ELK-6050

Wireless Photoelectronic Smoke Detector with built-in rate-of-rise and fixed temp Heat Sensor

Installation Instructions

Applications and Overview

The ELK-6050 Wireless Smoke Detector is designed for use with Elk's two-way wireless product line consisting of the ELK-M1XRFTW Transceiver and the ELK-M1 Control. It is intended for residential applications and incorporates many features designed to ensure its reliable performance.

The 6050 is powered by long life 3V Lithium batteries, providing power to both the detector and the built-in wireless transmitter. The unit utilizes photoelectric smoke detection technology, and also includes fixed temperature 135°F heat detection and rapid "rate-of-rise" temperature detection. Built-in self-diagnostics monitors sensitivity and operation status. Should the unit drift out of the UL Listed sensitivity range or fail the internal diagnostics, it will extinguish its Alarm/Status LED and signal a trouble condition to the Control. This detector meets NFPA 72 field sensitivity testing requirements without the need for external meters. A sensitivity test feature provides visual indication of the sensitivity level and warns if service is required. Built-in drift compensation allows the product to adjust sensitivity automatically as it becomes dirty over time. The drift compensation feature dramatically increases the time between cleanings, as well as reducing the chance of nuisance alarms.

Specifications

|	
Operating Voltage:	3 VDC
Average Standby Current:	10 µA
Maximum Alarm Current:	30 mA
Battery Type:	3V Lithium x 2, Panasonic CR123A, Duracel DL123A (meets UL minimum 1 year life expectancy requirement)
Smoke Detection:	Photoelectronic
Sensitivity:	.88% to 3.63%/ ft.
Heat Detection:	Fixed 135°F ± 5°F (57.2°C ± 2.8°C) Rate-of-Rise 15°F/min>105°F (8.3°C/min>40.6°C)
Built-in Sounder:	85 dBa at 10' temporal pattern
Battery Trouble Threshold:	2.75V
Low Battery Beep Rate:	1 every 45 seconds.
Wireless Freq:	902 Mhz - 928 Mhz frequency hopping
Maximum wireless range:	200 feet
Dimensions:	5.6" x 2.4" (14.2cm x 6.1cm)
Operating Temperature:	40 to 100°F (4.4 to 37.8°C)
Operating Humidity:	0 to 95% non-condensing
Agency Listings:	UL268

About This Guide

This Guide describes the installation, operation, and maintenance of this product. Please read these instructions thoroughly prior to installation.

Installer: This document should be left with the owner/user.

Owner/User: Keep this document in a handy location and refer to it when you have questions about this products functions or features. Reading this guide is the only way to learn how to use your product wisely and to know how to react in the event of an alarm. This product is a member of a reliable, high-quality product family using the latest technology available. Review the information in this section to ensure you get the most out of the product. The information in this User Guide is in accordance with NFPA 72.

Alarm/Status LED
Heat Sensor and Ack LED
Test/Silence Button
Alarm Sounder
Heat Sensor
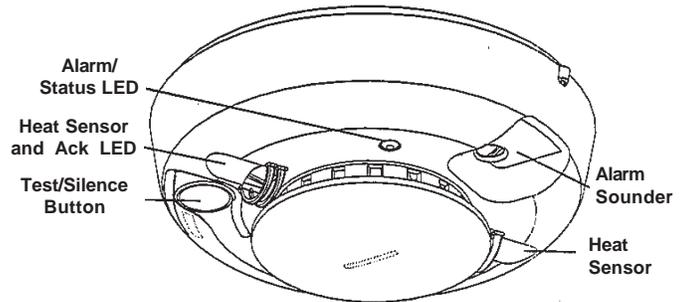
Components List

Smoke Detector electronics assembly
Mounting Baseplate
Mounting Screws and Anchors
Two CR123A lithium batteries
This User Guide

Two-way Communications

When multiple ELK-6050 Smoke Detectors are installed and enrolled into the same Control the two-way communications features offered by the Elk wireless permit certain communications to flow in both directions. For example; whenever any 6050 Smoke Detector alarms and the alarm is communicated to the Control, the Control will broadcast a signal to all other enrolled 6050 Smoke Detectors informing them to turn on their sounder. Likewise, whenever the alarm is silenced at the Control, a broadcast will be transmitted to silence the other "like" detectors. EXCEPTION: If smoke is still present in a detector, that detector will not cease sounding until the smoke has been cleared. Below is a complete listing of the two-way communications signals:

|		
Alarm	-	Sent from 6050 to the Control advising that the detection chamber has sufficient smoke or heat to qualify as an alarm condition.
Trouble	-	Sent from 6050 to the Control advising that the detector has an internal fault and may require service.
Low Battery	-	Sent from 6050 to the Control advising that the batteries have reached a low voltage state and must be replaced to maintain proper operation.
Test/Silence	-	Sent from 6050 to the Control advising that the Test Button was pressed on a detector. Also used to silence the alarm on that individual detector.
Sounder On	-	Sent from Control to all enrolled 6050 Smoke Detectors informing them to activate their sounder.
Sounder Off	-	Sent from Control to all enrolled 6050 Smoke Detectors informing them to silence their sounder. This is triggered by the silencing of the Fire Audible. NOTE: A detector will not silence if it continues to detect smoke or heat.
Trouble Off	-	Sent from Control to all enrolled 6050 Smoke Detectors informing them to silence their trouble chirps. In the case of a low battery trouble chirp, if the batteries are not replaced then the chirp will re-start after 24 hours.

ELK PRODUCTS, INC.
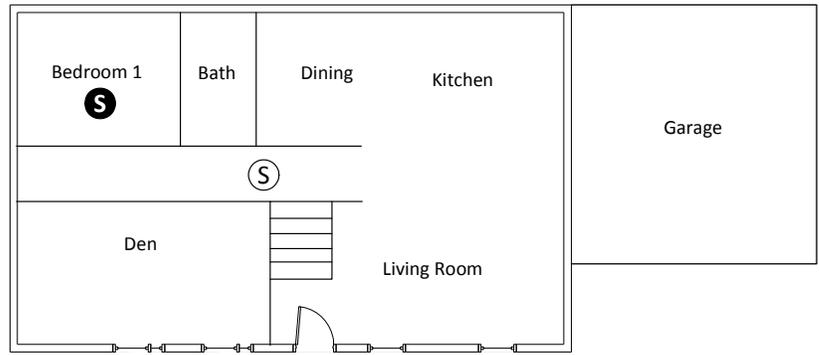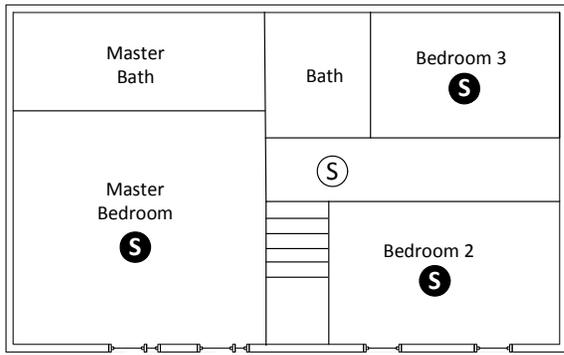
(S) Required Smoke Detector – Absolute Minimum

S Additional Smoke <u>required in new construction</u> and for additional protection

In homes basements or multiple levels at least one smoke detector shall be on each level.

A Smoke Detector shall be located in the hallway outside the entrance to any bedroom areas.

In new construction an additional Smoke Detector shall be installed in each sleeping area
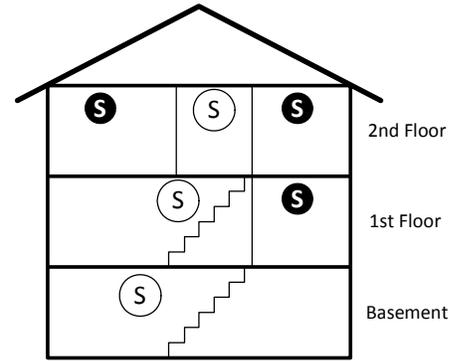
WARNING! LIMITATIONS OF SMOKE DETECTORS

- Wireless smoke detectors are very reliable, but may not work under all conditions. No fire alarm provides total protection of life or property. Smoke detectors are not a substitute for life insurance.

- **Smoke Detectors require a source of power to work.** This smoke detector will not operate and the alarm will not sound if batteries are dead or not installed properly.

- **Smoke Detectors may not be heard.** A sound sleeper or someone who has taken drugs or alcohol may not awaken if the alarm is installed outside a bedroom. Closed or partially closed doors and distance can block sound. This alarm is not designed for the hearing impaired.

- **Smoke Detectors may not always activate and provide warning early enough.** Smoke detectors only activate when enough smoke reaches the alarm. If a fire starts in a chimney, wall, roof, on the other side of closed doors, or on a different level of the property, enough smoke may not reach the alarm for it to alarm.

- Smoke Detectors are a significant help in reducing loss, injury and even death. However, no matter how good a detection device is, nothing works perfectly under every circumstance and we must warn you that you cannot expect a smoke alarm to ensure that you will never suffer any damage or injury.

- Current studies have shown smoke detectors may not awaken all sleeping individuals. It is the responsibility of individuals in the household that are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.

WHERE TO INSTALL

<u>Warning: As a minimum requirement, smoke detectors must be installed in accordance with the National Fire Protection Agency (NFPA) Standard 72, Chapters 2, 3, and 5, which define the standards for the National Fire Alarm Code (National Fire Protection Association), Batterymarch Park, MA 02269-9101). Depending on the application, you may need to reference other chapters of NFPA 72 or NFPA 101. In addition, observe all local and national building and electrical codes. See back page for listing of NFPA Guidelines.</u>

When choosing an installation location, consider:

- o Use of structure and type of construction
- o Contents you want to protect and their burning characteristics
- o Human occupancy
- o Total area to be monitored
- o Ceiling height and surface condition
- o Air movement and vent locations
- o Obstructions
- o Deflections

After considering these factors, choose a location:

- o Where the temperature range is between 40° and 100° F (4.4° and 37.8° C).
- o Where the humidity is between 0 and 90% non-condensing.
- o Away from ventilation sources that can prevent smoke from reaching the smoke alarm.
- o That is at least 5 feet (1.5 m) from bathrooms.

When placing the product on a ceiling, mount it in the center of the room or hallway, at least 4 inches (10cm) away from any walls or partitions.

When mounting the product on a wall, place it so the top is 4 to 12 inches (10 to 31cm) below the ceiling.

In rooms with sloped, peaked, or gabled ceilings, place smoke alarms 3 feet (.9 m) down or away from the highest point of the ceiling.

If mounting to suspended ceiling tile, secure the tile with the appropriate fastener to prevent tile removal.

Smoke detectors are not to be used with alarm guards unless the combination has been evaluated and found suitable for that purpose.

Note: A smoke detector does not provide warnings for fires resulting from explosions, smoking in bed, or other furniture; ignition of flammable liquids, vapors and gasses; and children playing with matches or lighters.

Locations to Avoid

o Areas where normal ambient temperature exceeds 100° F (37.8° C).

o Dirty, dusty, insect infested areas.

o In or near areas with combustion particles (kitchens, garages, furnaces, hot-water heaters, gas space heaters).

o On the ceiling in rooms next to kitchens, where there is no transom between the kitchen and such rooms.

o Damp or humid areas, or near bathrooms with showers.

o Near fresh-air inlets or returns or very drafty areas.

o Near heating/air conditioning vents, fans, and fresh air intakes, which can drive smoke away from the smoke alarm.

o In dead-air spaces at the top of peaked ceilings or in corners where walls and ceiling meet. Dead air can prevent smoke from reaching a smoke alarm/alarm.

o Within 10 feet (3 m) of fluorescent light fixtures.

o Not suitable for outdoor use.

In Case of Fire

o Leave immediately. Don't stop to pack or search for valuables.

o In heavy smoke, hold your breath and stay low, crawl if necessary. The clearest air is usually near the floor.

o If you have to go through a closed door, carefully feel the door and door knob to see if undue heat is present. If they seem cool, brace your foot against the bottom of the door with your hip against the door and one hand against the top edge. Open it slightly. If a rush of hot air is felt, slam the door quickly and latch it. Unvented fire tends to build up considerable pressure. Be sure all members of the household realize and understand this danger.

o Use your neighbor's phone or a street fire alarm box to call the fire department. The job of extinguishing the fire should be left to the professionals.

Be Prepared

Practice the following steps to prepare you and your family in the event of a fire:

o Perform fire drills regularly. Use them to assure recognition of an alarm signal.

o Draw a floor plan and show two exits from each room. It is important that children be instructed carefully, because they tend to hide in times of crisis.

o Establish one meeting place outside the home. Insist that everyone meet there during an alarm. This will eliminate the tragedy of someone reentering the house for a missing member who is actually safe.

o If you have children and/or physically challenged people residing in your household, use window decals to help emergency personnel identify the sleeping quarters of these individuals.

IMPORTANT:
It is recommend that the Smoke Detector be enrolled (added) into the Control and a Full-Test be performed prior to permanently mounting the detector in the intended location.
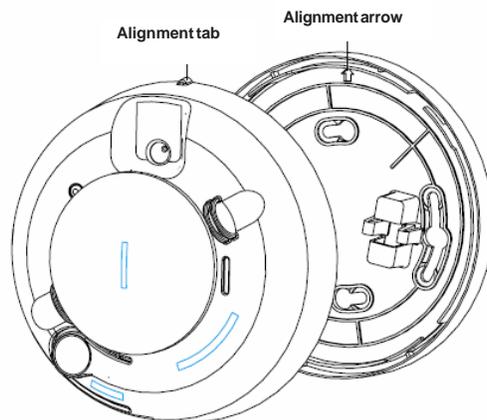
Mounting the Smoke Detector

Please enroll (add) the Smoke Detector into the Control and perform a Full-Alarm test with the detector temporarily positioned in the intended mounting location. This should be done PRIOR to permanent mounting to help ensure that the location is suitably in range of the wireless Transceiver and/or the Control. A little extra time and a few steps now can often save loads of time later.

A. Before mounting disconnect or disable any alarm-notification appliances (bells, sirens), any service-release devices, and any extinguishing systems that may be a part of the Control panel. Test communications between the control panel and smoke detector before permanently mounting.   Test as follows:

o Hold the Smoke Detector in the approximate location where it is to be installed.

o Press the alarm test button on the front of the unit for approximately 4 seconds. The built-in sounder should go into alarm and a wireless alarm transmission should be sent to the Control.

o At the Control Keypad, verify that the signal was received and that the Fire Alarm sounded. If no signal is received or the RF signal is low, relocate the smoke alarm and retest.

B. Using two supplied screws and anchors, mount the detector baseplate.

Note: NEVER attach this Smoke Detector to a removable ceiling panel unless some form of span support bracket is utilized. The best recommendation is to always mount directly to the metal grid support of the removable ceiling panels.

C. Attach the Smoke Detector to the mounting baseplate as follows:
o Line up the raised alignment tab on the lip of the detector with the alignment arrow on the mounting base.
o Insert the detector into the base and turn clockwise about 15 degrees until it snaps into place.

Alignment tab   Alignment arrow

Note: The product is designed so that it cannot be attached to the mounting base if no batteries are installed.

D. Test communications between the Smoke Detector and the Control once again.
- Press the Test button on the front of the unit for 4 seconds. Both the unit itself and the Control should sound an alarm.
- Verify the alarm and silence at the Control by entering a valid User Code.

E. The Control and all auxiliary functions should be verified for a complete test of the system.

Normal Mode Operation

- o In normal operation, the Alarm/Status LED should flash once every 16 seconds.
- o In alarm mode, the Alarm/Status LED should be ON – Red Color.
- o In trouble or maintenance mode, the Alarm/Status LED is OFF.

Silencing an Alarm or Low Battery

- o Press the Test/Silence button to silence the 6050 sounder during an alarm and will also silence a Low Battery trouble chirp.
- o After ~ 10 minutes the 6050 sounder will resume if smoke is still present in the detection chamber.

Tamper Protection

A Fire Trouble signal will be transmitted to the Control when the Smoke Detector front housing is removed from the backplate. Replacing the detector onto the baseplate should restore the Fire Trouble condition. To silence the trouble condition go to the keypad and press the " * " key. After the tamper condition has been restored enter a valid User Code to reset and clear the trouble condition.

Batteries

When the batteries become low the 6050 will extinguish its Alarm/Status LED and communicate a low battery trouble to the Control. It will sound a local chirp every 45 seconds until the batteries are replaced. The low battery chirp can be silenced for 24 hours by pressing the Test/Silence button. The 6050 meets the UL 1 year minimum battery life expectancy.

Replacing / Installing Batteries

Use only 3V lithium CR123A batteries, as listed on the battery compart-ment cover. Replace both batteries at the same time.

NOTE: Prior to changing the batteries or performing any maintenance ALWAYS contact your Central Monitoring Station to inform them that you are working on the system.

- A. Remove the 6050 Smoke Detector from the baseplate by grasping the front housing and twisting counterclockwise. A Fire Trouble condition will be generated by the Control and annunciated at the keypad.

    To temporarily silence the trouble condition press the " * " key on the keypad.
- B. Slide the battery compartment cover away from the smoke alarm to unsnap it and lift it off.
- C. Remove and dispose of (recycle) the batteries appropriately.
- D. **WAIT AT LEAST 20 SECONDS** after removing the old batteries before installing the new batteries.
- E. Observe correct polarity and insert two new 3V lithium batteries into the battery compartment. Lay the black ribbon in behind the new batteries as they are installed.

    Note: Use only new batteries when replacing old batteries. Do not replace with batteries that were used previously. Use of a different battery can detrimentally affect the smoke alarm opera-tion. Caution: Constant exposures to high or low humidity may reduce battery life.
- F. Replace the flat cover over the battery compartment.
- G. Align the raised alignment tab on the lip of the smoke alarm with the arrow on the mounting base and reattach the smoke alarm to the mounting baseplate.
- K. To clear the silenced trouble condition go to the keypad and enter a valid User Code.
- H. Test the Smoke Detector and the Control to verify operation.

RF ACK (Acknowledge) Green & Orange/Red LED

This LED is located near the detector's Test/Silence button, but down inside the cavity where the heat sensor is located. This LED helps provide a way to verify that the wireless (RF) communications to the Control. The LED will briefly flash Green if successful, or Orange/Red if unsuccessful. To view this LED it may be necessary to look directly into the heat sensor cavity. Bright lighting may hinder this viewing.

GREEN blink = Detector has successfully communicated to the Control and the signal was positively acknowledged.

ORANGE/RED blink = Detector was not successful in communicating to the Control after multiple attempts. **Refer to the Troubleshooting section of this manual.**

Full-Alarm Testing of the 6050 Smoke Detector

This sensor may be tested during install or at anytime after. At a minimum It is recommended the product be tested annually in-place.

NOTE: Prior to conducting any testing ALWAYS contact your Central Monitoring Station to inform them of the impending test.

- A. Use *SM200 Smoke! in a can*® for testing and follow the directions on the can.

    It is also possible to hold a smoldering punk or cotton wick close to the unit and gently direct the smoke into the smoke entry openings for 20 seconds or until an alarm is indicated.
- B. The Alarm/Status LED should illuminate, the sounder should emit a temporal 3 pattern, and the Control should be indicating a Fire alarm condition. Fan the detector to clear the smoke source and stop the local alarm. Enter a valid User Code at the Control Keypad to silence and reset the alarm. Extinguish the smoke source after testing!

LOCAL (non-alarm) Testing of the 6050 Smoke Detector

The detector's operation with the Control can also be tested WITHOUT causing a full alarm using the Control Walk Test mode (User Menu #3). This DOES NOT TEST or confirm the operation of any alarm notification appliances (Sirens/Bells), nor does it test the Central Station Communi-cations. Use the Full-Alarm testing procedures for those purposes.

- A. Place the Control in the WalkTest Area mode (User Menu #3). *While in the Walk Test the communicator does not send alarms to the Central Monitoring Station.*
- B. Locate the Test/Silence button on the Smoke Detector front.
- C. Press and hold the Test/Silence button for 4 seconds, then release. The Alarm/Status LED should blink indicating that the test has begun. Then the following should occur:
    1. The Alarm/Status LED should illuminate solid Red and the built-in sounder should blast for several seconds.
    2. The RF ACK (Acknowledge) LED (located near the Test/Silence button) should flash Green as soon as the transmission is acknowledged by the Control.
    3. A chime tone should be heard at the keypad where Walk Test was initiated. You may also hear the Control speak a number proceeded by the words "level." This is an approximate signal strength of the sensor's transmission. The higher the better.
    4. The same keypad will also display the number of zones that have successfully been tested. This number increments as additional zones are tested. Unfortunately there is no way to view which Smoke Detector zone tested because that portion of the Walk Test is only designed for Burglary tested zones.
- D. When satisfied with the test results press the " * " or Clear key to exit the Walk Test Area mode.

The Elk-6050 Smoke Detector may be enrolled into the Control using one of the following two methods.

Enrolling into Control from Keypad Programming

Each wireless sensor is programmed with a unique TXID number when manufactured. The unique ID must be enrolled into the control panel at the time of installation, allowing the detector to communicate with that specific control panel.

1. Make sure the M1XRFTW Transceiver is powered up and enrolled with the M1 Control.

2. Enter **M1 Keypad Installer Programming** and navigate to Menu: **14-Wireless Setup**

3. Scroll up to sub-menu:**3:Learn Sel Wireless Transmtr** and press **Sel**ect (right arrow).

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

5. Insert the Batteries into the 6050 as soon as the keypad displays: **Push Transmitter Button**. The M1G will speak; "Press transmitter button for zone xx". If successful the Keypad will chime and briefly display the 6 digit TXID code of the sensor. If a TXID is not displayed then enrollment was not successful. **Should this happen, re-move the batteries, wait 5 seconds, and re-insert.**

   Rapid-Enroll will auto advance to the next wireless zone in sequence and wait for the next sensor. Repeat the previous step for each new sensor.

6. After all wireless sensors are enrolled, press the ELK or Select Wireless key to stop Rapid-Enroll.

7. **Set the Loop ID to Type 2** - To do this scroll to the appropriate wireless zone and press the HW (left arrow) button. An 8 digit number (the TXID in decimal) will now display followed by Loop = 0. Move the cursor to the right (press RIGHT arrow) and enter a "2". Press the ELK key or the Select Wireless key to back out. The Loop ID is an identifier sent wireless by the 6050 to the Control. Setting the Loop ID to 2 is very important as the 6050 detector will not communicate with the Control unless this is set. The M1 default for all wireless zones is Loop "0".

8. **Set Supervision Type to "3" (Fire Supervision)** - To do this press the ELK or the Select Wireless key to locate Sub-Menu: **2:Xmit Transmitter Opt**. Scroll to the desired wireless zone, press Select (right arrow) and scroll to Option **2: Supervision Type.** Change or verify that this is set to "3." The Supervision Type informs the Control to expect a supervisory check-in report from the 6050 detector approximately every 64 minutes. If set to "0" the control will not expect a supervisory check-in, thus leaving the device unsupervised. A separate M1 option sets the number of missed check-ins that will be allowed before a sensor is declared missing.

9. **PROGRAM THE ZONE DEFINITION** - This must be done from Keypad Menu **5 - Zone Definitions** for all new enrolled wireless zones. Program the zone definition of the 6050 detector to Fire (Def=10).

Enrolling into Control using ELKRP software

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

2. Click the "+" next to Zones (Inputs) to expand the view. Look to see if there are any existing wireless zone groups. If there are none then it will be necessary to add or create a new group. 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 with Group 2. Click OK. Repeat if more wireless groups are required.

   NOTE: The M1 Control requires all expanded zones to be defined in groups of 16. E.G. Zones 17-32 = Group 2, zones 33-48 = Group 3, etc. And it requires the M1XRFTW Two-Way Transceiver to always be enrolled as the first expander (databus address 2). For this reason, the first group of wireless sensors must be defined as group 2. M1 allows a maximum of 144 wireless zones, therefore the last potential wireless zone will be Zone 160. So, If a large number wireless zones is ever anticipated, it would be a good idea to avoid conflict with any future Hardwired Zones in the 17 to 160 range by NOT enrolling any Hardwired Zone Expanders (M1XIN) at data bus addresses 10 or lower.

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.

4. The next steps involve setting the sensor's TXID and other wireless setup. The wireless setup may accessed directly from each zone definition screen (click the **Wireless Setup** button) OR from the ElkRP Wireless Setup in the folders column.

5. **Enable the sensor** by placing a check mark in the **Enabled** box.

6. **Set the Supervision type to "3" (Fire Supervision)** for the 6050. A setting of "0" means the control will not expect a supervisory check-in from the detector. For additional details refer to Supervision on the previous page.

7. Skip to the **TXID** box and **enter the detector TXID** that is printed on the small printed label attached to inside back of the detector.

8. Skip to the **LOOP** box and **set the Loop to Type 2**. This is very important as the 6050 will not communicate with the Control unless this is set.

9. Click **Save**. Repeat the entire sequence above for additional 6050 detectors or other Wireless Zone sensors.

   Don't forget to **PROGRAM THE ZONE DEFINITION** of the 6050 detector to Fire (Def=10).

Maintenance

This 6050 Smoke Detector is designed for a service life of approximately 8 to 10 years. Even so, the following annual and random maintenance tests are recommended:

Annual - Smoke Detector Test - Locate and follow the section in this manual titled: Full-Alarm Testing of the Smoke Alarm

Random - Visually check for LED flashing every 16 seconds
- Perform a Detector Sensitivity Test

Detector Sensitivity Test

This test performs a manual diagnostic of the detector with the results displayed via flashes of the Alarm/Status LED. To initiate this test:

A. Press and hold the detector Test button for 4 seconds. Once the test starts, the alarm/status LED will flash 1 to 9 times.

B. Count the LED flashes and view the table below to determine the results of the sensitivity test and any action required.

| FLASHES	MEANING	STEPS TO TAKE
1	Unserviceable hardware fault	Reset smoke sensor alarm and rerun the sensitivity test. If error persists, replace smoke sensor.
2 - 3	Smoke sensor is becoming insensitive	Clear smoke sensor, reset it, and rerun the sensitivity test. If error persists, replace smoke sensor.
4 - 7	Smoke sensor is within normal sensitivity range.	None.
8 - 9	Smoke sensor is becoming too sensitive	Verify smoke chamber is snapped down securely. Clean smoke sensor and replace the smoke chamber.

IMPORTANT:

If the sensitivity is within limits and all other tests pass, the detector will go into full alarm mode after the LED flashes stop. This also causes the Control to go into alarm. The detector will auto-reset after 7 seconds, but the Control's alarm must be manually reset by entering a User Code.

If the sensitivity is not within limits, or an unserviceable hardware fault is detected, the LED will remain OFF indicating that the Smoke Detector must be serviced or possibly replaced.

Cleaning the Smoke Detector

Clean the cover with a dry or slightly damp (water ONLY) cloth as needed to keep it free from dust and dirt. When necessary, use the following procedure to clean the interior of the detector and replace the optical chamber (UTC part #211) as follows:

A. Notify the Central Monitoring Station prior to cleaning or testing.

B. Remove the detector from its mounting base. This will generate a Fire Trouble condition on the Control annunciated by the keypad.

To temporarily silence the trouble condition press the " * " key on the keypad.
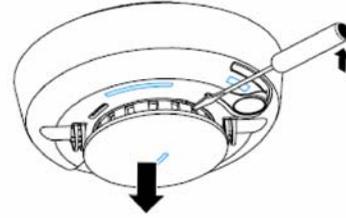
C. Remove the battery cover and then remove both batteries.

D. Slide a flat-blade screwdriver in the alarm cap slot. Gently push the handle down to pry the cap up and off. See figure above.

E. Squeeze the black optical chamber cap at the arrows indicated on the top of it. Pull it up and away from the optical base and discard.

F. Carefully blow out all dust and dirt from the optical base. A soft-bristled brush may also be utilized.

G. Align the latches on the optical base with the arrows on the NEW optical chamber and snap it down into place.

H. Replace the detector cap by aligning the four protrusion with the notches in the detector. Then insert the cap and turn clockwise about 15 degrees. The cap should snap firmly into place.

I. Insert the batteries into the detector using the proper polarity, then replace the battery compartment cover.

J. Reattach the detector to its mounting base.

K. To clear the silenced trouble condition go to the keypad and enter a valid User Code.

L. Run the Detector Sensitivity test.

Troubleshooting

Detector does not power up

- Verify that the batteries are fully seated inside the battery compartment and that their polarity orientations are correct.
- Check the battery voltage (3.0 VDC nominal).

Tamper alert sounds

- Press the keypad " * " or clear key to silence the tamper. You may be required to enter a valid user code to silence/clear.
- During service or maintenance the control should be placed into Walk Test mode so that tamper alerts will not sound.

Tamper condition does not restore

- Verify that the detector is properly seated and locked into the mounting baseplate.
- Perform a sensitivity test to be sure there are no trouble indications in the detector.

Alarm condition does not restore

- Fan some clear air towards the detector to be certain that no smoke still exists in the detector.
- Make sure the ambient air temperature isn't too high for the heat sensor in the detector.

The ACK (Acknowledge) LED flashes Orange/Red when the detector attempts to communicate with the Control

- Verify that the detector is properly enrolled into the Control.
- Verify that the detector's TXID matches what is enrolled in the Control.
- Verify that the M1XRFTW Transceiver and the Control are powered up and that the Transceiver's data bus address is set to either 2, 3, 4, or 5. Verify that the Transceiver has been enrolled into the Control.
- Check to see if the detector is comfortably within range of the M1XRFTW Transceiver.
- Test another (different) two-way wireless sensor at this same location to determine if it can successfully communicate.
- It may be necessary to temporarily move the unsuccessful detector a little closer to the M1XRFTW Transceiver and retest. If it successfully works at a closer location then it may be necessary to:
    a. Relocate the M1XRFTW Transceiver to a closer and more central location to this and all other sensors.

    OR

    b. Purchase another (redundant) M1XRFTW transceiver and mount it closer to the area where this sensor is mounted.

NFPA Guidelines

NFPA 72, 2-1.4.2.1 Total (Complete) Coverage

If required, total coverage shall include all rooms, halls, storage areas, basements, attics, lofts, spaces above suspended ceilings, and other subdivisions and accessible spaces; and the inside of all closets, elevator shafts, enclosed stairways, dumbwaiter shafts, and chutes. Inaccessible areas shall not be required to be protected by alarms. (For exceptions, see NFPA 72.)

NFPA 72, 2-1.4.2.2 Partial Coverage

If required, partial detection systems shall be provided in all common areas and work spaces, such as corridors, lobbies, storage rooms, equipment rooms, and other tenantless spaces in those environments suitable for proper alarm operation in accordance with this code.

NFPA 72, 2-1.4.2.3 Selective Coverage

Where codes, standards, laws, or authorities having jurisdiction require the protection of selected areas only, the specified areas shall be protected in accordance with this code.

NFPA 72, 2-1.4.2.4 Supplementary (Non required) Coverage

Where installed, detection that is not required by an applicable law, code, or standard, whether total (complete), partial, or selective coverage, shall conform to the requirements of this code. (For exceptions, refer to NFPA 72 Chapter 2 Spacing Requirements.)

NFPA 72, 2-1.4.3

Where non-required detection devices are installed for a specific hazard, additional non-required detection devices shall not be required to be installed throughout an entire room or building.

NFPA 72, 2-2 Heat-Sensing Fire Alarms

Heat-sensing fire alarms shall be installed in all areas where required by the NFPA codes and standards or by the authority having jurisdiction.

NFPA 72, 8-1.4.1.3.2 Detection in New Apartment Buildings

Approved, single-station smoke alarms shall be installed in accordance with 7-6.2.10 of NFPA 101 outside every sleeping area in the immediate vicinity of the bedrooms and on all levels of the dwelling unit including basements. (101: 18-3.4.4.2) (For exceptions, refer to this section of NFPA 72.)

NFPA 72, 8-1.4.1.4.2 Detection in Existing Apartment

Buildings Approved, single-station smoke alarms shall be in-stalled in accordance with 7-6.2.10 of NFPA 101 outside every sleeping area in the immediate vicinity of the bedrooms and on all levels of the dwelling unit including basements. (101: 19-3.4.4.1) (For exceptions, refer to this section of NFPA 72.)

Important Product Information

Fire Prevention and Escape

The purpose of an early warning smoke alarm is to detect the presence of fire in its early stages and sound an alarm giving the occupant(s) time to exit the premises safely.

Avoid Fire Hazards

No detections device can protect life in all situations. Therefore, safeguards should be taken to avoid potentially dangerous situations as follows:

o **Do not** smoke in bed.

o **Do not** leave children home alone.

o **Never** clean with flammable liquids such as gasoline.

o Properly store materials. Use general good housekeeping techniques to keep your home neat and tidy. A cluttered basement, attic, or other storage area is an open invitation to fire.

o Use combustible materials and electrical appliances carefully and only for their intended uses. Do not overload electrical outlets

o **Do not** store explosive and/or fast burning materials in your home.

o Even after proper precautions have been taken, fires can start. **Be prepared.**

In Case of Fire

o Leave immediately. Don't stop to pack or search for valuables.

o In heavy smoke, hold your breath and stay low, crawl if necessary. The clearest air is usually near the floor.

o If you have to go through a closed door, carefully feel the door and door knob to see if undue heat is present. If they seem cool, brace your foot against the bottom of the door with your hip against the door and one hand against the top edge. Open it slightly. If a rush of hot air is felt, slam the door quickly and latch it. Unvented fire tends to build up considerable pressure. Be sure all members of the household realize and understand this danger.

o Use your neighbor's phone or a street fire alarm box to call the fire department. The job of extinguishing the fire should be left to the professionals.

Be Prepared

Practice the following steps to prepare you and your family in the event of a fire:

o Perform fire drills regularly. Use them to assure recognition of an alarm signal.

o Draw a floor plan and show two exits from each room. It is important that children be instructed carefully, because they tend to hide in times of crisis.

o Establish one meeting place outside the home. Insist that everyone meet there during an alarm. This will eliminate the tragedy of someone reentering the house for a missing member who is actually safe.

o If you have children and/or physically challenged people residing in your household, use window decals to help emergency personnel identify the sleeping quarters of these individuals.

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.

Limited Warranty

The 6050 Wireless Smoke 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.

FCC AND IC 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.

ELK-6050   Wireless Smoke Detector   FCC ID# TMAELK-6050

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.

ELK-6050 Wireless Smoke Detector