PIR (auto restore)." This SHOULD NOT be enabled since the 6032 PIR sends a restore transmission when the sensor returns to normal.

3.8 In the **TXID** box type in the Sensor TXID that is printed on the small label attached to the transmitter.

3.9 In the **LOOP** box enter a 2.

3.10 Click **Save**. Repeat the entire step 4 for each additional Wireless Zone and Sensor.

#### **RF ACKnowledge (Green) LED**

There is an RF Acknowledge LED (D1) on the 6032 transmitter board that is viewable while installing the batteries. This bi-color LED provides visual status of the two-way acknowledge (response) from the control/transceiver.

NOTE: Once the 6032 Sensor has been fully installed and the covers installed, the RF ACKnowledge LED is no longer visible.

**GREEN blink** = Sensor has successfully transmitted to the transceiver and that signal has been received and acknowledged by the transceiver. The green blink is not provided for a sensor restore transmission.

**ORG/RED blink** = Sensor was not successful in transmitting after multiple attempts.

**POSSIBLE CAUSES:** a) Sensor is not enrolled. b) Control or transceiver is not powered. c) Transceiver has not been enrolled in the control. d) Distance from sensor to transceiver is too great. Check the following:

- A. Verify the M1 Control is powered on.
- B. Verify the M1XRFTWM Transceiver is powered on and that it is enrolled with the M1.
- C. Verify the sensor is properly enrolled.
- D. Trip a different wireless sensor to determine if it can successfully communicate.
- E. If above steps are OK, temporarily move the failed sensor closer to the transceiver and retest. If sensor successfully communicates at the closer range then it may be necessary to:
  1. Relocate the transceiver to a closer and more central location to this and all other sensors.
  - OR
  2. Purchase and install an additional "remote" transceiver to cover the area where this sensor was mounted.