

IntegrAlarm USER AND INSTALLER MANUAL  
5-FUNCTION KEYFOB  
IntegrAlarm MODEL IA-FOB-1

February 09, 2004

## Table of Contents

1	IntegrAlarm Overview .....	3
2	5-Function Keyfob (Remote Control Unit).....	5
2.1	Description .....	5
2.2	Technical Specifications .....	5
2.3	Installation .....	6
2.3.1	Registration .....	6
2.3.2	Testing.....	6

## 1 IntegrAlarm Overview

The IntegrAlarm wireless security system includes a Control Panel and a number of wireless peripheral units. The system operates on the ISM wireless band of 902-928 MHz, in frequency hopping mode, transmitting short (about 10 ms) packets of data, with each packet transmitted on a different frequency. Time and frequency synchronization is maintained by a synchronization signal transmitted by the system Control Panel to the various peripherals every 3 minutes. The system operates on 56 pseudo random selected channels.

In its present configuration, the system includes five types of peripheral units:

- Door/window sensor.
- PIR sensor.
- Smoke detector.
- 5-function keyfob (handheld remote control unit).
- Remote siren.

This manual is devoted to the installation instructions for the IntegrAlarm IA-FOB-1 5-function keyfob.

The installation instructions for the other IntegrAlarm peripherals and the IntegrAlarm Control Panel appear in the User and Installer Manuals for the respective units.

## FCC Compliance Statement

### The FCC Wants You to Know

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:

- a) Reorient or relocate the receiving antenna.
- b) Increase the separation between the equipment and receiver.
- c) Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- d) Consult the dealer or an experienced radio technician.

### FCC ID: RUF150702

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.

### FCC Warning

Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC Rules.

### Instructions concerning human exposure to radio frequency electromagnetic fields.

To comply with FCC Section 1.307 (b)(1) for human exposure to radio frequency electromagnetic fields, implement the following instruction:

The equipment user should keep a distance of at least 20cm. between the equipment and his body (excluding hands, wrists, feet, and ankles) or any other person.

## 2 5-Function Keyfob (Remote Control Unit)

### 2.1 Description

The multifunction keyfob consists of an RF transceiver, a micro-controller, a keypad and a battery.

The multifunction keyfob is composed of the following principal parts:

- RF/controller PCBB assembly with LED.
- Housing with keypad.
- Battery, 2 X N1/3 cells

An exploded view of the multifunction keyfob is shown in Figure 1 below.

### 2.2 Technical Specifications

Operating frequency band – ISM 902-928 MHz.

Mode of operation – frequency hopping; every data packet is transmitted on a different pseudo random selected frequency.

Data packet transmission duration – less than 7 milliseconds.

Data packet validity check – CRC.

Transmission and reception verification – two-way communication; each received packet is acknowledged, with an automatic repeat request (ARQ) in case of unacknowledged data packet.

Functions – 5 keys: Home, Away, Off (Disarm), Accessories (PGM) and Panic.

Power source – two 3V Lithium MNO<sub>2</sub> cells type 1/3 N x 2.

Remote control dimensions (mm): L-76, W-48, D-16.

Weight, including battery (grams): 35.

## 2.3 Installation

Installation of each multifunction keyfob is a two-step procedure. The multifunction keyfob should first be registered via the IntegrAlarm Control Panel. It should then be tested to confirm that it operates properly.

### 2.3.1 Registration

From Installer Menu on Control Panel, select ENROLL. Screen will show:

ENTER ZONE #

Use numeric keypad at right of Control Panel to enter the desired zone number. The description of the zone number (e.g. MASTER BEDROOM) will appear at bottom of screen. If zone description is correct, press OK at left of Control Panel. Screen will show:

PLEASE POWER UP  
THE ZONE

Insert battery. The remote control will begin to transmit. If Control Panel does not identify the remote control, screen will show:

ZONE NOT FOUND

If Control Panel identifies the remote control, Control Panel will emit an audible beep and screen will show:

S/N: XXXXXX  
TYPE: YYYY

where XXXXX is the multifunction keyfob serial number and YYYY is REMOTE. Ensure that the serial number displayed corresponds to the serial number of the multifunction keyfob and press OK at left of Control Panel. Screen will show:

ACCEPT ZONE DATA  
NO            YES

Press OK at left of Control Panel.

System will update zone enable parameters, multifunction keyfob serial number and type, and mode of operation (A, B or C).

### 2.3.2 Testing

When the multifunction keyfob has been registered and installed, test it by performing each of the following tests:

- Standing near the Control Panel, press HOME. Ensure that the LED first flashes red (indicating transmission to the Control Panel) and then green (indicating receipt of ACK response from the Control Panel). Observe Control Panel display to ensure that the IntegrAlarm System enters

Home arming mode. Press HOME again and observe Control Panel display to ensure that the IntegrAlarm System is disarmed.

- Standing near the Control Panel, press AWAY. Ensure that the LED first flashes red (indicating transmission to the Control Panel) and then green (indicating receipt of ACK response from the Control Panel). Observe Control Panel display to ensure that the IntegrAlarm System enters Away arming mode. Press AWAY again and observe Control Panel display to ensure that the IntegrAlarm System is disarmed.
- Telephone the IntegrAlarm Monitoring Station and inform the operator that the PANIC function is about to be tested. (Note: If you do not do this, the police or security services will be called!) Now standing near the Control Panel, press PANIC. Ensure that the LED first flashes red (indicating transmission to the Control Panel) and then green (indicating receipt of ACK response from the Control Panel). Telephone the IntegrAlarm Monitoring Station again to ensure that the call was received.
- Standing near the X-10 or PGM device to be operated, as defined in the specific IntegrAlarm system (e.g. front gate, outside lighting, etc.), press AUX. Ensure that the LED first flashes red (indicating transmission to the Control Panel) and then green (indicating receipt of ACK response from the Control Panel). Ensure that device operates.

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