SILENT KNIGHT

MODEL 4130/35

RADIO FREQUENCY

INSTALLATION MANUAL

REVISED NOVEMBER 1990

PART NUMBER 150474

Table of Contents

1 INTRODUCTION

The Model 4130 RF system was designed for use with the Model 4720 Control/Communicator. It provides the 4720 with up to 64 additional zones. This system contains two separate models. The Model 4130 is the RF Interface Module that conveniently mounts inside of the Model 4720 cabinet. The Model 4135 Remote Demodulator is the actual RF Receiver for the system. The 4135 was designed to be remotely mounted from the interface, in a central location. The two models are connected together via a 4-wire conductor. The following list shows the Silent Knight Transmitters that can be used with the Model 4130 RF system.

1. Model 1501 Surface Mount Transmitter
2. Model 1502 Hand Held Transmitter
3. Model 1504 Smoke Detector Transmitter
4. Model 1507 PIR (passive infrared) Transmitter

CAUTION: Changes or modifications not expressly approved by Silent Knight Security Systems could void the user's authority to operate the equipment.

2 MOUNTING THE 4130

To mount the 4130 Interface Module, simply snap it into the plastic board mount located inside of the Model 4720 cabinet. The 4130 should be oriented so that the terminals screws are facing the 4720 printed circuit board. Connect the Model 4130 to the 4720 Expansion Bus using the 12-wire conductor provided (P/N 130228).

3 MOUNTING THE 4135

The Model 4135 Remote Demodulator was designed to be placed in a central location relative to the position of the transmitters. If the 4135 is placed higher off the ground than any of the transmitters, such as in the attic of the building, mount it with the antenna pointing down (see section 13). **Do NOT mount the 4135 on a metal surface.**

1. Remove the 2 cover screws located on either side of the housing.

2. Separate the top of the 4135 from the base. Note that the printed circuit board stays with the top of the housing.

3. Using the three mounting slots, mount the base of the 4135 in the desired location.

4. Run a 4-wire conductor from the 4135 to the 4130. Terminal 1 of the 4135 should be connected to terminal 1 of the 4130. Terminal 2 of the 4135 should be connected to terminal 2 of the 4130, etc.

NOTE: Use 22-gauge wire. The distance between the 4135 and the 4130 must not exceed 500 feet.

TABLE 3 - I: TERMINAL DESCRIPTION FOR MODELS 4135 AND 4130

TERMINAL	DESCRIPTION
1	Circuit Ground
2	$+12\,V_{DC}$
3	Logic Signal
4	Analog Signal

5. After the 4135 has been wired to the 4130, place the top over the base and secure it using the two screws removed earlier. Be careful not to pinch the 4-wire conductor between the top and base.

6. Plug the antenna into its receptacle on the 4135.

Before installing the transmitters, read the sections on transmitter specifications (section 4), operation (section 5) and programming (section 7).

4 GENERAL TRANSMITTER SPECIFICATIONS

1. All of the programmable options are programmed into an EEPROM using the Model 5520 Programmer (see section 6.1).

2. Each transmitter is programmed with its own Zone #.

3. 1024 different Resident Codes are available. The large number of Resident Codes reduces the possibility of unwanted interference.

4. Transmitters can be programmed for two Zone Types (Fire or Intrusion). When programmed as a Fire Zone, 16 data

words are transmitted. When programmed as an Intrusion Zone, 12 Data words are transmitted.

5. Battery status is checked every hour and each time the transmitter is activated.

6. A supervisory report, including sensor and battery status, is sent every hour.

7. The Models 1501 and 1502 transmitters use a 6-V Alkaline battery. It is recommended that you use Duracell 7K67 or Eveready 539 batteries or the equivalent.

8. Operating temperature range is -4° F to +130° F (-20° C to +54° C).

5 GENERAL TRANSMITTER OPERATION

If a transmitter is programmed for Normally Open contacts, a Closed contact will cause an Alarm condition. If a transmitter is programmed for Normally Closed contacts, an Open contact will cause an Alarm condition.

In this manual, a Normally Open device *will NOT* conduct when in a NON-ALARM state. A Normally Closed device *will* conduct when in a NON-ALARM state.

Assume that the transmitter has been programmed for 12 transmissions (Level 1). When the transmitter is activated, it sends a 24-bit digital word to the remote demodulator 12 times. It then pauses for a short time and again sends the word 12 times. It repeats the transmission in case the first one was not received. If the transmitter had been programmed for 16 transmissions (Level 2), the transmitter would send the word 16 times. After a short pause, it sends the word 16 more times.

6 TRANSMITTER PROGRAMMING INFORMATION

6.1 USING THE MODEL 5510 OR 5520 PROGRAMMER

Each transmitter requires specific information and option selections which must be programmed into the EEPROM (Electrically Erasable Programmable Read Only Memory) before the transmitters are installed. The EEPROM is an 8-pin integrated circuit X2444P chip that can be reprogrammed over and over. The PROM Coding Forms (provided in this manual) explain the options and how to select them. Programming this information allows the user to customize the transmitters to meet their personal needs. The Model 5510 or 5520 programmer can be used to program the EEPROM. Refer to the operation manual of the programmer and the PROM Coding Forms to program the EEPROMs. The transmitters are shipped with the EEPROMs inserted in their sockets on the printed circuit boards. The EEPROMs must be removed and programmed before power is applied to them.

The small socket of the programmer is designed for 16-pin IC's. Be sure to insert the EEPROM into the correct half of this socket (see figure 6.1A). Pin 1 of the EEPROM should be inserted in the lower left hole of the programmer socket. Be sure the lever of the 5520 socket is in the UP position when inserting the EEPROM, then lower the lever to lock the EEPROM in place. When using the Model 5520 programmer, **always** use the small socket to prevent damage to the EEPROM. After the EEPROM has been programmed, remove it from the programmer socket and **carefully** reinsert it in its socket on the PC board (see section 6.3).

NOTE: To program the transmitters using the Model 5520, you must have revision 880129 or later.

FIGURE 6.1A: EEPROM SOCKETS

6.2 EEPROM REMOVAL

TO PREVENT INCORRECT PROGRAMING OR DAMAGE TO THE EEPROM, BE SURE THAT THE BATTERY IS REMOVED FROM THE TRANSMITTER WHEN INSERTING OR REMOVING THE EEPROM FROM ITS SOCKET.

To remove the EEPROM from its socket on the PC board, it is recommended that you use a "PROM Puller". If this tool is not available, a flat-blade screwdriver may be used to GENTLY lever the EEPROM out of its socket.
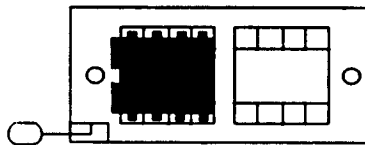
6.3 EEPROM INSERTION

TO PREVENT INCORRECT PROGRAMMING OR DAMAGE TO THE EEPROM, BE SURE THAT THE BATTERY IS REMOVED FROM THE TRANSMITTER WHEN INSERTING OR REMOVING THE EEPROM.

To insert the EEPROM back into its socket on the PC board, **CAREFULLY** press it back into its socket. Pay close attention to which way the notch cut-out of the EEPROM is facing. It should be replaced on the PC board exactly as it was removed. Apply even pressure on each end of the EEPROM so that it goes in squarely. If any of the legs are accidently bent, they may be straightened using a pair of flat sided pliers. Keep in mind that the legs are extremely fragile and great care should be taken when straightening them.

Figure 6.3A shows the position of the EEPROM in an RF sensor.
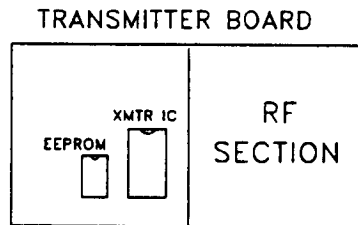
TRANSMITTER BOARD

FIGURE 6.3A: TRANSMITTER EEPROM POSITION

7 TRANSMITTER PROGRAMMING

The following section is a description of each option for programming the individual transmitters. Read over the options carefully. Then write the options you want to select on the PROM Coding Form at the end of this section.

*NOTE: When using the 5520 to program **any transmitter except the Model 1502**, select 1501 as the transmitter model number. The Model 1502 is not supported by the 5520 at this time. To program the 1502, you must use the 5510 programmer.*

When using the 5510, select each transmitter's model number. For example, for the 1504, select 1504 as the transmitter model number. Exception: When programming the 1507, select 1505.

7.1 OPTIONS DESCRIPTIONS

7.1.1 RF RCVR MODEL (Model 5520 programmer only)

Select 4130 for the RF RCVR Model for **ALL** transmitters.

NOTE: In 5520/21 programmers using Software Revision 890630 or earlier, the receiver model number is not retained. You must select "4130" as the RF RCVR model number each time you program the EEPROM.

7.1.2 RESPONSE TIME

You have a choice of **FAST** or **SLOW** for a response time. The **FAST** option requires the contacts to remain open or closed (depending on the type of contact used) for 10 ms before the transmitter will report. The **SLOW** option requires the contacts to remain open or closed (depending on the type of contact used) for 100 ms before the transmitter will report.

7.1.3 CONTACT TYPE

Normally Open or Normally Closed contacts may be used on the Model 1501 transmitter. All other types of transmitters (Models 1502, 1504 and 1507) **MUST** be programmed for Normally Closed contacts.

NOTE: A transmitter programmed for Normally Open contacts will report an alarm condition when the contact is closed.

7.1.4 ZONE TYPE

You may choose Level 1 (INTRUSION) or Level 2 (FIRE). The difference between FIRE and INTRUSION is the number of attempted transmissions. If an INTRUSION and a FIRE transmission are sent at the same time, the FIRE will override the INTRUSION. If a transmitter is not being received properly at the receiver and the situation cannot be corrected, the FIRE option should be selected. This allows FOUR (4) extra transmission attempts. For Fire Alarm detection devices, the FIRE option **MUST** be selected.

7.1.5 CALCULATING TRANSMITTER ID NUMBERS AND ZONE NUMBERS

7.1.5.1 CALCULATING ID NUMBERS FROM ZONE NUMBERS

A zone number is the number displayed by the 4720 when a particular zone is violated. In order for the right zone number to be displayed, you must program a specifc ID number for each transmitter. Transmitter ID numbers can range from 0 to 63. Use the following formula to determine the correct ID number:

$$ID \# = (ZONE \# - LAST\ INT\ Z\#) - 1$$

The "LAST INT Z#" is the number you entered in the 4720 Programming Record (Internal Zones section) for "LAST INT Z#."

EXAMPLE: If you are programming an ID number to correspond to Zone 20, and your last internal zone was 13, then the ID number will report as:

$$ID \# = (20 - 13) - 1$$

$$ID \# = 6$$

If you're using two zone expanders, first determine whether the 4130 will be Expander #1 (Device #2) or Expander #2 (Device #3). If it will be Expander #1, no modifications need be made to the PC board. If the 4130 will be Expander #2, you must cut Jumper J1 on the 4130 printed circuit board. Doing this results in the 4130 being "Device #3." (Device #0 is the dialer and Device #1 is the printer.)

CAUTION: If the 4130 will be Expander #2, the zone numbers selected must not overlap the zones used on Expander #1.

7.1.5.2 CALCULATING ZONE NUMBERS FROM ID NUMBERS

If you already know a transmitter ID number and you want to determine which zone number will be displayed when that transmitter is activated, use the following formula:

$$ZONE \# = ID \# + LAST\ INT\ Z\# + 1$$

7.1.6 RESIDENT CODE

Any Resident Code from 0 to 1023 may be used. Make sure you program the same Resident Code in every transmitter. This code must also match the Resident Code that is programmed into the 4720 main control panel.

7.2 PROM CODING FORMS

In the DATA column, write the selections you wish to program.

7.2.1 MODEL 1501 PROM CODING FORMS

7.2.1.1 MODEL 1501 PROM CODING FORM--5510 PROGRAMMER

STEP	FUNCTION	CHOICES		DATA
0	Transmitter Model #	---------		1501
1	(Not Used)	(Must select 1)		1
2	Response Time	1 = 10 ms	0 = 100 ms	
3	Contact Type	1 = N.O.	0 = N.C	
4	Zone Type	1 = INTRUSION	0 = FIRE	
5	Transmitter ID #	(0 - 63)		
6	Resident Code	(0 - 1023)		

7.2.1.2 MODEL 1501 PROM CODING FORM--5520 PROGRAMMER

FUNCTION	CHOICES		DATA
Transmitter Model #	---------		1501
RF Receiver Model #	---------		4130
Response Time	10 ms	100 ms	
Contact Type	N.O.	N.C.	
Zone Type	INTRU	FIRE	
Transmitter ID #	(0 - 63)		
Resident Code	(0 - 1023)		

7.2.2 MODEL 1502 PROM CODING FORM

To program the Model 1502, you MUST use a Model 5510 programmer. Select **1502** as the model number. At this time, the 5520 can **not** be used to program the 1502.

NOTE 1: *The zone to which a 1502 reports should be programmed as NON-SUPERVISED when programming the 4720 main control unit. Since the 1502's are hand held transmitters, there is a good chance that they will be carried out of the supervision range of the remote demodulator. If a 1502 is out of the range during its supervision time, and it is programmed as a supervised zone, it would cause a **trouble** report to be generated.*

NOTE 2: *Either button on the 1502 will activate the transmitter when used with the 4720.*

STEP	FUNCTION	CHOICES	DATA
0	Transmitter Model #	---------	1502
1	(Not Used)	(Must select 1)	1
2	Transmitter ID #	(0 - 63)	
3	Resident Code	(0 - 1023)	

Revised 11/90

7.2.3 MODEL 1504 PROM CODING FORMS

7.2.3.1 MODEL 1504 PROM CODING FORM--5510 PROGRAMMER

STEP	FUNCTION	CHOICES	DATA
0	Transmitter Model #	---------	1504
1	(Not Used)	(Must select 1)	1
2	Transmitter ID #	(0 - 63)	
3	Resident Code	(0 - 1023)	

7.2.3.2 MODEL 1504 PROM CODING FORM--5520 PROGRAMMER

When programming the Model 1504 using the 5520 programmer, you MUST select **1501** as the model number, program the transmitter for **SLOW Response Time** and **Normally Closed contacts,** and select **FIRE** for the Zone Type.

FUNCTION	CHOICES	DATA
Transmitter Model #	---------	1501
RF Receiver Model #	---------	4130
Response Time	---------	100 ms
Contact Type	---------	N.C.
Zone Type	---------	FIRE
Transmitter ID #	(0 - 63)	
Resident Code	(0 - 1023)	

7.2.4 MODEL 1507 PROM CODING FORMS

7.2.4.1 MODEL 1507 PROM CODING FORM--5510 PROGRAMMER

When programming the Model 1507 using the 5510 programmer, you MUST select **1505** as the Model number.

STEP	FUNCTION	CHOICES	DATA
0	Transmitter Model #	---------	1505
1	(Not Used)	(Must select 1)	1
2	Transmitter ID #	(0 - 63)	
3	Resident Code	(0 - 1023)	

7.2.4.2 MODEL 1507 PROM CODING FORM--5520 PROGRAMMER

When programming the Model 1507 using the 5520, you MUST select **1501** as the model number. Program the transmitter for **SLOW Response Time** and **Normally Closed contacts,** and **select INTRUSION** for the Zone Type.

FUNCTION	CHOICES		DATA
Transmitter Model #	---------		1501
RF Receiver Model #	---------		4130
Response Time	10 ms	100 ms	100 ms
Contact Type	N.O.	N.C.	N.C.
Zone Type	INTRU	FIRE	INTRU
Transmitter ID #	(0 - 63)		
Resident Code	(0 - 1023)		

8 PRE-INSTALLATION INSPECTION

Now that the transmitters have been programmed, it is time to preview the site for transmitter locations. Look for any items that may hinder signals being transmitted. The most obvious items are:

a)	Metal Shelving	e)	Aluminum Siding
b)	Metallic Wall Paper	f)	Mirrors
c)	Metal Window Frames	g)	Large Appliances
d)	Metal Doors		

All of these items could block the signal being transmitted to the receiver, so avoid having them in the transmission path. Smaller metal objects such as picture frames, coat hangers, and small appliances can also interfere with the transmission if they are close enough to the transmitter or receiver. Unfortunately, the majority of metal building materials are hidden from sight. These include:

a)	Foilback Insulation	d)	Metal Lathe
b)	Metal Studs	e)	Fireplace or Chimney Inserts
c)	Plumbing		

9 PRETESTING THE SITE

For best results when installing the RF system, it is important to pretest the site. Place all of the transmitters where you would like to install them. **Tape** them in place rather than permanently mounting them. This will avoid having to repair a wall or doorframe if the transmitter fails to function properly from the desired location.

10 TESTING TRANSMITTER SIGNAL STRENGTH

To test the signal strength of the transmitter, follow the procedure below:

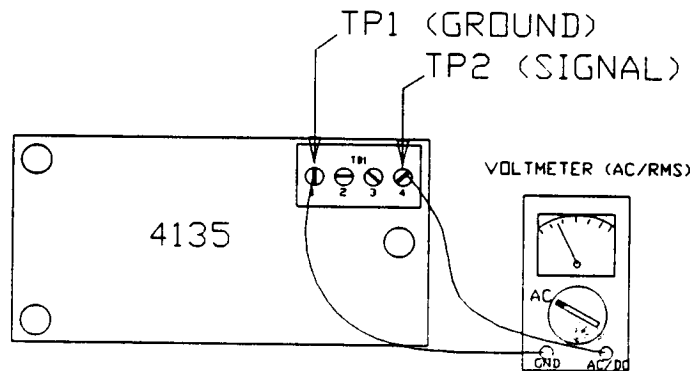1. Connect a voltmeter (set to AC) to the receiver as shown in figure 10A.

FIGURE 10A: VOLTMETER/RECEIVER CONNECTIONS

2. Have someone else activate the transmitter (by opening the door, tripping the PIR detector, etc., depending on the type of sensor). While the transmitter is activated, watch the meter and note the maximum AC voltage.

3. Estimate the distance in feet between the transmitter and receiver.

4. On the bottom of the graph shown in figure 10B, find the distance that is closest to your estimate. The curve shows the acceptable signal strength voltages for the various distances. Compare the AC voltage you noted on the meter with the voltage shown on the graph.

NOTE: The voltages shown in figure 10B are **RMS values**.

5. If the meter voltage is less than the acceptable voltage by more than 0.05 V_{AC}, the transmitter is weak. Try the following suggestions, then test the transmitter again, as explained in the previous steps.

    a. Replace the battery (see the troubleshooting guide, section 13).

    b. Move the transmitter or receiver so they are closer together.

    c. If the signal strength is still weak, the transmitter may need service. Call Silent Knight Technical Service at 1-800-328-0103.
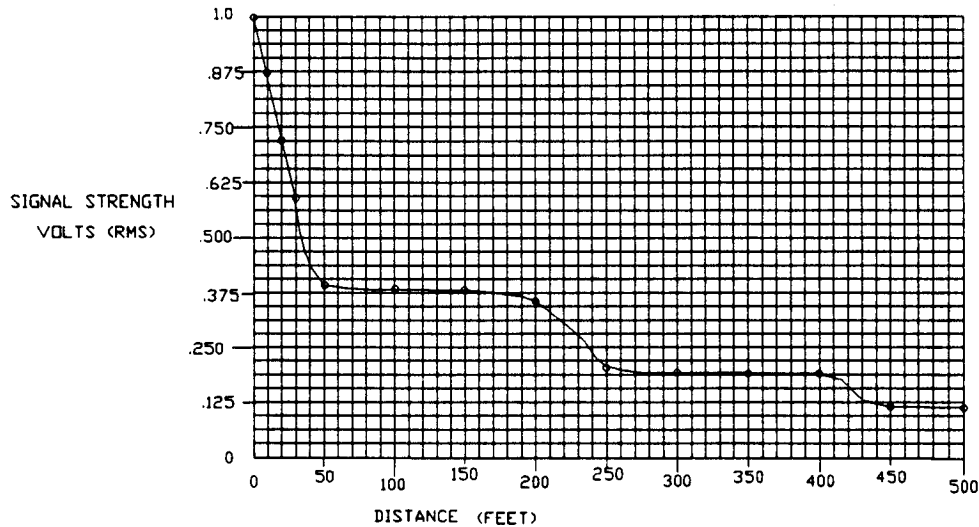
FIGURE 10B: ACCEPTABLE SIGNAL STRENGTH VOLTAGES

11 HELPFUL HINTS

1. The transmitters should be mounted as high as possible off of the floor.

2. **DO NOT** install transmitters where the temperature will be below -4º F or above +130º F (-20º C to +54º C).

3. **DO NOT** run wire loops tightly around the transmitters as it may cause interference.

4. **DO NOT** mount the transmitters directly on metal or Foilback wallpaper. If there is no choice, mount the transmitter on a nonconductive spacer.

NOTE: *Before testing the system, remember to program all of the EEPROMs and install the transmitter batteries.*

After testing all of the transmitters and finding the best location for them to be mounted, follow the directions below to mount them permanently.

12 TRANSMITTER MOUNTING INSTRUCTIONS

12.1 MODEL 1501 MOUNTING PROCEDURE

Figure 12.1A shows the wiring of Normally Open sensors to a 1501 transmitter. **DO NOT** use both Normally Open and Normally Closed sensors on the same transmitter. Normally Open sensors should be connected in **parallel across** the two terminals of the transmitter. Remember to select the Normally Open option in the EEPROM of the transmitter if you are using this type of sensor.
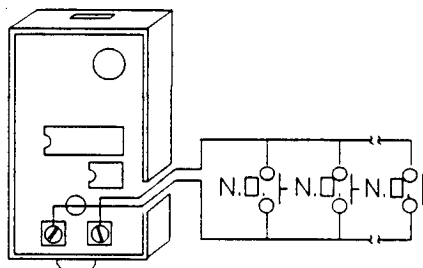

FIGURE 12.1A: NORMALLY OPEN SENSORS

Figure 12.1B shows the wiring of Normally Closed sensors to a 1501 transmitter. **DO NOT** use both Normally Closed and Normally Open sensors on the same transmitter. Normally Closed sensors should be connected in **series between** the two terminals of the transmitter. Remember to select the Normally Closed option in the EEPROM when using this type of sensor.
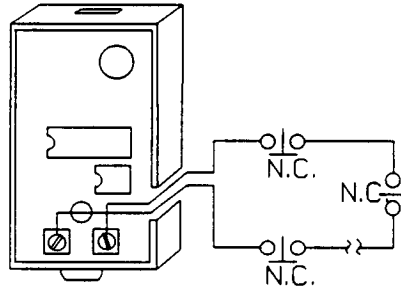
FIGURE 12.1B: NORMALLY CLOSED SENSORS

Figure 12.1C shows the mounting procedure for the 1501 Surface Mount Transmitter. Use #8 Flathead Phillips drive screws. The following steps refer to figure 12.1C.

CAUTION: Before these steps can be followed, the battery must be removed.

1. Drive the top screw into the wall so that the transmitter will be desired location.

2. Place the transmitter on the top screw slot and slide downward until the screw head is at the top of the screw slot.

3. Drive the bottom screw into the wall, through the clearance hole in the PC board and the housing until it is snug.

4. Press the battery into place in the housing from the bottom side. Make sure that the terminals are at the top of the battery and the hook at the bottom of the battery is on the side of the housing with the notch. When inserted properly, the hook should snap into the notch of the housing.

5. Attach the sensor wires to the terminals and place the wires in the wire slots.

6. Slide the bottom of the cover under the housing until the bottom tab of the housing rests in the slot of the cover.

7. Press the top of the cover forward and slightly downward until the top snaps into the slot in the top of the cover.
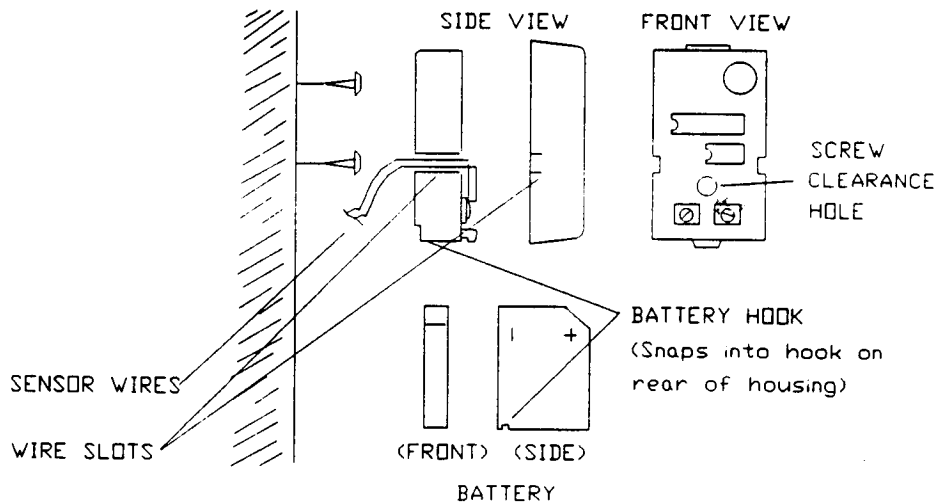
FIGURE 12.1C: MOUNTING THE MODEL 1501 SURFACE MOUNT TRANSMITTER

12.2 MODEL 1504 MOUNTING PROCEDURE

The ESL smoke detectors have a Model 1504 transmitter inside of the housing. The transmitters must be programmed before correct operation can take place. Figure 12.2A shows possible placement of smoke detectors in a typical residential setting. A smoke detector should be placed between each sleeping area and the rest of the family living unit. A smoke detector should be placed on each floor, preferably at least one near the bottom entrance to each stairwell. Other areas for placement are the centers of rooms and near main exits. Additional smoke detectors may be required to achieve the desired level of protection. Refer to the National Fire Code for more detailed information concerning placement of--and number of--smoke detectors. The installation instructions are included with the smoke detector.

The 1504 transmitter and smoke detector circuit share the same battery. A "Low Battery" report from the transmitter also refers to the smoke detector battery.
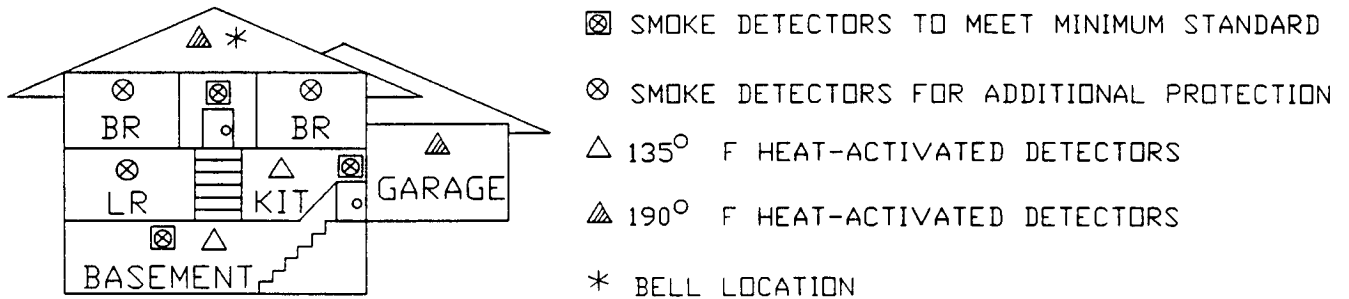
⊠ SMOKE DETECTORS TO MEET MINIMUM STANDARD

⊗ SMOKE DETECTORS FOR ADDITIONAL PROTECTION

△ 135° F HEAT-ACTIVATED DETECTORS

⟁ 190° F HEAT-ACTIVATED DETECTORS

* BELL LOCATION

FIGURE 12.2A: SMOKE DETECTOR PLACEMENT EXAMPLE

12.3 MODEL 1507 MOUNTING PROCEDURE

Detection Systems Inc. DS-984 PIR detectors with an SK Model 1507 transmitter in them can provide excellent area and volumetric coverage. Figure 12.3A shows possible placement of PIR detectors. Refer to the Detection Systems brochure for mounting instructions and precautions.
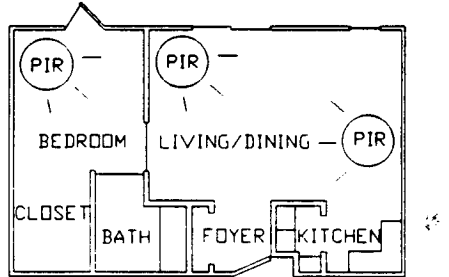
FIGURE 12.3A: POSSIBLE PLACEMENT OF PIR DETECTORS

13 TROUBLESHOOTING GUIDE

This guide is provided to help troubleshoot the RF system after it has been installed. Here are some suggestions if you should receive a report that a transmitter has failed.

1. The first thing to do is to test the transmitter in question. If it fails the test every time, look for some form of obstruction that may have been placed in the transmission path after the installation was completed. If an obstruction is found, ask yourself this question: Is it easier to move the obstruction or should you move the transmitter? Remember that a small movement of the transmitter in any direction may correct the situation.

2. If the transmitter works intermittently, you may want to program the main control unit for a longer supervision time. The control needs to see only one good transmission during supervision time. Suppose the transmitter works one out of three times. This means that during a 3-hour period the transmitter has sent one good signal. If the control's supervision time is set to 3 hours or longer, it should receive one good signal during this time.

3. Another option is to program the transmitter for FIRE transmissions. The actual data words transmitted are the same as those for INTRUSION, but the message is repeated more times.

4. Suppose you are getting a "Low Battery" (with a 15-mA load--less than 4.0 V_{DC} for Models 1501 and 1502, and less than 7.2 V_{DC} for Models 1504 and 1507) report from the transmitter. The first thing to do is test the battery with a voltmeter. If the battery is found to be bad, replace it with a new one.

   If you continue to get a "Low Battery" report, one of two things is probably happening. Either the new battery is no good or you did not use an alkaline battery. If alkaline batteries are not used, you may still get a "Low Battery" report from brand new batteries. Recommended batteries for the 1501 and 1502 are Duracell 7K67, Eveready 539 or similar type (Silent Knight P/N 006710). For the 1504 and 1507, recommended batteries are Duracell MN1604 or Eveready 522 or similar type (Silent Knight P/N 006906). Batteries can be ordered from:

   > Silent Knight Security Systems
   > 7550 Meridian Circle
   > Maple Grove, MN 55369-4927
   > 612-493-6455
   > 800-328-0103

Let's take a look at another type of situation that could arise. A transmitter is reporting an alarm. After the condition is cleared, the transmitter does not report a RESTORE. This situation can occur because of the fact that a Restore transmission has only 8 data words, whereas an Alarm has 12 or 16 (depending on Zone Type). Here is what you can do:

1. If this occurs when you are installing the system, try moving the transmitter closer to the remote demodulator. It may be a situation where the transmitter was outside of its normal operating range.

2. If this situation occurs after the system was installed and tested, you can check for a low battery. The battery may not be low enough to activate a LOW BATTERY report, but if the transmitter is on the edge of its range, it may not be able to send the 8 data words.

3. You may have a problem with "signal bounce". If this is suspected, try moving the antenna of the transmitter at different angles. This will cause the signal to be polarized at a different angle and may eliminate the "bounce".

Environmental conditions may adversely effect the performance of the transmitters. The temperature limits were mentioned earlier in this manual. Humidity is another factor. High humidity can cause false alarms or can cause a transmitter to ignore an alarm. Suppose you are using normally open contacts. Because the internal impedance of the transmitter is so high, it takes very little current to activate them. If moisture builds up inside the transmitter, it may look like a closed contact to the circuit thus causing an alarm. If normally closed contacts are used, they may open up, but excessive moisture may close the circuit, preventing the transmitter from activating an alarm. This situation is extremely rare, but it is a possibility.

If you should encounter a situation where your PIR detectors are rapidly depleting their batteries, you should check to see if "Radio Mode" has been selected in the PIR (see brochure provided with PIR). For longer battery life, this mode should be selected. If the PIR detector is in an area of heavy traffic, it will activate every time there is movement in the area. When "Radio Mode" is selected, the PIR can activate only once every three minutes thus lengthening the life of the battery.

A similar situation can occur with "switch mats". If the mat is placed in a high traffic area, it will cause the battery to rapidly deplete. This is due to the fact that every time someone steps on the mat, a transmission will be sent. It could also cause a situation where the transmission signal could clash with the supervisory signal thus causing improper supervision reports. Therefore, wiring a switch mat to a Model 1501 transmitter is NOT recommended.

Revised 11/90

14 TRANSMITTER LOG

ZONE #	LOCATION		ZONE #	LOCATION
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____
___ · · ·	_____		___ · · ·	_____

Index