EXHIBIT 5

Installation and Operating Instructions
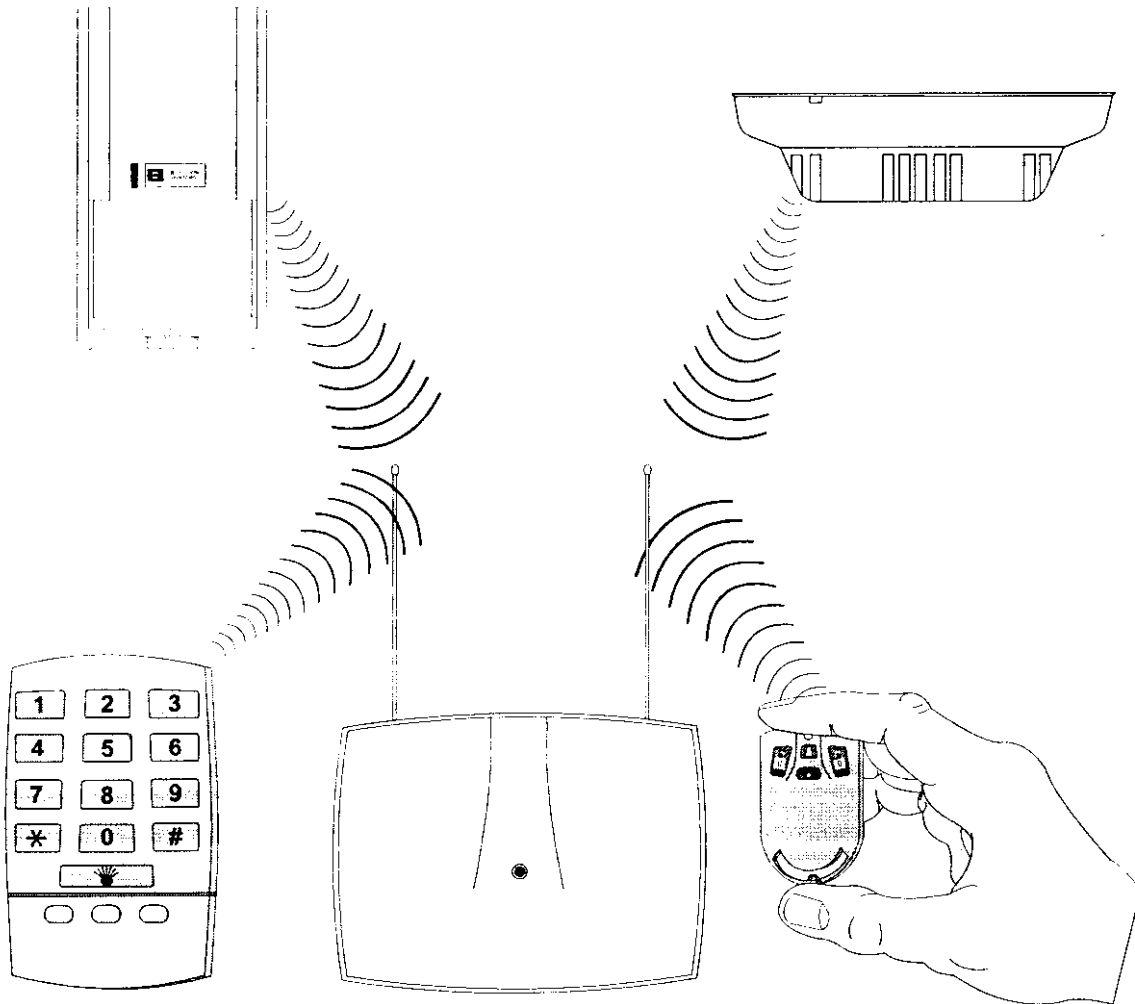
Para. 2.1033(b)(3)

DS7400Xi Version 3+
Wireless Reference Guide

5/1/97 Edition

1.0 Description

This reference guide will show you the way to install the necessary components to add wireless RF capacity to your DS7400Xi Version 3+ control/communicator. The DS7400Xi must have software revision 3.07 or higher to use a wireless receiver.

2.0 Installation

2.1 Install the DS7430 or DS7436 Multiplex Interface Module

- Install the DS7430 or DS7436 Multiplex module in accordance with the installation instructions included with the module. Use caution to avoid flexing the DS7400Xi printed circuit board during installation as it may damage the board.

2.2 Install the RF3222 Receiver

2.2.1 Receiver Specifications

- **Power Requirements:** 12 VDC nominal, 30 mA
- **Frequency:** 304.00 mHz
- **Operating Temperature:** +32°F to +120°F (0°C to 49°C)
- **Dimensions:** 6.0" x 4.25" x 1.2" (W x L x D)
  152mm x 108mm x 31mm (W x L x D)

- The receiver should be mounted in a central location in regard to all wireless sensors, whenever possible. The receiver may be located up to 5000 ft. (1520 m) away from the control panel if using #18 AWG (1.0mm) quad cable (do not use twisted pairs) and up to 2000 ft. if using #22 AWG (.8mm) quad cable. Adding additional multiplex devices to the Mux Bus may reduce the maximum distance.


Although the wireless devices have a range of approximately 500 ft. (150 m) in open air, building materials can greatly reduce that range. As a guideline, keep all remote devices within 100 ft. (30 m) of the receiver.

IMPORTANT

- Leave at least 10 inches above the receiver for the antennas.
- Avoid mounting the receiver in areas with excessive metal or electrical wiring, including furnace and utility rooms. If unavoidable, mount the receiver on metal with the antennas extending above the metal surface.
- Avoid mounting the receiver in areas where it may be exposed to moisture.
- Avoid excessive temperatures.

2.2.2 Hardware Installation

- Determine the mounting location of the receiver. Remember to leave at least 10 inches above the unit for the antennas.
- Remove the outer cover from the receiver and set it aside. It will not be necessary to remove the inner cover.
- Place the receiver base on the wall at the desired mounting location and mark the two mounting holes.
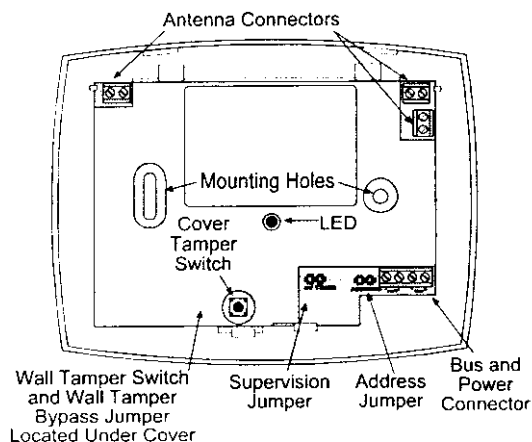
- Install anchors where studs are not present and secure the receiver base to the wall with screws at the mounting hole locations.

- Insert an antenna into the outside terminal on two of the antenna terminal blocks.
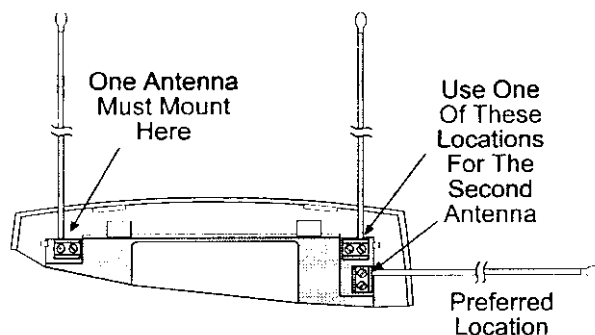
2.2.3 Receiver Jumper Settings

- Set the RF3222 Supervision Jumper as appropriate:
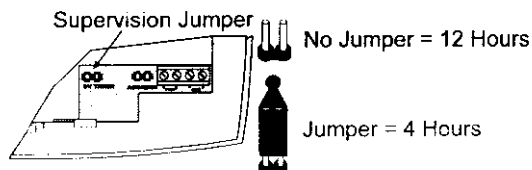
For UL Certificated Installations, supervision must be set for 4 hours.

- Set the Receiver Address Jumper as required:

- Set the Wall Tamper Jumper as required.
- Remove the inside cover by pressing the cover latch.

- Set the wall tamper jumper.

For UL Certificated Installations, tamper switches must be enabled.

3.0 Wiring and Power Up

- Remove power from the control panel.
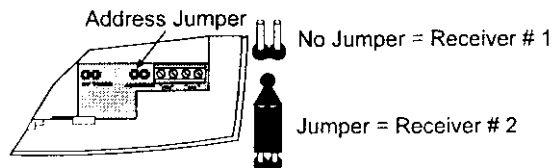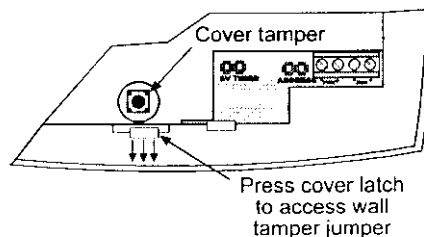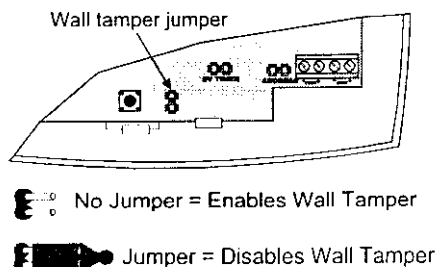- Connect the DS7430 Multiplex Module terminals to the RF3222 Receiver (or receivers if you are using two) terminals as shown below, using 4-conductor, 22-gauge or larger wire. Shielded cable is not required and do not use twisted pair wire. If you are using a DS7436 Multiplex Module, you may connect the receiver to either multiplex bus. If using two receivers and the DS7436 Multiplex Module, you may connect both to one multiplex bus or one to each bus.
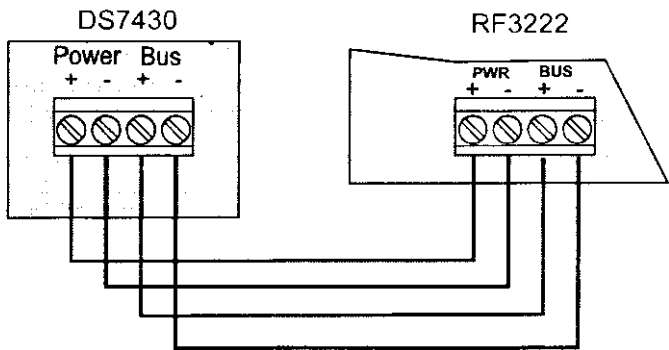
- Apply power to the control panel. The red LED at the center of the module should turn on.

4.0 Receiver LED Operation

The following describes the status of the receiver based on the LED condition.

LED on - The receiver is functioning normally.

LED off - Power failure has occurred or the receiver is not wired correctly.

LED turns off momentarily - The receiver acknowledged receiving an RF signal from a remote RF device.

LED blinks rapidly - The receiver is being programmed with zone and transmitter I.D.s from the DS7400Xi control panel. This condition will occur upon initialization (power-up) of the system or when new zone information has been programmed into the system. The rapid blink should last for less than one minute.

FCC COMPLIANCE NOTICE:
This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry and Science Canada. 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 undesirable operation.
Changes or modifications not expressly approved by Detection Systems, Inc. can void the users authority to operate the equipment.

5.0 Panel Programming Information

5.1 Receiver Programming: Program Address 0168

The DS7400Xi control panel can accept 1 or 2 receivers on the multiplex bus. The panel must be programmed for the number of receivers used and which zones are assigned to each receiver.

Data Digit 1 defines if there are 0, 1, or 2 receivers.
Data Digit 2 defines the zones covered by receiver #1 and receiver #2. If there is only one receiver, Data Digit 2 should be 0.

Select Option	DD
No Receiver	0
One Receiver	2
Two Receivers	4

Select Option	DD
One Receiver	0
Receiver #1 = Zones 009 - 016 Receiver #2 = Zones 017 - 128	1
Receiver #1 = Zones 009 - 024 Receiver #2 = Zones 025 - 128	2
Receiver #1 = Zones 009 - 032 Receiver #2 = Zones 033 - 128	3
Receiver #1 = Zones 009 - 040 Receiver #2 = Zones 041 - 128	4
Receiver #1 = Zones 009 - 048 Receiver #2 = Zones 049 - 128	5
Receiver #1 = Zones 009 - 056 Receiver #2 = Zones 057 - 128	6
Receiver #1 = Zones 009 - 064 Receiver #2 = Zones 065 - 128	7
Receiver #1 = Zones 009 - 072 Receiver #2 = Zones 073 - 128	8
Receiver #1 = Zones 009 - 080 Receiver #2 = Zones 081 - 128	9
Receiver #1 = Zones 009 - 088 Receiver #2 = Zones 089 - 128	*0
Receiver #1 = Zones 009 - 096 Receiver #2 = Zones 097 - 128	*1
Receiver #1 = Zones 009 - 104 Receiver #2 = Zones 105 - 128	*2
Receiver #1 = Zones 009 - 112 Receiver #2 = Zones 113 - 128	*3
Receiver #1 = Zones 009 - 120 Receiver #2 = Zones 121 - 128	*4

5.2 Multiplex Zone Type: Program Address 0166

In Address 0166, the zones are assigned to be multiplex (wired) or wireless RF zones. Data Digits 1 and 2 also determine if wireless keypads will be used with the system. Zones are assigned in groups of 8. You cannot assign an individual zone to be mux or wireless.

IMPORTANT — Receiver Programming, Address 0168, must be set before selecting wireless zones.

Data Digits 1 & 2 define if there are wireless keypads and if Zones 9 - 64 are multiplex or RF zones.
Data Digits 3 & 4 define if zones 65 - 128 are multiplex or RF zones

Data Digit
1 2 3 4

REMEMBER
The ● selection selects wireless zones and keypads

Option	0	1	2	3	4	5	6	7	8	9	*0	*1	*2	*3	*4	*5
Disabled	●															
RF Keypads		●		●		●		●		●		●		●		●
Zones 9-16			●	●			●	●			●	●			●	●
Zones 17-24					●	●	●	●					●	●	●	●
Zones 25-32									●	●	●	●	●	●	●	●

Option	0	1	2	3	4	5	6	7	8	9	*0	*1	*2	*3	*4	*5
Disabled	●															
Zones 33-40		●		●		●		●		●		●		●		●
Zones 41-48			●	●			●	●			●	●			●	●
Zones 49-56					●	●	●	●					●	●	●	●
Zones 57-64									●	●	●	●	●	●	●	●

Option	0	1	2	3	4	5	6	7	8	9	*0	*1	*2	*3	*4	*5
Disabled	●															
Zones 65-72		●		●		●		●		●		●		●		●
Zones 73-80			●	●			●	●			●	●			●	●
Zones 81-88					●	●	●	●					●	●	●	●
Zones 89-96									●	●	●	●	●	●	●	●

Option	0	1	2	3	4	5	6	7	8	9	*0	*1	*2	*3	*4	*5
Disabled	●															
Zones 97-104		●		●		●		●		●		●		●		●
Zones 105-112			●	●			●	●			●	●			●	●
Zones 113-120					●	●	●	●					●	●	●	●
Zones 121-128									●	●	●	●	●	●	●	●

6.0 Adding Wireless RF Devices to the System

6.1 Adding RF3341 Keypads

If using wireless keypads, please observe the following:
- There must be at least one wired keypad in the system.
- If only one wired keypad is used, it must be keypad #1.
- The system may have a maximum of 5 wireless keypads.
- Wireless keypads must be assigned as keypads 1-5.
- Wireless keypads should not be assigned as master keypads.
- Both a wired and a wireless keypad may be assigned to the same address.
- If both a wired and a wireless keypad are assigned to the same address, select the option for the appropriate wired keypad in Addresses 0173-0175.
- If a wireless keypad without a wired counterpart is desired, assign the wireless keypad as 0 (Disabled).
- Wireless keypads may be assigned to any partition.

6.1.1 Keypad Assignment Programming: Programming Addresses 0173-0180

Keypad Assignment Programming is where you assign the keypad type.
Data Digit 1 defines the first keypad in the address.
Data Digit 2 defines the second keypad in the address.

Data Digit
1 2

Select Options	0	1	2	3
Disabled or Wireless Keypad	●			
Alpha (LCD) Keypad		●		●
LED Keypad			●	
Master Keypad***				●

Program Address 0173
Data Digit 1 — Keypad 1* default = 1
Data Digit 2 — Keypad 2 default = 0

Program Address 0174
Data Digit 1 — Keypad 3 default = 0
Data Digit 2 — Keypad 4 default = 0

Program Address 0175
Data Digit 1 — Keypad 5 default = 0
Data Digit 2 — Keypad 6 default = 0

Program Address 0176
Data Digit 1 — Keypad 7 default = 0
Data Digit 2 — Keypad 8 default = 0

Program Address 0177
Data Digit 1 — Keypad 9 default = 0
Data Digit 2 — Keypad 10 default = 0

Program Address 0178
Data Digit 1 — Keypad 11 default = 0
Data Digit 2 — Keypad 12 default = 0

Program Address 0179
Data Digit 1 — Keypad 13 default = 0
Data Digit 2 — Keypad 14 default = 0

Program Address 0180
Data Digit 1 — Keypad 15 default = 0
Data Digit 2 — Must Be 0 → 0

6.1.2 Keypad Partition Assignment: Programming Addresses 0208-0215

Keypad Partition Assignment is where both wired and wireless keypads are assigned to a partition. Wireless keypads may only be keypads 1-5. Wireless keypads may be assigned to any partition.
Data Digit 1 defines the first keypad in the address.
Data Digit 2 defines the second keypad in the address.

Select Option	DD
Belongs to Partition 1	0
Belongs to Partition 2	1
Belongs to Partition 3	2
Belongs to Partition 4	3
Belongs to Partition 5	4
Belongs to Partition 6	5
Belongs to Partition 7	6
Belongs to Partition 8	7

Program Address 0208
Data Digit 1 — Keypad 1
Data Digit 2 — Keypad 2

Program Address 0209
Data Digit 1 — Keypad 3
Data Digit 2 — Keypad 4

Program Address 0210
Data Digit 1 — Keypad 5
Data Digit 2 — Keypad 6

Program Address 0211
Data Digit 1 — Keypad 7
Data Digit 2 — Keypad 8

Program Address 0212
Data Digit 1 — Keypad 9
Data Digit 2 — Keypad 10

Program Address 0213
Data Digit 1 — Keypad 11
Data Digit 2 — Keypad 12

Program Address 0214
Data Digit 1 — Keypad 13
Data Digit 2 — Keypad 14

Program Address 0215
Data Digit 1 — Keypad 15
Data Digit 2 — Must Be 0 [**0**]

6.1.3 Programming Wireless keypads

Once the Keypad Assignment Programming (Addresses 0173-0180) and Keypad Partition Assignment Programming (Addresses 0208-0215) have been completed, the wireless keypads may be programmed into the system. See Section 7 - Programming Wireless RF Devices for programming the keypads.

6.1.4 Wireless keypad Fire, Help and Panic keys

The Fire, Help and Panic keys will only be operational if programmed in your control/communicator. See "Emergency Key Programming", Program Addresses 0181-0182, in your control panel Reference Guide.

6.1.5 Programming the Accessory Key [🖐]

The operation of the 🖐 key will be the same on all keypads and keyfobs if they are assigned to the same partition.
The RF3341 Keypad has an accessory key which may be programmed to drive the control panel outputs. The accessory key may be used drive any of the three panel outputs or any of the 15 custom programmable outputs.

Programming the Alarm Output, Programmable Output 1 or Programmable Output 2: Program Addresses 0146-0148 to follow the Accessory key.

Output	Address	Default
Alarm	0146	6 3
Programmable Output 1	0147	3 3
Programmable Output 2	0148	2 3

Wireless Keypad Outputs [*0] → Data Digit 1 [*0] Data Digit 2 [ ]

	RF3341	
Disabled		0
Momentary	Accessory 🖐 Key	1
Toggle	Accessory 🖐 Key	2

• The outputs may be assigned to follow the Keyfobs in one or all partitions in the Output Partition Assignment Addresses 0149-0150.

Output	Address	Default
Alarm	0149-DD1	8
Programmable Output 1	0149-DD2	8
Programmable Output 2	0150-DD1	8

PA 0149 Data Digit 1, 2
PA 0150 Data Digit 1, 2 [**0** Must Be 0]

Select Option	DD
Belongs to Partition 1	0
Belongs to Partition 2	1
Belongs to Partition 3	2
Belongs to Partition 4	3
Belongs to Partition 5	4
Belongs to Partition 6	5
Belongs to Partition 7	6
Belongs to Partition 8	7
Follows all Partitions	8

Programming the Output Functions to follow the wireless keypad accessory 🖐 key.

Data Digit 1 Option *0 is used to program an Output Function to follow the Wireless Keypad Output Button.

Program Address 1 — Data Digit 1, 2

Follow Wireless Keypad Accessory Key [*0] → [*0] [ ]

Options	RF3341	DD
Disabled		0
Momentary	Accessory 🖐 Key	1
Toggle	Accessory 🖐 Key	2

Output Function Number	Program Address 1
1	1472
2	1475
3	1478
4	1481
5	1484
6	1487
7	1490
8	1493
9	1496
10	1499
11	1502
12	1505
13	1508
14	1511
15	1514

6.2 Adding RF3332 and RF3334 Keyfobs

Each RF3332 (2-Button) or RF3334 (4-Button) Keyfobs occupies 1 RF zone. It is possible to have up to 120 Keyfobs on a system. The RF3334 Keyfob can also have programmed outputs.

6.2.1 Zone Programming for Keyfobs: Programming Addresses 0026-0145

• Each Keyfob must be assigned to a zone.

✓ **IMPORTANT** Any zones used by RF devices must be programmed as RF zones before the wireless devices can be activated. See Section 5.2 Multiplex Zone Type for programming information.

Data Digit 1 must be set to 5.
Data Digit 2 defines if the Keyfob will arm one or all partitions and if force arming is allowed.

Zones 9 - 128 = Program Addresses 0026 - 0145
(Hint: Zone Number + 17 = The Program Address)
Example: Zone 10 + 17 = Program Address 0027

Data Digit 1, 2
Must be 5 for Keyfobs → [**5**] [ ]

Select Options	1	2	3	4
Single Partition No Force Arming Allowed	●			
Single Partition Force Arming is Allowed		●		
All Partitions No Force Arming Allowed			●	
All Partitions Force Arming is Allowed				●

6.2.2 Assigning Keyfobs to a Partition: Programming Address 1252 - 1311

- Each Keyfob must be assigned to one or all partitions. If one of the "All Partitions" options was selected for the zone (see Section 6.2.1) you do not need to assign a partition to the zone.

- The partition assignment for odd numbered zones is programmed into the first data digit of these addresses. The partition assignment for even numbered zones is programmed into the second data digit.

Select First Zone Option	00
Belongs to Partition 1	0
Belongs to Partition 2	1
Belongs to Partition 3	2
Belongs to Partition 4	3
Belongs to Partition 5	4
Belongs to Partition 6	5
Belongs to Partition 7	6
Belongs to Partition 8	7

Select Second Zone Option	00
Belongs to Partition 1	0
Belongs to Partition 2	1
Belongs to Partition 3	2
Belongs to Partition 4	3
Belongs to Partition 5	4
Belongs to Partition 6	5
Belongs to Partition 7	6
Belongs to Partition 8	7

Partition Assignment Addresses		Partition Assignment Addresses	
Zones	Address	Zones	Address
9 and 10	1252	69 and 70	1282
11 and 12	1253	71 and 72	1283
13 and 14	1254	73 and 74	1284
15 and 16	1255	75 and 76	1285
17 and 18	1256	77 and 78	1286
19 and 20	1257	79 and 80	1287
21 and 22	1258	81 and 82	1288
23 and 24	1259	83 and 84	1289
25 and 26	1260	85 and 86	1290
27 and 28	1261	87 and 88	1291
29 and 30	1262	89 and 90	1292
31 and 32	1263	91 and 92	1293
33 and 34	1264	93 and 94	1294
35 and 36	1265	95 and 96	1295
37 and 38	1266	97 and 98	1296
39 and 40	1267	99 and 100	1297
41 and 42	1268	101 and 102	1298
43 and 44	1269	103 and 104	1299
45 and 46	1270	105 and 106	1300
47 and 48	1271	107 and 108	1301
49 and 50	1272	109 and 110	1302
51 and 52	1273	111 and 112	1303
53 and 54	1274	113 and 114	1304
55 and 56	1275	115 and 116	1305
57 and 58	1276	117 and 118	1306
59 and 60	1277	119 and 120	1307
61 and 62	1278	121 and 122	1308
63 and 64	1279	123 and 124	1309
65 and 66	1280	125 and 126	1310
67 and 68	1281	127 and 128	1311

6.2.3 Programming Wireless keyfobs

Once the Keyfob Zone Programming (Addresses 0026-0145) and Keyfob Partition Assignment Programming (Addresses 1252-1311) have been completed, the wireless Keyfobs may be programmed into the system. See Section 7 - Programming Wireless Devices for programming the Keyfobs.

IMPORTANT

If the system is using two receivers, please note the following: Because keyfobs are assigned to a zone and zones are assigned to a receiver, the range of the keyfob is limited to the assigned receiver.

6.2.4 Wireless keypad Panic Function

The Panic function will only be operational if programmed in your control/communicator. See "Emergency Key Programming", Program Address 0182, in your control panel Reference Guide.

6.2.5 Output Programming for the RF3334 Keyfob

The RF3334 Keyfob has two key outputs which may be programmed to drive the control panel outputs. Either key may be used drive any of the three panel outputs or any of the 15 custom programmable outputs.
The operation of the ☀ key will be the same on all keypads and keyfobs if they are assigned to the same partition.

Programming the Alarm Output, Programmable Output 1 or Programmable Output 2: Program Addresses 0146-0148.

- For any of these addresses, the first digit must be *0 for Keyfobs.

Output	Address	Default
Alarm	0146	6 3
Programmable Output 1	0147	3 3
Programmable Output 2	0148	2 3

	RF3334	
Disabled		0
Momentary	Accessory ☀ Key	1
Toggle	Accessory ☀ Key	2
Momentary	Auxiliary ☐ Key	3
Toggle	Auxiliary ☐ Key	4

- The outputs may be assigned to follow the Keyfobs in one or all partitions in the Output Partition Assignment Addresses 0149-0150.

Output	Address	Default
Alarm	0149-DD1	8
Programmable Output 1	0149-DD2	8
Programmable Output 2	0150-DD1	8

Select Option	DD
Belongs to Partition 1	0
Belongs to Partition 2	1
Belongs to Partition 3	2
Belongs to Partition 4	3
Belongs to Partition 5	4
Belongs to Partition 6	5
Belongs to Partition 7	6
Belongs to Partition 8	7
Follows all Partitions	8

Programming the Output Functions to follow the Keyfob Output Buttons.

Data Digit 1 Option *0 is used to program an Output Function to follow the Wireless Keyfob Output Buttons.

Options	RF3334	DD
Disabled		0
Momentary	Accessory ☀ Key	1
Toggle	Accessory ☀ Key	2
Momentary	Auxiliary ☐ Button	3
Toggle	Auxiliary ☐ Button	4

Output Function Number	Program Address 1
1	1472
2	1475
3	1478
4	1481
5	1484
6	1487
7	1490
8	1493
9	1496
10	1499
11	1502
12	1505
13	1508
14	1511
15	1514

7.0 Programming Wireless RF Devices

All Wireless RF devices (Keypads, Keyfobs, PIRs, Smoke Detectors and Contact Points) must be programmed into the DS7400Xi panel in order to be recognized.

Each wireless device will have a unique ID code attached to the device in the form of a two part bar code sticker like the one shown below:

167770187

167770187

It is suggested that you keep one part of the sticker for your records and leave the second part attached to the device.

7.1 Zone Programming

Before installing a RF (Wireless) device, its address and other information must be programmed into the control panel. Perform the following:

- Program the control panel.

  - Refer to section 11.2-11.4, Zone Programming in your DS7400Xi Version 3+ Reference Guide P/N 28995.

    This section allows you to define the RF (Wireless) Zone's address (zone number), its type (always a single input zone, selection 0), which zone or output function it will follow (1-15) and its partition (1-8). The Zone Functions for RF zones must always be set for "Alarm on Short". **DO NOT** program the zone function for "Trouble on Short".

    For example: Program zone 9 to be a single zone input device that follows zone function 1 and is in partition 1.

    Procedure: Enter the programmer's mode (Default code = 9876#0).

    Enter address 0026.

    Enter the data digits as [0] and [1] followed by the [#] button.

    Enter address 1252.

    Enter the data digits as [0] and [0] followed by the [#] button.

    Exit the programmer's mode or program another address.

- Once the zone programming is done, you are ready to program the RF devices. Perform the following:

  - Enter the programmer's mode (Default code = 9876#0).

    Do this by entering the programmers code followed by the [#] and [0] buttons.

  NOTE You may exit the programming mode at any time by pressing the [*] key for two seconds. If no keystrokes are detected for four minutes, the panel will automatically exit the programmers mode.

  - Enter the RF programming mode.

    Do this by entering [9] [9] [9] [0] followed by the [#] button.

  - If no RF zones have been programmed into the panel the following message will appear:

```
No RF Zones
Press Off
```

  - If the panel has been programmed with RF zones the RF Installers Menu will then appear:

```
Add RF Zone?
Press 1
```

```
Test RF Zone?
Press 2
```

```
Remove RF Zone?
Press 3
```

- Select "Add RF Zone" by pressing the 1 key.

- If all of the RF zones have been added, the following message will appear:

```
Last RF Zone
Press Off
```

- If zones are ready to be added, the display below will appear. The zone number shown will be the lowest number zone available to be added. You may step forward to other programmed and ready to be added zones by pressing the "ON" key on the keypad. If you step through all the zones and the message "Last RF Zone - Press Off" appears, you may return to the first available zone for programming by pressing the "On" key. You cannot step backward through the zones - only forward. You may exit the programming mode at this time by pressing the "Off" key.

```
Add Zone ###
Press #
```

- When the point number desired is shown in the display, press the # key to accept that zone number and display the following:

```
Enter ID Zn ###
```

- At this time, enter the 9 digit code from the ID sticker on the device. The system will confirm acceptance of the device with a single beep from the keypad and display the following message:

```
Added Zone ###
Press On
```

- Pressing the "On" key at this time will prompt the system to the next zone ready to be added to the system or display the message "No Zones To Add Press Off" if there are no zones to be added.

- A three beep tone from the keypad will indicate that the device was not accepted by the system for one of the following reasons.

- If the display shows the following message, it indicates that the sensor code has already been added to the system. The sensor shown can be removed from the system (see Section 7.3) or another sensor may be added to the system.

```
Duplicate Zn ###
Press #
```

- Pressing the # key will attempt to program the zone again.

- If the following message appears, it indicates that the device ID number was not entered correctly:

```
ID Entry Error
Press #
```

- Pressing the "Off" key will exit the Add RF Zone mode. The system will pause while the RF zones are configured.

```
Configuring RF
Please Wait
```

7.2 Testing RF Zones

From the main menu, select Test RF Zone (selection 2).

```
Test RF Zone
Press 2
```

- If there are no RF zones programmed into the system or if the zones have not been "Added", the display will read:

```
Last RF Zone
Press Off
```

- If RF zones are programmed into the system and the sensors have been "Added", the display will show the first RF sensor available for testing:

```
Test Zone ###
   Press #
```

- You may test the zone shown by pressing the # key or advance to another zone by pressing the "On" key. When a zone is selected you will be prompted to activate the point. You may activate the point by creating an alarm or tamper condition.

```
  Zone XXX
Activate Point
```

- The test values will now be displayed.

```
Zn XXX XXXXXXXX ◄───  Good
PK:XXX P:## A:##      Marginal
                      Replace
```

- The information displayed will be the Zone Number and the PKT or Packet Number (when transmitting information the transmitter sends the same information 4 or 8 times in "Packets" and the receiver must receive at least 1 or 2 of these packets. The number of packets sent depends on the device sending the information and the type of information. The number of packets does not reflect the actual strength of the signal). "Good" "marginal" or "Relocate" will also appear depending on the relative signal strength. If the signal is Good, the keypad will beep 8 times, 4 times for a Marginal signal and only once for a Relocate signal. The "P" represents the relative signal strength above the ambient noise level and is displayed as a value of 0-99. The "A" represents the ambient noise level and is displayed as a value of 0-99.

- Pressing the # key will allow you to select another zone. Pressing the "Off" key exits the test mode.

7.3   Removing RF Zones

Removing RF zones is a two step process. First, the zone must be removed from the receiver using the procedure below. After the zone has been removed from the receiver you must then remove the zone from its zone programming address (0018-0145) by setting the appropriate zone programming address to 00.

IMPORTANT

From the Main Menu, select "Removing RF Zones" (selection 3).

```
Remove RF Zone
   Press 3
```

- If no RF zones have been programmed or "Added" the following message will be displayed:

```
 No RF Zones
  Press Off
```

- If there are RF zones that may be removed, the first available zone will be displayed:

```
Remove Zone ###
    Press #
```

- You may select the zone displayed or advance to another zone by pressing the "On" key. If the # key is selected at this time, the panel scans the receiver to remove the ID for the specified sensor. When completed, the display shows the following message:

```
Zone Removed ###
    Press #
```

- Pressing the # key at this time will present the next zone that can be removed. Press the "Off" key to exit the Remove Zone mode.

7.4   RF Zone Troubles

RF Zone Troubles will only appear on the display after a user code followed by [#] [8] [7] has been entered into the keypad. One or more of the following messages will appear if there is a problem with a RF Zone:

```
Missing Zone ###
  [Zone Text]
```

- **Missing Zone** indicates that the sensor zone failed to receive a report from the sensor during the supervisory period of 4 or 12 hours.

```
Trouble Zone ###
  [Zone Text]
```

- **Trouble Zone** indicates that the RF sensor has determined that there is some type of trouble with itself. Not all types of sensors have the capacity to report troubles.

```
Zone Trouble ###
  [Zone Text]
```

- **Zone Trouble** may indicate a shorted sensor zone.

```
Tamper Zone ###
  [Zone Text]
```

- **Tamper Zone** indicates that the cover tamper has been violated on the detector.

```
Low Bat Zone ###
  [Zone Text]
```

- **Low Battery** indicates that the sensor battery is low.

7.5   Receiver Trouble Displays

NOTE   Receiver #1 refers to the receiver with the lower zone numbers. Receiver #2 refers to the receiver with the upper zone numbers.

The Keypad displays may show the following receiver troubles:

```
Control Trouble
Tamper RF Rcvr #
```

- **RF Receiver Tamper** indicates that one of the receivers covers have been removed or tampered with. Receiver #1 refers to the receiver with the lower zone numbers.

```
Control Trouble
Jammed RF Rcvr #
```

- **RF Receiver Jammed** indicates that the receiver may be getting interference from outside sources. Such types of interference may be caused by older Cell Phones, multichannel cordless phones, some business/police/fire band radios and "Walkie Talkies". Receiver #1 refers to the receiver with the lower zone numbers.

```
Control Trouble
Troubl RF Rcvr #
```

- **RF Receiver Trouble** indicates that the receiver has not received any supervisory signals from the sensors during the supervision interval. Check the receiver antennas and test all the sensors. If the sensor tests are unsuccessful, then the problem is likely to be in the receiver. Receiver #1 refers to the receiver with the lower zone numbers.