

IntegrAlarm USER AND INSTALLER MANUAL  
(REMOTE SIREN / STROBE UNIT)  
IntegrAlarm MODEL IA-SRN1

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## 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. The system operates on 56 pseudo random selected channels. Time and frequency synchronization is maintained by a synchronization signal transmitted by the system Control Panel to the various peripherals (including the IA SRN-1) every 3 minutes. The IntegrAlarm system is a two-way communication system; every data or command packet is validated using a high level of error detection code (CRC) and acknowledged back to the transmitting source. Automatic repeat request (ARQ) is provided in case of unacknowledged data or command packet. In its present configuration, the system includes five types of peripheral units:

- Door / window magnetic sensor.
- PIR motion detector.
- Smoke detector.
- 5-function key fob (handheld remote control).
- Remote siren / strobe.

This manual is devoted to the installation instructions for the IntegrAlarm IA SRN-1 siren/strobe unit.

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 unit, 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: RUF150706, Canadian Industry IC: 4937A-150706

This unit complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This unit may not cause harmful interference and
- (2) This unit 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:

A distance of at least 20cm. between the equipment and all persons should be maintained during the operation of the equipment.

## 2 Remote Siren/Strobe Unit

### 2.1 Description

The IntegrAlarm model IA-SRN1 remote siren / strobe unit consists of an RF transceiver, a micro-controller with non-volatile memory, siren generator and amplifier, a piezo element and horn, a high voltage power supply and a discharge tube, a power supply with back-up batteries, and a wall mounted mains isolation transformer, 115 to 12 VAC.

The remote siren / strobe unit is composed of the following principal parts:

- Top cover in two sections: opaque white and transparent red.
- Siren / strobe unit base with siren piezo element and horn, battery holder for 6 NiCad rechargeable batteries and two tamper switch actuators.
- RF / controller, siren and strobe circuitry PCB with strobe discharge tube.
- 6 AA NiCad rechargeable batteries (7.2 V).
- Wall mounted mains isolation transformer, 115 to 12 VAC.

An exploded view of the IA-SRN1 remote siren / strobe unit is shown in Figure 1 below.

The IA-SRN1 remote siren receiver continuously monitors the control panel synchronization and command packets. Upon receiving a command packet that contains the correct system and peripheral ID, the IA-SRN1 remote siren controller will acknowledge the receive packet and activate the siren in the requested pattern with or without the strobe.

In case of tamper, the IA-SRN1 sends an alarm packet to the control panel that in turn activates the siren if the system is armed.

Automatic transmission / reception periodic test, programmable from the control panel, periodically verifies the IA-SRN1 remote siren operation.

## 2.2 Technical Specifications

Communication principle – two-way.

Operating frequency band – ISM 902-928 MHz.

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

Packet transmission duration – less than 10 milliseconds.

Packet transmission destination address – destination ID and system ID.

Received packet validation check – CRC.

Received valid packet acknowledgment – each received valid packet is acknowledged by the addressed destination.

Automatic repeat request (ARQ) – in case of unacknowledged data packet.

Automatic periodic test (programmable by the control panel) – periodic transmission of a test data packet and receipt of acknowledgment.

Siren – 110 dbA, dual tone 1400 Hz and 3000 Hz.

Siren patterns – Fire (ANSI S3.41 Temporal Pattern), General Alarm (0.25 sec alternate 1400/3000 Hz).

Strobe flash peak power – 150 watt min.

Strobe flash repetition rate – 1.5 flashes/sec.

Automatic self-test (transmission of a data packet and receipt of acknowledgment).

Power source – mains voltage with step-down isolation transformer 115 to 12 VAC.

Back-up batteries - 6 AA NiCad rechargeable batteries.

Back-up time for fully charged battery – 1 hour minimum.

Unit dimensions (mm): L-230, W-130, D-50.

Weight (grams): 950 including backup batteries and mains transformer.

### 3 Installation

Installation of a siren / strobe unit is a five-step procedure.

- Step 1: Select and mark the location on the outside wall of the building to be secured, where the siren / strobe unit is to be installed. The siren / strobe unit should be installed in a relatively sheltered spot – for example, under an overhanging roof – in order to protect it from rain, hail, etc. It should be installed high enough to be out of reach without a ladder, to discourage tampering. Ensure that the siren / strobe unit is clearly visible from the main road outside the building to be secured (i.e. not obstructed by tree branches, etc.). Open the cover and perform a visual inspection to ensure that all of the components listed in Section 2.1 above are present and in good order.
- Step 2: Enroll the siren / strobe unit to this security system according to Section 4 below.
- Step 3: Temporarily mount the siren / strobe unit on an outside wall of the building to be secured and perform Place Test according to Section 5 below, to check for sufficient signal level. It is recommended to use an adhesive compound or double side adhesive tape for temporary mounting.
- Step 4: Mount the unit on an outside wall of the building to be secured, as follows: Using four screws, attach the unit base to the wall in the marked location as shown in Figure 1 below. When the unit base is in place, attach the cover. Ensure that the strobe discharge tube can be seen through the red section in the cover.
- Step 5: Test the unit for proper operation as follows:
  1. To test the fire alarm, move the reed switch on the smoke detector. Ensure that the siren sounds in the ANSI S3.41 Temporal Pattern required by the United States National Fire Alarm Code: 0.5 sec "on", 0.5 sec "off", 0.5 sec "on", 0.5 sec "off", 0.5 sec "on", 1.5 sec "off". Ensure that the strobe flashes every 0.5 sec.
  2. To test the burglary alarm, arm the system and open an outside door or window. Ensure that the siren sounds in the pattern defined for burglary alarms. Ensure that the strobe flashes every 0.5 sec.

## 4 Enrolling Procedure

### 4.1 General

Note: Assignment of units to protect specific zones should be completed before enrolling procedure may be implemented. See Control Panel Installer Manual, Section 3.2, Installer Function Programming, for instructions.

Note: The Installer functions can only be implemented by the system installer. If an ordinary User or Master ID or an incorrect code is entered for any Installer function, an INCORRECT ID prompt will be displayed and an "Incorrect ID" voice prompt will sound. After 1 second, an ENTER ID prompt will be displayed and an "Enter ID" voice prompt will sound. (After three incorrect ID entries, the system will respond with an INCORRECT ID prompt and an "Incorrect ID" voice message, followed by an ACCESS DENIED prompt and an "Access Denied" voice message, and access to the system from the Control Panel will be denied for a preprogrammed interval of time.)

Note: The Enroll procedure should be performed continuously. If a pause of more than 20 minutes (default time) occurs, the installation will be terminated and the opening screen will again be displayed, without saving the installation data.

Note: At any point in any Installer function, pressing OK at top of Control Panel will move one level downward in the menu structure; pressing C key at top of Control Panel will move one level upward in the menu structure.

All Control Panel programming functions are implemented by means of the four keys (OK, C, DOWN, UP) at the top of the Control Panel and the numeric keypad.

### 4.2 Siren / Strobe Unit Enrollment

To access the Main Menu, press OK at top of Control Panel when system is disarmed and opening screen is displayed. Screen will show:

MAIN MENU 1: USER
----------------------

Use the DOWN key to select:

MAIN MENU 3: INSTALLER
---------------------------



Press OK at top of Control Panel. An ENTER ID prompt will be displayed and an "Enter ID" voice prompt will sound. Enter your Installer ID.

Press the DOWN key repeatedly until the following screen appears:

INSTALLER MENU 10: ENROLL ZONES
------------------------------------

Press OK at top of Control Panel. Screen will show:

ENTER ZONE # 1 FRONT DOOR
------------------------------

Overwrite the desired number using the numeric keypad and press OK at top of Control Panel.

Note: Overwriting a new zone number will not change the label on the display, but after pressing OK, the default zone label for this zone # is automatically selected. The default zone labels are set to the zone option selection.

Screen will show:

PLEASE POWER UP THE ZONE
-----------------------------

Connect siren to mains. The unit will now transmit its serial number, type and status (open / tamper) to the Control Panel.

If the Control Panel receives this information from the unit within a predefined time, screen will show:

S/N: XXXXXX SIREN [STATUS]
-------------------------------

Screen will then alternate between the above and:

PRESS OK TO ACCEPT ZONE DATA
---------------------------------

Press OK to accept the unit type and serial number.

If the Control Panel receives no information from the unit within a predefined time, screen will show:

PU NOT FOUND
--------------

Disconnect the unit from mains, reconnect and try again. If the same error message appears, replace the unit.

Prepare unit for Place Test (Section 5 below) as follows:

When zone enrollment is complete, secure the unit temporarily to the outside wall of the building to be secured, using an adhesive compound or a double side adhesive tape and proceed to Place Test as described below.

Note: For first time installation for this system, Section 4.2 must be repeated for each siren / strobe unit in the system.

## 5 Place Test

From the Enroll Zones menu as shown in Section 4.2 above, press DOWN key at top of Control Panel. Screen will show:

INSTALLER MENU 11: PLACE TEST
----------------------------------

Note: This operation refers to the unit for which Section 4.2 was just performed.

Press OK at top of Control Panel. Screen will show:

PLEASE ACTIVATE THE ZONE
-----------------------------

Go to the location where the siren / strobe unit is to be installed, temporarily mount the unit and connect it to mains. The unit will transmit its serial number, type and mode to the Control Panel.

If the Control Panel receives this information from the unit within a predefined time, screen will show:

S/N: XXXXXX SIREN [STATUS]
-------------------------------

If the signal level for this unit is OK, the buzzer will sound and screen will then change to:

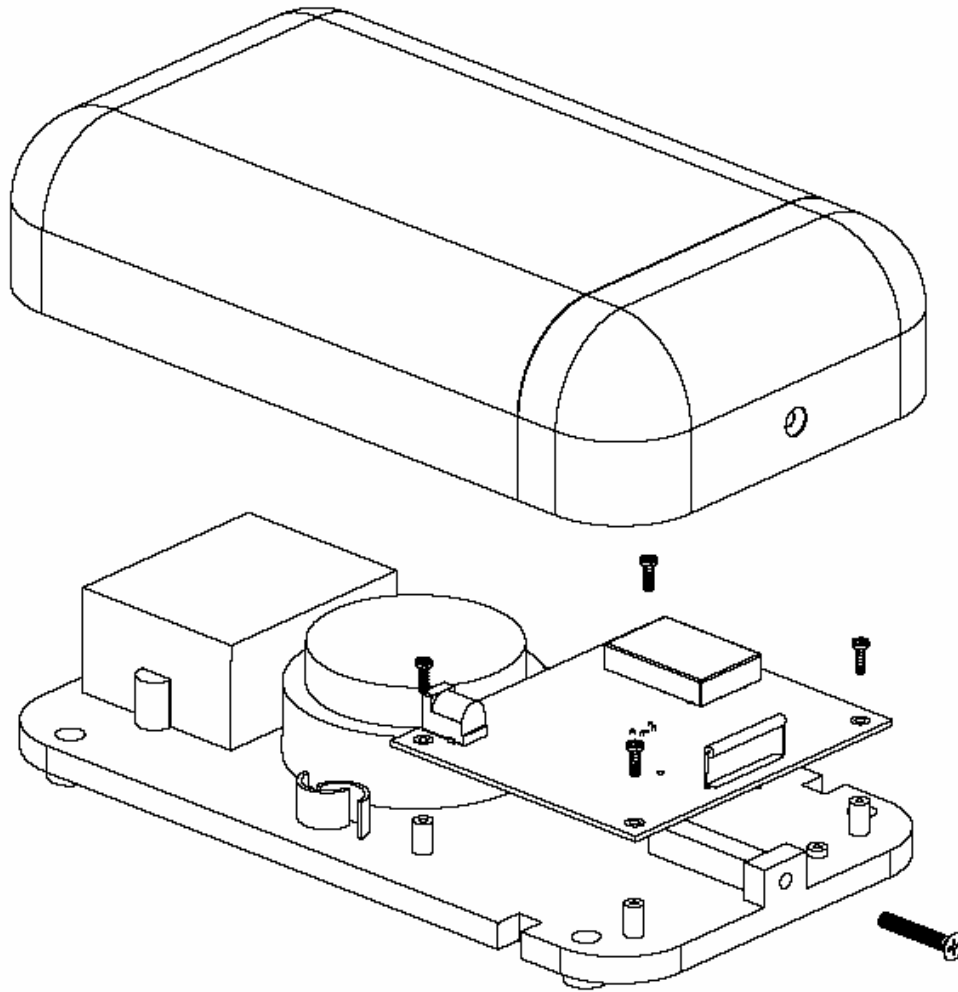
SIGNAL LEVEL OK
--------------------

If the signal level for this unit is not OK, the buzzer will not sound and screen will then change to:

SIGNAL LEVEL TOO LOW
-------------------------

Note: For first time installation for this system, Section 5 must be repeated for each siren / strobe unit in the system.

REV.	ECO	DESCRIPTION	DESIGN	APPVD.	DATE



<b>AQI</b> Advanced Quality Industries					
	NAME	DATE	TITEL	SIRENE ASSEMBLY	
DRAWN	YOSSI L		MAREIAL		
DESIGN	YOSSI L		SURF. ROUGH.	SCALE	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN mm. GENERAL TOLERANCE: ANGLES TOLERANCE: TOL. TO HOLES CENTER:
CHECK	TZAH		✓		
APRVD	DORON				
SIZE	DWG. No.	SIRENE-000		REV.	
A4				0	SHEET OF

F