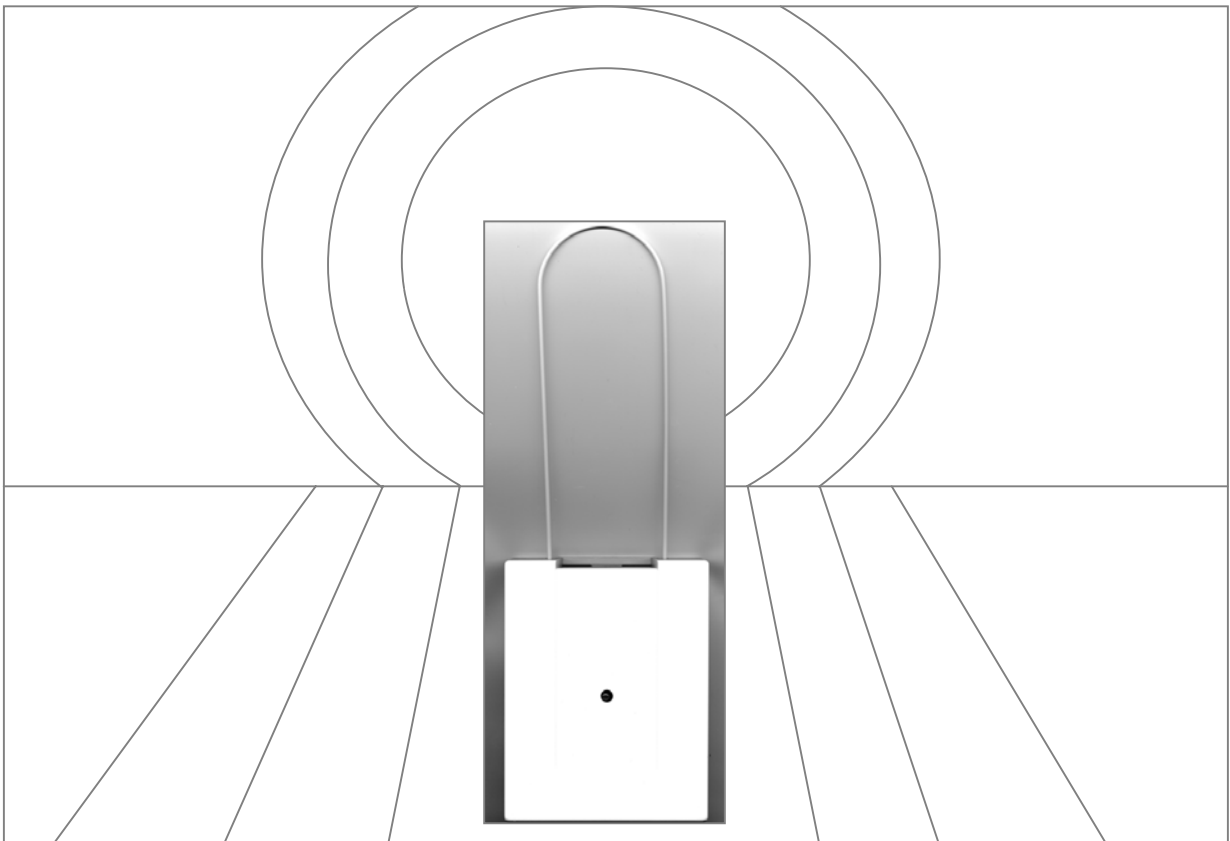




GE Security

***Wireless Data Gathering Panel
(DGP) Model AL-1231***

**Installation
& Programming Guide**



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About this Guide

How this guide is structured

This guide is the technician's installation guide, and the programming guide after installation.

It is arranged in three parts:

1. Installing and testing the hardware
2. Programming the Wireless DGP and using the inbuilt diagnostics
3. Miscellaneous topics.

Even though the programming section presents each procedure in the same order as the Alliance System menu; don't use the same order for installation programming. See page 5 for the correct installation sequence.

This guide also contains basic instructions on how to program a repeater station into the Alliance System. Mounting the repeater is not covered.

Assumed knowledge: Technicians

For installers: All installation procedures assume a trained qualified installer will install the Wireless DGP and that your local cabling standards are met.

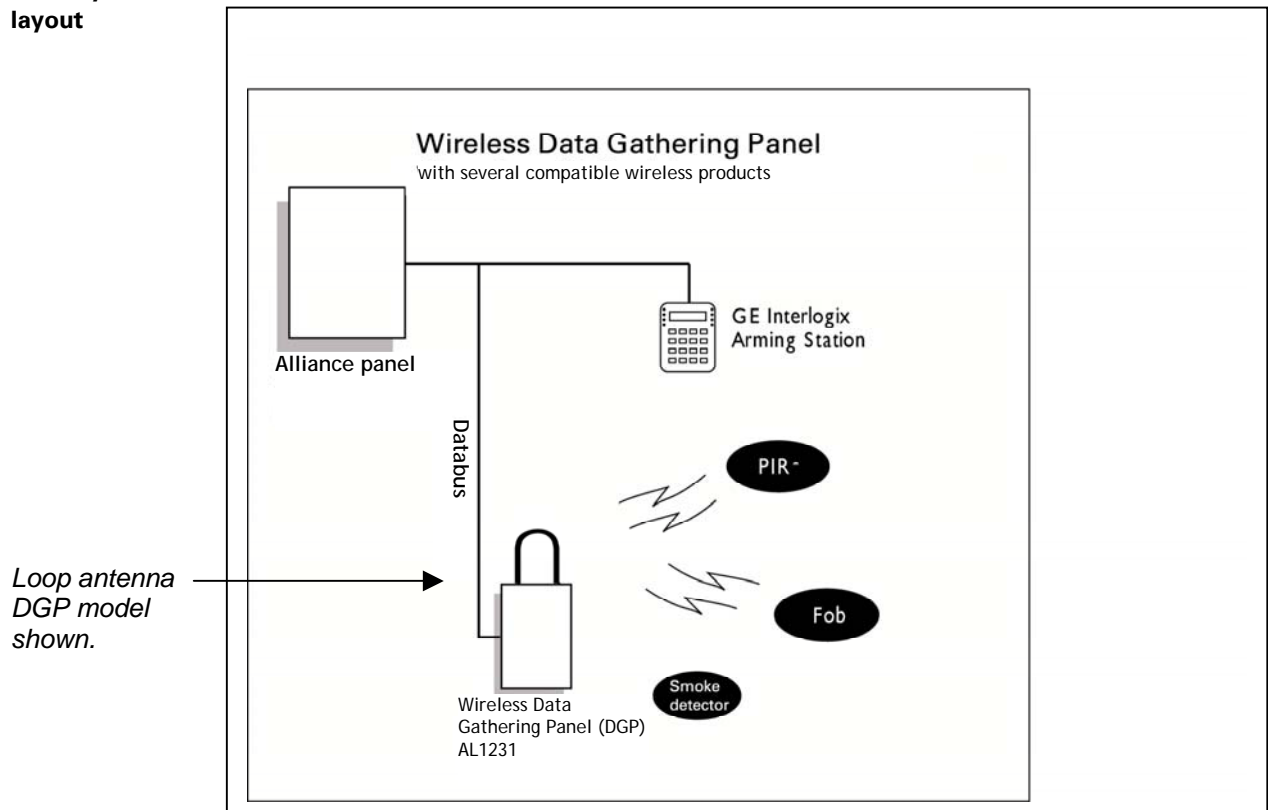
Installation procedures assume installers are experienced with Alliance System Remote Arming Station (RAS) keypad programming and understand wireless sensor technology.

For Technicians: No programming experience is assumed, but familiarity with using a RAS keypad to navigate the Alliance System menu is desirable.

Wireless Data Gathering Panel — Introduction

- Product Features**
- The Wireless Data Gathering Panel receiver expands the Alliance System panel's input capability by up to 32 zones using GE Interlogix™ Learn Mode™ 319.5 MHz Wireless Transmitter Sensors — crystal or Surface Acoustic Wave (SAW).
 - The Wireless DGP may be located up to 1100 feet (335 meters) from the Alliance System panel.
 - The Wireless DGP receives information from a range of compatible sensor types programmed into the DGP.
 - The Wireless DGP features spatial diversity to minimize wireless signal nulls or dead spots and has a nominal open-air receiving range of 1500 feet (460 m).
 - If dead spots need to be eliminated a GE Interlogix 319.5MHz repeater may be used.
 - The Wireless DGP may be powered from the Alliance System databus or a remote auxiliary power supply.
 - Fob buttons may be programmed for users to arm and disarm or to control relays. For example, to remotely open and close a garage door as well as arm or disarm an office security system.

Basic system layout



Wireless DGP working with some of the possible sensors.

Installation Topics

Topic	See Page
Installation Kit	5
Installation Overview	6
Installation: <ul style="list-style-type: none">• Stage 1: Mount the Wireless DGP• Stage 2: Set the DIP switches• Stage 3: Connect the Wireless DGP to the Alliance System databus - Power and Communication Connections• Stage 4: Power up the AL-1231 and Alliance System panel• Stage 5: Test the Connectivity to the Alliance System panel• Stage 6: Program the Wireless DGP into the Alliance System panel	6
Installation troubleshooting	12

Installation kit

Part	√ Received
1 x AL-1231 Wireless DGP in plastic enclosure	
2 x dipole antennas	
4 x mounting screws and plastic plugs	
1 x wall-tamper magnet (optional)	
1 x Installation and Programming guide	√
1 x 470 Ω ¼ watt databus (RS485) termination resistor*	

* The first and the last devices on the databus must be terminated.

Installation Overview

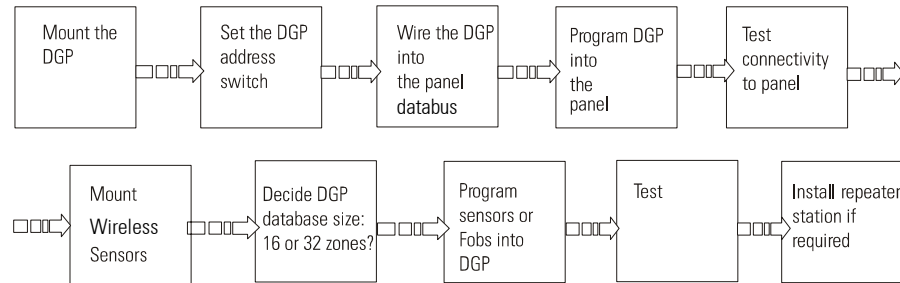
Basic requirements and suggestions

- Requires version AL-40xx.04.05.10 Alliance System firmware or above.
 - Up to 15 DGPs may be connected to the Alliance System panel providing 240 wireless zones (also known as inputs), or up to 240 fobs to arm/disarm area or activate/deactivate relay controls.
 - The maximum recommended databus length is 1100 feet (335 m) when one or more AL-1231 Wireless DGPs are connected.
 - Each Wireless DGP must have a unique DIP switch address.
 - Leave 7 inches (18 cm) above the Wireless DGP plastic enclosure for the antennas.
 - Avoid areas likely to expose the Wireless DGP to moisture.
 - Remove power from the Alliance System panel before commencing installation.
 - You must be free of static electricity before handling the printed circuit board. Wear a grounding strap when opening the plastic enclosure.
 - Avoid excessive metal or electrical wiring, e.g. furnace & utility rooms.
 - As a general recommendation, locate the Wireless DGP central to all transmitter sensors.
 - Use the GE Interlogix 319.5 MHz Repeater to assist with range problems or receiver dead spots. If unavoidable, mount on or near metal with the antennas extending *above* the metallic surface, as shown in the diagram on page 8.
-

Installation sequence

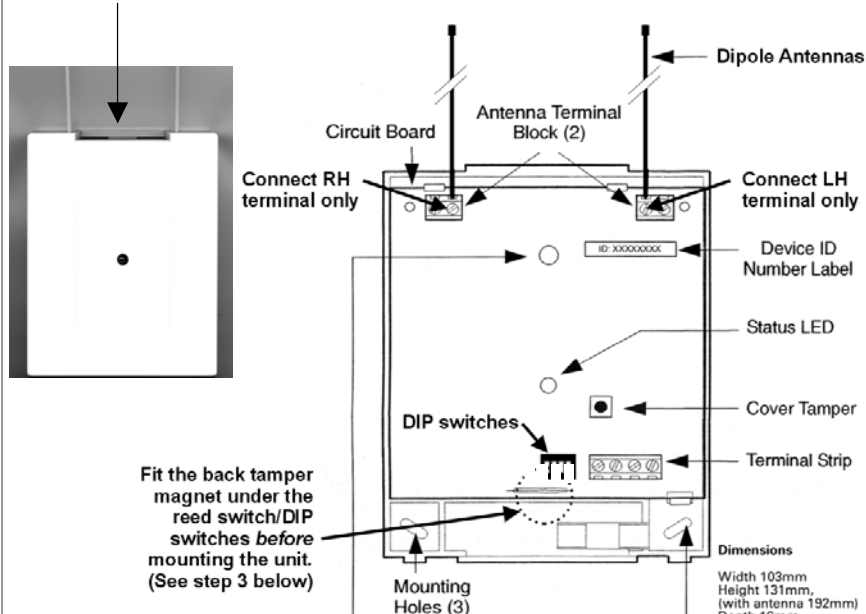
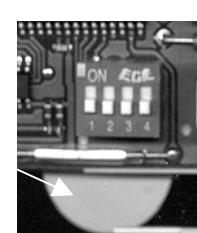
1. Mount the wireless DGP.
 2. Set the Wireless DGP address DIP switch.
 3. Wire the Wireless DGP to Alliance System databus.
 4. Program the Wireless DGP into the Alliance System. (See programming guide.)
 5. Test connectivity to Alliance System.
 6. Mount sensors and 319.5 MHz Repeater (a Repeater can be added later if sensor performance or signal strength is found to be inadequate.)
 7. Decide Wireless DGP zone database size (16 or 32).
 8. Program sensor or fob zones into the DGP.
 9. Test.
 10. Install repeater station if required.
-

Installation sequence flowchart



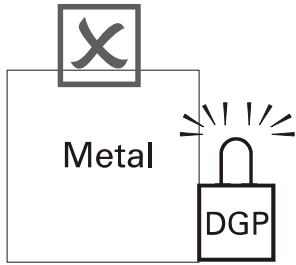
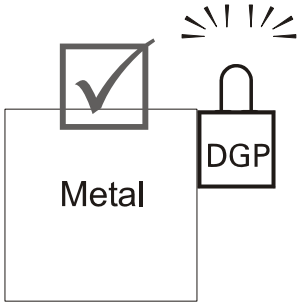
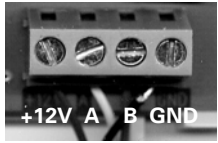












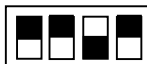




Installing the Wireless DGP

Procedure

Stage1: Mounting the Wireless DGP	
Step	Action
1	Remove power from the Alliance System panel.
2	<p>Remove the Wireless DGP plastic cover. Hold the base of the Wireless DGP against the mounting surface and mark the three mounting holes. Leave 7 inches (18 cm) of free space above for the antenna.</p> <p>Press down here to remove the cover.</p> 
3	<p>If back tamper is required, drill a 16 mm diameter hole and insert the back tamper magnet (supplied) so it will sit under the reed switch (next to DIP switches) after the unit is mounted. Make sure the back tamper magnet fits tightly in the drilled hole. Remove the two plastic accessories in the cable entry slot.</p> <p>Back tamper magnet mounted under reed switch</p>  <p>TIP: Remember to enable the rear tamper in the Wireless DGP menu option 9 - Tamper Options (see page 32).</p>
4	Drill holes and insert screw anchors if required.
5	Secure to the wall with screws provided.

Continued on next page

Procedure (continued)

	<p>If mounting near metal, give the antenna as much clearance as possible. This applies to both loop antenna (shown) or dipole antennas (not shown).</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Metal</p> </div> <div style="text-align: center;">  <p>Metal</p> </div> </div>
6	<p>Connect the four databus cable wires to the terminal strip on the DGP.</p> <p>A = D+ B = D -</p> 
7	<p>Connect the databus cable directly to the Alliance System panel databus.</p>
8	<p>Insert the antenna into the innermost terminals of the antenna terminal block at the top of the circuit board and tighten the screws.</p> 
<p>Stage 2: Set the DIP switches</p>	
1	<p>Diagram: Wireless DGP address DIP switch settings</p> <div style="text-align: center;">  <p>(Address 0 not used)</p> <p>Address 0</p> </div> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 25%;"> <p>On → </p> <p>Address 1</p> </div> <div style="width: 25%;"> <p></p> <p>Address 2</p> </div> <div style="width: 25%;"> <p></p> <p>Address 3</p> </div> <div style="width: 25%;"> <p></p> <p>Address 4</p> </div> <div style="width: 25%;"> <p></p> <p>Address 5</p> </div> <div style="width: 25%;"> <p></p> <p>Address 6</p> </div> <div style="width: 25%;"> <p></p> <p>Address 7</p> </div> <div style="width: 25%;"> <p></p> <p>Address 8</p> </div> <div style="width: 25%;"> <p></p> <p>Address 9</p> </div> <div style="width: 25%;"> <p></p> <p>Address 10</p> </div> <div style="width: 25%;"> <p></p> <p>Address 11</p> </div> <div style="width: 25%;"> <p></p> <p>Address 12</p> </div> <div style="width: 25%;"> <p></p> <p>Address 13</p> </div> <div style="width: 25%;"> <p></p> <p>Address 14</p> </div> <div style="width: 25%;"> <p></p> <p>Address 15</p> </div> </div>

Continued on next page

Procedure (continued)

Each Wireless DGP connected to the Alliance System databus **must** identify itself to Alliance System panel with its own address, set with the DIP switches on the DGP. The diagram shows the DIP switch settings for **15 possible Wireless DGP addresses**. Address 0 is a factory test setting — don't use it.

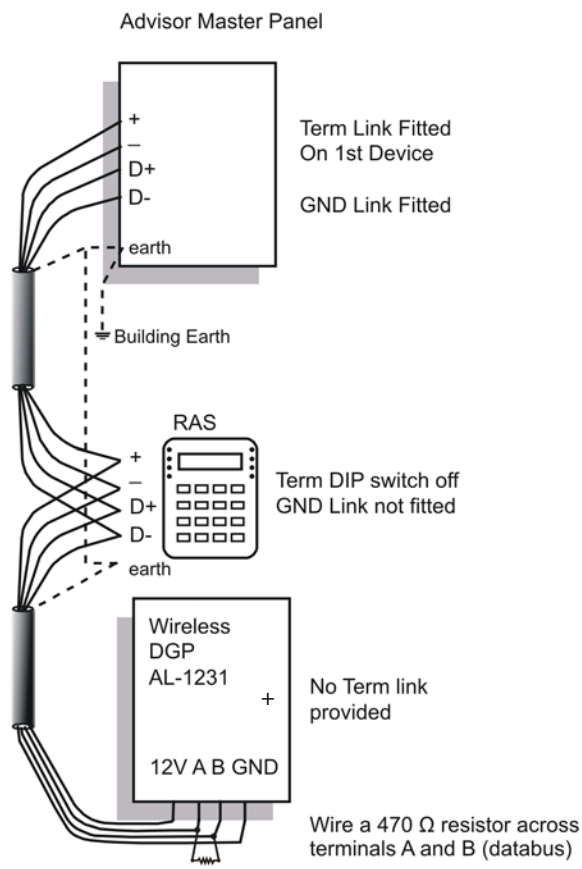
Important note: Before adding a new Wireless DGP to an Alliance system with existing DGPs, check that the Wireless DGP at the preceding address is not programmed for more than 32 zones, i.e., if Wireless DGP 1 is programmed for 32 zones it uses the 1st 16 zones for Wireless DGP 1 *and* 2nd 16 zones for Wireless DGP 2. Therefore don't poll Wireless DGP address 2.

Example: DGP 1 was installed six months ago with 32 zones. Adding Wireless DGP 2 today and activating sensors for zones 33-48 **will create confusing event messages**. Instead, add today's Wireless DGP as Wireless DGP 3.

- 2 Replace the plastic cover. Make sure the cover tamper switch extension spring is in place on the tamper switch.

Stage 3: Connect the Wireless DGP to the Alliance System databus - Power and Communication Connections


Wiring Diagram:
Single Wireless DGP wired directly to the Alliance system LAN connection.



Continued on next page


Procedure (continued)

Databus wiring connection notes

Databus connection wiring:	
+12	<ul style="list-style-type: none"> Positive connection to the databus 12 V DC supply or remote auxiliary power supply Max. current drawn by the Wireless DGP is 30 mA Max. voltage is 13.8 V
A	<ul style="list-style-type: none"> RS485 Data +
B	<ul style="list-style-type: none"> RS485 Data –
GND	<ul style="list-style-type: none"> Ground connection to the databus 12 V DC supply or auxiliary power supply.
<ul style="list-style-type: none"> The AL-1231 Wireless DGP is not fitted with a databus termination link. Use a 470 Ω ¼ watt resistor if the unit is either the first or last unit on the databus. The recommended databus cable is Belden 8723, 2-pair twisted, shielded data cable. The maximum recommended databus length is 1100 feet (335 m) when one or more AL-1231 Wireless DGP is connected The shield of each length of data cable is normally connected to the system earth at one end only. The AL-1231 Wireless DGP is not fitted with an earth terminal. The Earth terminal of all other devices in the system fitted with earth terminals must be connected properly to one common earth point via a separate earth wire run with the databus to the panel. The separate earth wire must be at least 0.01 inches (2.5 mm²). We recommend a heavier gauge for long cable runs. Wiring must be installed in accordance with local guidelines. 	
Stage 4: Power up the AL-1231 and the panel	
1	Verify that all wiring to the panel and Wireless DGP is correct.
2	Connect the Alliance System battery and AC power pack.
3	Check the Wireless DGP status LED (center of the DGP's front cover) is ON.
<p> TIP: Rx (Receive) and Tx (Transmit) LEDs aren't provided on the Wireless DGP. If the Wireless DGP LED is not ON, disconnect power and see the troubleshooting notes below.</p>	
Stage 5: Test the DGP Receiver	
1	Activate a sensor (Alarm or Tamper) and check that the DGP status LED flashes about eight times for each activation.
Stage 6: Program the Wireless DGP into the panel	
1	At the panel RAS keypad: press * [MENU] > Key in the installer code [1278] > press [19] > press [ENTER] > press [4] > press [ENTER] and the RAS screen will display:
<div style="border: 1px solid gray; border-radius: 10px; padding: 10px; width: fit-content; margin: 0 auto;">Poll DGP:</div>	

Continued on next page

Databus wiring connection notes (continued)

2	<p>Key in the address of the Wireless DGP ('1' in this example), and then press [ENTER]. The screen will display:</p> <div data-bbox="565 394 1024 506" style="background-color: #e0e0e0; padding: 5px; border: 1px solid #ccc;"> <p>1, 2: Poll DGP:</p> </div> <p> TIP: A comma after the 1 indicates that DGP 1 is polling successfully, and the colon after the 2 indicates that DGP 2 is offline or not connected. Press [* MENU] to update the menu.</p>
3	<p>Press [# ENTER]. You'll be prompted to set the DGP type:</p> <div data-bbox="565 701 1024 812" style="background-color: #e0e0e0; padding: 5px; border: 1px solid #ccc;"> <p>Set DGP type DGP no:</p> </div> <p>Key in the address of the Wireless DGP ('1' in this example), and then press [ENTER].</p>
4	<p>The RAS screen will display:</p> <div data-bbox="565 953 1024 1064" style="background-color: #e0e0e0; padding: 5px; border: 1px solid #ccc;"> <p>Standard Type:</p> </div> <p>Key in [3] to select the Wireless DGP type, and then press [#ENTER].</p>
5	<p>The RAS screen will display:</p> <div data-bbox="565 1205 1024 1316" style="background-color: #e0e0e0; padding: 5px; border: 1px solid #ccc;"> <p>Wireless DGP (433 MHz) Type:</p> </div> <p>Press [# ENTER] to exit.</p>
Stage 7: Testing Receiver Performance	
1	Program sensors into the DGP as per programmers' guide.
2	Check that the RF Noise level is within limits (see page 35) the DGP may need to be relocated if the RF noise floor is too high.
3	Check that the signal strength of each sensor is within limits (see page 33) If a sensor signal strength is too low, the sensor may need to be relocated or a 319.5 MHz Repeater or an additional AL-1231 DGP installed closer to the sensor

Installation Troubleshooting

Problem	Action/Solution
<p>The Wireless DGP module status LED stays off when power is applied.</p>	<ul style="list-style-type: none"> • Check for incorrect wiring connections. • Make sure the Alliance System Panel is powered correctly. • Measure Wireless DGP DC power with a multimeter. (Should be 13.8 V DC). • If the LED still remains off, replace the Wireless DGP module.
<p>The Wireless DGP module status LED stays lit but doesn't flash when wireless devices are activated.</p>	<ul style="list-style-type: none"> • Check Wireless DGP antenna connections • Check for Wireless DGP antenna proximity to metal obstructions such as ducting or AC wiring. • Make sure the sensor transmitters are the correct frequency, that is, 319.5 MHz • If LED still doesn't flash, replace the DGP.
<p>The Wireless DGP status LED stays lit and flashes when wireless devices are activated, but Alliance System doesn't respond</p>	<ul style="list-style-type: none"> • Check that DIP switch address 0 is not selected on the DGP. • Check Wireless DGP databus connections. • Check that each Wireless DGP connected to the databus has a unique address. • Check that the Wireless DGP is being polled by (Alliance System Menu 19 > 4.) • Check that the Transmitter sensor is programmed into the Wireless DGP See Programming Guide • If the Alliance system still doesn't respond, try replacing the Wireless DGP module.

Programming Topics

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Checking the State of a Zone (Panel menu)	36

Introduction

Before you start

- Read the Wireless DGP installation guide
 - Before starting programming set the Wireless DGP address, and poll the Wireless DGP to check it communicates with the Alliance System panel.
 - Enter all data at the RAS keypad.
-

✂ Important tips to avoid problems after installation!!

1. To avoid problems, just after installation program the **database size** first (16 or 32 zones, see page 29).
2. Before adding a new Wireless DGP to a system with an existing DGP, **always** check which zones the existing Wireless DGP is using; that is: is it using 32 zones, including the zones for the Wireless DGP you're about to add?

Example: Wireless DGP 1 was installed six months ago with 32 zones. Adding Wireless DGP 2 today and activating sensors for zones 33-48 **will create confusing event messages**. Instead, add today's new Wireless DGP as Wireless DGP 3.

Operating mode

The Wireless DGP has two possible operating modes: **extended** and **standard**.

Extended mode:

- Alliance System panel firmware version AL-40xx.04.05.10 and later required.
- GE Interlogix two and four-button fobs can be used for arm/disarm functions and to control relays.
- All 16 or 32 zones are available.

Standard mode:

- Fewer features than extended mode. **Do not use.**
-

Installation programming summary

1. Program a new Wireless DGP into the Alliance System
 2. Program a repeater if one is used
 3. Program the Wireless DGP database size (max. number of zones)
 4. Program the sensors or fobs
 5. Complete any other programming required.
-

Selecting the Remote Wireless DGP Menu (Panel menu)

Introduction You must select the remote Wireless DGP programming menu using the RAS keypad.

Procedure

Step > Action

Step 1: At the RAS Keypad > press [***MENU**] > key in [**Installer's code**] > then [**ENTER**] key in [**19**] > then [**ENTER**] to access installer's menu > key in [***MENU**] then [**ENTER**] for advance options and key in [**28**] > then [**ENTER**] and the keypad will display:

Remote Type: 1-DGP, 2-RAS
Type No: __

Step 2: Key in [**1**] for Remote Type Wireless DGP > press [**ENTER**] and the RAS will display:

Remote DGP Setup:
DGP No: __

Step 3: Key in the number of the Wireless DGP (same as DIP switch number for the DGP) > press [**ENTER**]. The RAS will identify the DGP and the firmware version.

GE Interlogix AL1231.VXX
0-Exit Menu: __

Programming a Sensor into the Wireless DGP (DGP menu 1)

Introduction

Each sensor must be programmed into the Wireless DGP database via an Alliance System RAS keypad. In this procedure **it's assumed** the:

- Sensor you are programming requires only one zone
- The DIP switch address for the Wireless DGP is correct (See page 8.)
- The DGP's database size have been correctly selected and programmed (see page 29)
- Sensors are physically installed or mounted
- The repeater has been installed and programmed if required. (See pages 38 and 16.)

This section also lists the sensor activation switches, Wireless DGP zone ranges and Contact ID error codes. Programming **fobs** is described on page 24.

Procedure

Step > Action

Step 1: At the RAS keypad: press [* **MENU**] > key in [**install code**] > press [# **ENTER**] > key in [**19**] > press [# **ENTER**] > press [* **MENU**] and key in [**28**] for the advanced menu > press [# **ENTER**] and the RAS will display:

Remote Type: 1-DGP, 2-RAS
Type No: __

Step 2: Key in [**1**] for Wireless DGP > press [**ENTER**] and the RAS will display:

Remote DGP Setup:
DGP No: __

Step 3: In this example the Wireless DGP's no. or address is **1**, as set by the Wireless DGP DIP switch. Key in [**1**] > press [**ENTER**]. The RAS will identify the DGP:

GE Interlogix AL-1231.Vxx
0-Exit Menu:

Step 4: Key in [**1**] > press [**ENTER**] for the first DGP menu option. The first zone will always appear. Asterisks **** next to the zone number indicate an available zone, as shown in the RAS display below:

Program (17-32): 17 ****
Type No: __

At this point you can:

- Program an empty zone
 - Move to a specific zone by typing in the number and pressing [**ENTER**].
 - Delete the zone (see page 27).
-

Continued on next page

Programming a Sensor into the Wireless DGP (DGP menu 1), Continued

(continued)

Step 5: (In this example, a PIR is being programmed for DGP zone 17.)

Activate the sensor. (See Table 1 below.)

Two beeps sound when the DGP receives the signal from the sensor.

If **seven beeps** sound, the sensor was already in the database. Once the DGP zone has been updated with the new sensor, you'll be prompted to activate the next zone or exit:

Program (17-32): 18 *****

0-Exit: __

Other options: To see the zone you've just programmed, key in its number (in this case 17) > press [# ENTER]. The RAS will display the DGP number and a short name (for example PIR) to identify the sensor. **To move to the next zone**, key in the zone number you need, e.g. 20.

Program (17-32): 17 PIR

0-Exit: 20

Table 1: Program Activation Switch

This table lists how to activate the programming switch

Sensor type	How to activate each sensor's programming switch
2-Button Fob	Press and hold the Lock and Unlock buttons together until the Fob's LED flashes
4-Button Fob	Press and hold the Lock and Unlock buttons together until the Fob's LED flashes
Door Window Sensor (DWS)	Remove front cover (Tamper)
Freeze Sensor	Remove the top cover to operate tamper
Glassbreak or Universal Transmitter	Remove front cover to operate tamper
Panic Button	Press the panic button
PIR	Remove the rear cover to operate tamper
Rate-Of-Rise (Thermal Detector)	Press switch near the rear of the 9-volt battery
Repeater	Open Tamper connector near battery terminals
Shock Sensor	Press rear tamper with cover on. Release rear tamper.
Smoke Detector	Remove detector from ceiling mounting base to operate tamper.


Continued on next page

Programming a Sensor into the Wireless DGP (DGP menu 1), Continued

**Table 2: DGP
input ranges**

This table lists the DGP's ranges in extended mode for 16 and 32 zone databases.

Wireless DGP Address	16-Zone Database	32-Zone Database
1	17 to 32	17 to 48
2	33 to 48	33 to 64
3	49 to 64	49 to 80
4	65 to 80	65 to 96
5	81 to 96	81 to 112
6	97 to 112	97 to 128
7	113 to 128	113 to 144
8	129 to 144	129 to 160
9	145 to 160	145 to 176
10	161 to 176	161 to 192
11	177 to 192	177 to 208
12	193 to 208	193 to 224
13	209 to 224	209 to 240
14	225 to 240	225 to 256
15	241 to 256	241 to 256

TIP:  If the DGP 1 is been programmed with 32 zones, then the next 16 zones (33-48) normally belonging to DGP 2 will now belong to DGP 1 and the RAS display would show 17-48.

**Table 3:
DGP status**

This table lists the DGP status events, Ademco Contact ID and SIA codes.

DGP Event	History	Ademco Contact ID		SIA		
		Small	Large	Small	Large	
DGP Hardware Tamper	Open	Yes	E145 00 C006	E145 00 Czzz	TA 0	TA 301-316
	Closed	Yes	R145 00 C006	R145 00 Czzz	TR 0	TR 301-316
DGP CPU Restart	Yes	Yes	E305 00 C003	E305 00 Czzz	–	RR 301-316
DGP DIP Switch Change (16/32 zones)	Yes	–	–	E304 00 Czzz	–	–
RF Jamming Fault	Yes	Yes	E344 00 C020	E344 00 Czzz	XQ 0	XQ 301-316
RF Jamming Restored	Yes	Yes	R344 00 C020	R344 00 Czzz	XH 0	XH 301-316
Symbols used above						
zzz	Refers to the DGP address. C065 to C079 are DGP addresses 1 to 15. Example: Contact ID message C066 refers to DGP 2.					

Programming a Sensor with Multiple Zones (DGP menu 1)

Introduction

Some sensors can be connected to more than one zone. A Door Window Sensor (DWS) for example can use two zones. In the example below, the first zone for the door reed switch under the DWS sensor cover is programmed. Then the second zone, the DWS window tapes are programmed.

- This procedure is slightly different to programming a single zone, even though the starting point in the RAS DGP menu is the same. The difference is that [# ENTER] is pressed when asterisks are displayed, instead of activating the sensor immediately.
- If the DGP zone database doesn't have enough spare zones (e.g. the database has one spare zone left, but two are required) the system will accept any zones it has room for, in this case, the first, and ignore the rest.

Programming Fobs: For instructions for programming fobs see page 24.

Procedure

Step > Action

Step 1: At the RAS press [* MENU] > key in [install code] > press [# ENTER] > key in [19] > press [# ENTER] > press [* MENU] and key in [28] for the advanced menu > press [# ENTER] > key in [1] > press [# ENTER] > key in 1 to 15 [DGP number] > press [# ENTER].

Step 2: Key in [1] at the Wireless DGP menu > press [# ENTER]. The first free zone (with asterisks ***** after the zone number indicate a free zone) will display, and the zone database size and zone range in brackets, here as (17-32)

```
Program (17-32): 17*****  
0-Exit:__
```

Step 3: Press [# ENTER] and the RAS will display: (The default is 1 zone.)

```
How many zones 1  
(1-4):__
```

Step 4: For this example, key in [2] (the DWS has 2 zones) > press [# ENTER]. The RAS will display:

```
How many zones 2  
(1-4):__
```

Continued on next page

(continued)

Procedure

Step > Action

Step 5: Press [# **ENTER**] and the RAS will display.

Press program switch
#-Exit

Step 6: Now activate the sensor's **programming input** and two beeps will sound. The RAS will display the first available zone:

Program (17-32): 19 ****
0-Exit:___

Options: To go back and check inputs just programmed (i.e. inputs 17-18), key in [17] > press [# **ENTER**]. The RAS will display the details for the previously programmed zone:

Program (17-32): 17 DWS 1
0-Exit:___

Press * [MENU] to see the details for this sensor's second zone, and the RAS will display:

Program (17-32): 18 DWS 2
0-Exit:___

Deleting a Wireless Sensor Zone (DGP menu 1)

Basic concepts for deleting or changing sensors

- **Deleting a wireless sensor zone** removes it from the DGP zone database.
 - **Changing a wireless sensor zone:** To change the details of a zone, the zone must be deleted first, and then added as a new wireless sensor zone.
 - **Changing or deleting Fobs:** Read more about the separate procedures for fobs, on page 27.
-

Procedure

Step > Action

Step 1: At the RAS press [* **MENU**] > key in [**install code**] > press [# **ENTER**] > key in [**19**] > press [# **ENTER**] > press [* **MENU**] and key in [**28**] for the advanced menu > press [# **ENTER**] > key in [**1**] > press [# **ENTER**] > key in 1 to 15 [**DGP number**] > press [# **ENTER**].

Step 2: Key in [**1**] > press [# **ENTER**] and then key in the number of the zone you wish to delete > press [# **ENTER**]. The RAS will display the zone's details. (In this example we're deleting zone number 19 from the DGP database.)

```
Program (17-32): 19 DWS 2
0-Exit:__
```

Step 3: To delete this DWS at zone 19 (this sensor actually uses two zones, 18 & 19), press [# **ENTER**] and the RAS will display:

```
Delete Device?
* - Yes # - No
```

Step 4: Press * [**MENU**] key to delete the DWS. If the sensor uses more than one zone (e.g. in this case it uses zones 18 & 19), any other zone it uses is automatically cleared from the DGP zone database. Asterisks will appear indicating the zone has been cleared and is available.

```
Program (17-32): 19 ****
0-Exit:__
```

Viewing a Wireless Sensor's ID Number (DGP menu 2)

Introduction

Every wireless sensor has a unique factory programmed number, visible in the RAS. Use this procedure to identify the sensor's ID number if required or to identify the type of sensor.

Procedure

Step > Action

Step 1: At the RAS press [* MENU] > key in [install code] > press [# ENTER] > key in [19] > press [# ENTER] > press [* MENU] and key in [28] for the advanced menu > press [# ENTER] > key in [1] > press [# ENTER] > key in 1 to 15 [DGP number] > press [# ENTER].

Step 2: Key in [2] > press [ENTER]. The RAS screen below will prompt you for the input number:

```
Zone number (17-32)?  
0-Exit:__
```

Step 3: Key in the input number you wish to view the ID number for, in this case [17] > press [ENTER]. The RAS will display the sensor's unique, factory programmed ID number:

```
17: 4BC22F: PIR  
*- Prev 0- Exit:__
```

Asterisks ***** will appear instead of an ID number if the zone (in this example zone 17) isn't programmed:

```
17: 0:*****  
*-Prev 0-Exit:__
```

Viewing the Zone Sensor Status (DGP menu 3)

Introduction

You can check the status of a zone input sensor. Depending on the sensor type, there are six possible sensor warning messages:

Warning	Description
Normal	Operating normally
Alarm	Zone in alarm
Tamper	Tamper
Supervsn	Supervision Fail. See Supervision Options on page 31.
Batt	Low battery warning
Dirty	Smoke detectors only

Procedure

Step > Action

Step 1: At the RAS press [* MENU] > key in [install code] > press [# ENTER] > key in [19] > press [# ENTER] > press [* MENU] and key in [28] for the advanced menu > press [# ENTER] > key in [1] > press [# ENTER] > key in 1 to 15 [DGP number] > press [# ENTER].

Step 2: Key in [3] for the input status menu.

Input number (17-32)?
0-Exit:__

Key in the input number required (in this case 17 is used) > press [# ENTER]. The RAS will display one or more of the six possible conditions below depending on the sensor type. See the table above for details.

17: Normal
*-Prev, 0-Exit

17: Alarm
*-Prev, 0-Exit

17: Tamper
*-Prev, 0-Exit

17: Batt
*-Prev, 0-Exit

17: Supervsn
*-Prev, 0-Exit

17: Dirty
*-Prev, 0-Exit

Programming Users/Relay Fobs (DGP menu 4)



Introduction

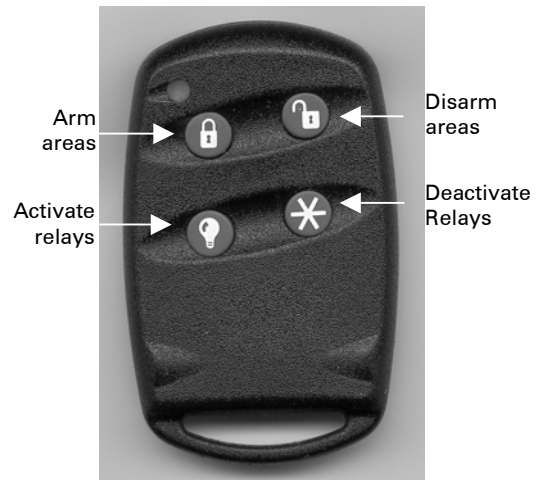
Two and four-button fobs are programmed in a separate part of the DGP zone database. Fob button sets can be programmed in five combinations of relays and users.

- A **user** represents a person or alarm group (with automatic access to arm and disarm allocated areas), and, is identified as a user number from 1 to 65,535.
 - **Relays** activate and de-activate devices (such as garage doors or lights) and can be a number from 1 to 255.
 - This option is only available in extended mode.
-

Fob sets and buttons explained

Fob buttons are arranged in two **sets** (or rows):

- **Set 1:** buttons 1 & 2. 
- **Set 2:** buttons 3 & 4. 



Fob sets can be programmed as:

- 2 users (set 1=user 1, set 2 = user 2)
- 2 relays (set 1= relay 1, set 2 = relay 2)
- 1 user and 1 relay (set 1= user 1, set 2 = relay 1)
- 1 user (set 1= user 1, set 2 = not used)
- 1 relay (set 1= relay 1, set 2 = not used)

TIPS:

- ☞ Once a fob button is programmed as a user to arm areas or to activate relays, the second button in the set is available to disarm the area or de-activate the relay.
 - ☞ When programming a 1-set, 2-button fob, skip the menu option for fob set 2, by pressing [ENTER].
-

Continued on next page

Procedure

Step > Action

Step 1: At the RAS press [* MENU] > key in [install code] > press [# ENTER] > key in [19] > press [# ENTER] > press [* MENU] and key in [28] for the advanced menu > press [# ENTER] > key in [1] > press [# ENTER] > key in 1 to 15 [DGP number] > press [# ENTER].


Step 2: Key in [4] > press [# ENTER] and the RAS will display:

```
Fob No.(1-16)
0-Exit:___
```

 **TIP:** If the fob has already been programmed, the RAS will prompt you to delete the fob. Read more about deleting fobs on page 27.

Step 3: Key in [1] and press [# ENTER] to program the first fob input. The RAS will display:

```
Press Program Switch
#-Exit
```

Step 4: Press both top fob buttons until the fob LED  flashes to initiate the fob. The display will give two beeps and show:

```
1: 1-User, 2-Relay
Option:___
```

Step 5: You can now program button set one (top buttons 1 and 2) as a user or a relay. If you wish to program a user, key in [1], if you wish to program relays, key in [2]. (In this example we're programming the top fob set as a user.) > press [# ENTER], the RAS will display:

```
Button Set 1
User No:___
```

Step 6: Key in the **user's number** > press [# ENTER], and the display will change to the second set of fob buttons — whether there are one or two sets to be programmed. If there's one set, press [# ENTER] to bypass the options for the second set and end the programming for this fob. Otherwise, continue the programming for the second set as described in step 7.

```
2: 1-User, 2-Relay
Option:___
```

Continued on next page

(continued)

Procedure

Step > Action

Step 7: Decide if you want the second set to be a user or relay. In this case it is a relay, so key in [2] and the RAS will display:

Button Set 2
Relay No:___

Step 8: Key in the relay number and press [# **ENTER**]. The data for two sets of fob buttons is now programmed in the **DGPs fob database**. The RAS will display:

Fob No. (1-16)
0-Exit:___

To add another fob, simply restart the procedure at **Step 1** above.

Deleting or Changing the Details of a Fob (DGP menu 4)

Deleting and changing fob details

To **delete** a fob follow the directions below.
To **change** the details of a fob, *delete* the fob first and *then* re-enter details as a new fob. (See previous section on programming fobs.)

Procedure

Step > Action

Step 1: At the RAS press [* **MENU**] > key in [**install code**] > press [# **ENTER**] > key in [**19**] > press [# **ENTER**] > press [* **MENU**] and key in [**28**] for the advanced menu > press [# **ENTER**] > key in [**1**] > press [# **ENTER**] > key in 1 to 15 [**DGP number**] > press [# **ENTER**].

Step 2: Key in [**4**] > press [# **ENTER**], and then key in the number of the fob you wish to delete. If the fob exists in the database the RAS will display:

Delete Fob?
*-Yes, #-No

Press [* **MENU**] to delete the fob or press [# **ENTER**] to return to the fob-programming screen.

All elements of the fob will be cleared from the database. Press [**0**] (zero) to exit the menu.

Viewing Fob User/Relay Numbers (DGP menu 5)

Introduction

This function allows you to view the user and relay details for any fob. This option is only available in extended mode.

Procedure

Step > Action

Step 1: At the RAS press [*** MENU**] > key in [**install code**] > press [**# ENTER**] > key in [**19**] > press [**# ENTER**] > press [*** MENU**] and key in [**28**] for the advanced menu > press [**# ENTER**] > key in [**1**] > press [**# ENTER**] > key in 1 to 15 [**DGP number**] > press [**# ENTER**].

Step 2: Key in [**5**] > press [**# ENTER**] and the RAS will display the details for fob number 1, for example, FBC7E5 is the fob's factory programmed ID number.

1: User 65000, Relay 100, FBC7E5
*Prev, 0-Exit

Step 3: To see the next fob, press [**ENTER**] and the details for fob two could show:

2: Fob Not Used
*-Prev, 0-Exit

or

2: Relay 20, Relay 200,FD7012
*-Prev, 0-Exit

or

2: ****, User 300, FC4A5
*-Prev, 0-Exit

Press [*** MENU**] key to view the previous fob or press [**0**] (zero) to exit.

Changing the Database Size (DGP menu 6)

Introduction

- The Wireless DGP zone database can be set up as either a 16-zone or 32-zone database.
-

Procedure

Step > Action

Step 1: At the RAS press [* MENU] > key in [install code] > press [# ENTER] > key in [19] > press [# ENTER] > press [* MENU] and key in [28] for the advanced menu > press [# ENTER] > key in [1] > press [# ENTER] > key in 1 to 15 [DGP number] > press [# ENTER].

Step 2: Key in [6], and press [ENTER], the RAS will display:

16 Zones
*_Change, 0-Exit

or

32 Zones
*_Change, 0-Exit

Step 3: Press [* MENU] to change the database size.

Programming the Supervision Time (DGP menu 7)

Introduction

Program the supervision time to control how often the Wireless DGP checks the sensor is communicating and in range of the Wireless transmitter. If a sensor fails to answer the Wireless DGP in the set time, an alarm event is created.

- Two and four-button **fobs** don't transmit supervision signals.
 - Supervision time cannot be set for individual sensors, only for individual Wireless DGPs.
-

Procedure

Step > Action

Step 1: At the RAS press [* **MENU**] > key in [**install code**] > press [# **ENTER**] > key in [**19**] > press [# **ENTER**] > press [* **MENU**] and key in [**28**] for the advanced menu > press [# **ENTER**] > key in [**1**] > press [# **ENTER**] > key in 1 to 15 [**DGP number**] > press [# **ENTER**].

Step 2: Key in [**7**] > press [**ENTER**] and the RAS will display (default):

24 hours
(2-32):__

- The maximum is 32 hours.
- The minimum is 2 hours.
- The factory **default** is 24 hours.

Key in [**0**] (zero) > press [# **ENTER**] to exit.

Note: For technical reasons, the supervision time can be up to one hour more than the selected setting.

Programming the Supervision Options (DGP menu 8)

Introduction

- The supervision function monitors sensors at the interval set up in the previous procedure. Supervision can be switched on or off, disabled by the first relay of the Wireless DGP (Relay 17 for DGP 1) to stop unwanted supervision fail messages. The factory default for supervision is *on*.
- Two and four-button **fobs** do not transmit a supervision signal: when fobs are programmed, they automatically set supervision to "off".

For a zone supervision to "fail" and an alarm event to be created:

- The sensor has been successfully programmed as a zone, *and*
 - Supervision is enabled, *and*
 - The supervision time has expired.
-

Procedure

Step > Action

Step 1: At the RAS press [* MENU] > key in [install code] > press [# ENTER] > key in [19] > press [# ENTER] > press [* MENU] and key in [28] for the advanced menu > press [# ENTER] > key in [1] > press [# ENTER] > key in 1 to 15 [DGP number] > press [# ENTER].

Step 2: Key in [8] > press [Enter] and the RAS will display:

```
Input number (17-32)?
0-Exit:__
```

Step 3: To check or change the supervision for the first DGP input, key in the number of the zone, in this case 17, and press [Enter]. One of the RAS screens below will be displayed. Supervision 'on' (the first) is the default.

- Press [* MENU] to change/move through the supervision options or,
- Press [# ENTER] to advance to the next zone or,
- Key in [0] (zero) > press [# ENTER] to exit the menu.

```
17: Supervsn On
*-Change 0-Exit
```

Supervision is on for zone 17.

```
17: Relay 17 Disabled
*-Change 0-Exit
```

Relay 17 disables (mask) supervision timer to stop unwanted tamper and error messages for zone 17.

```
17: Supervsn Off
*-Change 0-Exit
```

Supervision switched off for zone 17.

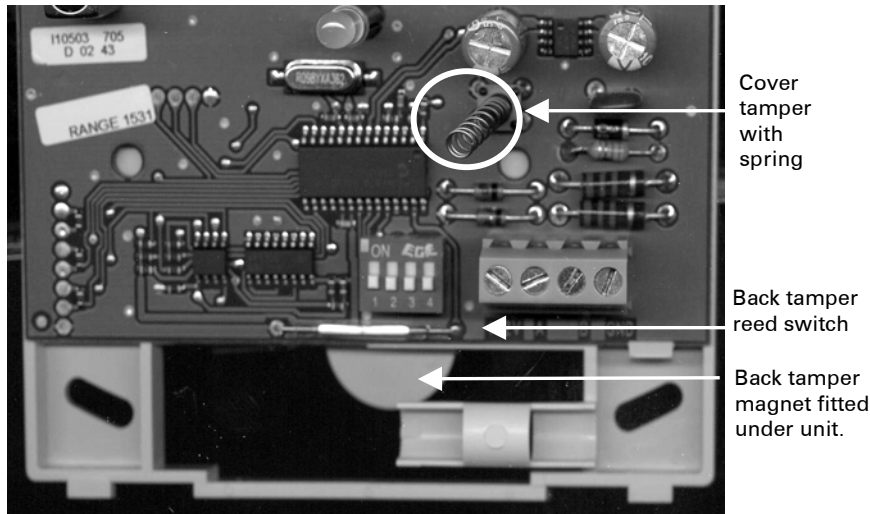
Programming the Tamper Switch Options (DGP menu 9)

Cover and back tamper switches

The DGP has two tamper switches:

- The DGP **cover tamper** (see diagram below) is always enabled.
- The **back tamper** is a magnetically operated reed switch, and is disabled by default. The back tamper magnet is mounted under the Wireless DGP's DIP switches.

The cover tamper must be installed to clear the DGP tamper.



Clearing the tamper: When the back tamper is enabled, both the cover tamper switch and the back tamper switch must be closed to reset the Wireless DGP tamper.

Procedure

Step > Action

Step 1: At the RAS press [*** MENU**] > key in [**install code**] > press [**# ENTER**] > key in [**19**] > press [**# ENTER**] > press [*** MENU**] and key in [**28**] for the advanced menu > press [**# ENTER**] > key in [**1**] > press [**# ENTER**] > key in 1 to 15 [**DGP number**] > press [**# ENTER**].

Step 2: To enable the wall tamper, key in [**9**] and press [**# ENTER**]. The RAS will display:

Wall Tamper Off
*-Change 0-Exit

Step 3: Press [*** MENU**] to change the option and the RAS will display:

Wall Tamper On
*-Change 0-Exit

Testing the Wireless Sensor Signal Strength (Installer Sensor Test) (DGP menu 10)

Introduction

- To ensure the sensor is installed within an effective range of the AL-1231 or repeater, the installer can check the signal strength of a wireless sensor's last event transmission on the RAS screen.
 - If a sensor is communicating effectively, it will display a value of 15 dB or more.
 - Two beeps will sound for each message received.
 - **dB range:** The dB range for the Wireless DGP is 0 to 100.
-

Procedure

Step > Action

Step 1: At the RAS press [*** MENU**] > key in [**install code**] > press [**# ENTER**] > key in [**19**] > press [**# ENTER**] > press [*** MENU**] and key in [**28**] for the advanced menu > press [**# ENTER**] > key in [**1**] > press [**# ENTER**] > key in 1 to 15 [**DGP number**] > press [**# ENTER**].

Step 2: Key in [**10**], press [**ENTER**] and the RAS will display:

Input Number (17-32):
0-Exit:___

Step 3: Key in the number of the zone and press [**ENTER**] to view the signal strength. If the zone isn't programmed or if the Wireless DGP has just been powered up, a signal will not be received and the RAS will display 0 dB:

17: 0 dB
*-Prev 0-Exit

When a successful signal is received (in this example from the sensor at zone 17), the RAS screen will display the signal strength in dBs and sound two beeps. For reliable transmission, the sensor's signal strength must be **15 dB or more**.

17: 27 dB
*-Prev 0-Exit

Tip:


- If the signal is zero, and the zone is correctly set up, manually activate the tamper or the alarm on the sensor to create a signal and check the signal strength again.
-

Resetting the Wireless DGP to the Factory Defaults (DGP menu 12)

Introduction

This option allows you to reset the Wireless DGP to its factory default settings (extended mode, 16 zones). Resetting clears the entire Wireless DGP database. See the table below for default details.

Procedure

 *Tip: this is installer or advanced menu 12*

Step > Action

Step 1: At the RAS press [* **MENU**] > key in [**install code**] > press [# **ENTER**] > key in [**19**] > press [# **ENTER**] > press [* **MENU**] and key in [**28**] for the advanced menu > press [# **ENTER**] > key in [**1**] > press [# **ENTER**] > key in 1 to 15 [**DGP number**] > press [# **ENTER**].

Key in **12**, press [**ENTER**] and the RAS will display:

Set Factory Defaults?
*- Yes #-No

To clear the entire Wireless DGP database and return it to the factory default, press * [**MENU**].

Table 4: DGP factory settings

This table lists the default Wireless DGP factory settings.


Menu option number and description	Factory default setting
Menu 1, DGP Zones	All Zones Clear
Menu 1, Zone number	Zone 1 for the DGP (See Table 2 on page 18)
Menu 4, Fobs	All Fobs Clear
Menu 6, Database size	16 Zones
Menu 7, Supervision Time	24 hours
Menu 8, Supervision Options	All Zones set to Supervision On
Menu 9, Wall Tamper	Off

Checking Receiver RF Noise Level (DGP menu 13)

Introduction

Electromagnetic noise or Radio Frequency (RF) noise level is a major consideration when finding the best location for a wireless receiver. To assist with this process, the Wireless DGP can indicate on the RAS display the noise received. Remember RF noise may be transmitted intermittently from passing cars with noisy ignitions, electric machinery under load or even household appliances.

The **optimum** location for the receiver is where the displayed noise value is minimal. In a good environment, expect values in the range of around 10 dB to 20 dB. In a bad environment, expect values greater than 30 dB.

 **TIP:** Reception depends on a number of factors, and these are infinite. To illustrate, reliable reception is much more likely in example 1 below than in example 2:

Example 1: You may have a high noise level, but due to the Wireless Sensor being in close proximity, the signal strength may be adequate for reliable operation.

Example 2: You may have a low noise level and weak signal from a distant wireless sensor.

Procedure

Step > Action

Step 1: At the RAS press [* MENU] > key in [install code] > press [# ENTER] > key in [19] > press [# ENTER] > press [* MENU] and key in [28] for the advanced menu > press [# ENTER] > key in [1] > press [# ENTER] > key in 1 to 15 [DGP number] > press [# ENTER].

Step 2: Key in [13] and press [ENTER]. The RAS will display the current noise received:

```
(0-100):17db
#-Exit
```

Step 3: Press [# ENTER] to exit

If the measurement confirms noise is too high; e.g. 40 dB, consider moving the receiver or using a repeater.

Checking the State of a Zone (Panel menu)

Introduction

When active, all Wireless DGP zones send wireless sensor information to the panel via the databus. The state of each zone can be checked. The panel sends the zone states and the Ademco Contact ID codes to the remote monitoring station for each Wireless DGP event type, shown in the tables below for both modes.

 **TIP:** All DGP zones can be checked here.

Procedure

Step > Action

Step 1: At the RAS press [*** MENU**] > key in [**install code**] > press [**# ENTER**] > key in [**12**]

Step 2: The screen will show:














Test Individual Zone
Zone no: __

Step 3: Key in the zone number you need to check, in this example **33**, and the RAS will display as below. Press [**Enter**] to move to, and check the next zone.

SEALED on 33
Press Enter

Table 5:
Extended mode
reporting events

This table lists the zone states and event codes for **extended** mode.

Receiver/Sensor State	Zone State *	Ademco Contact ID		SIA	
		Small	Large	Small	Large
Sensor Not Programmed	Open	E383 xx Cyyy	E383 xx Cyyy	TA yyy	TA yyy
Sensor Programmed	Seal	R383 xx Cyyy 	R383 xx Cyyy 	TR yyy 	TR yyy 
Sensor In Alarm	Unseal	E130 xx Cyyy 	E130 xx Cyyy 	BA yyy 	BA yyy 
Sensor Restored	Seal	R130 xx Cyyy 	R130 xx Cyyy 	BR yyy 	BR yyy 
Sensor Tamper	Short	E383 xx Cyyy	E383 xx Cyyy	TA yyy	TA yyy
	Sealed	R383 xx Cyyy	R383 xx Cyyy	TR yyy	TR yyy
Sensor Supervision Fail	**	E381 yy Cyyy	E381 xx Cyyy	BZ yyy	BZ yyy
Supervision Restored	**	R381 yy Cyyy	R381 xx Cyyy	BJ yyy	BJ yyy
Sensor Low Battery	**	E384 yy Cyyy	E384 xx Cyyy	XT yyy	XT yyy
Battery Voltage Restored	**	R384 yy Cyyy	R384 xx Cyyy	XR yyy	XR yyy
Smoke Detector Dirty	**	E393 00 C000	E393 xx Cyyy	AS yyy	AS yyy
Detector Dirty Cleared	**	R393 00 C000	R393 xx Cyyy	AN yyy	AN yyy
Symbols used above					
*	Zone state refers to the state in the panel user menu 12-Test zone				
**	Zone state unaffected.				
xx	Area number 1 to 16				
yyy	Zone number 001 to 256				
	Refer to Alliance Programming Manual. Reporting Codes are definable in the Zone Database.				

Radio Frequency (RF) Jam Sensing

Introduction If the level of Radio Frequency (RF) noise is too high, messages sent from the sensors to the Wireless DGP are stopped. When the DGP detects a too-high RF noise condition, it also informs the monitoring station there is a problem.

How jam sensing works The Wireless DGP continuously monitors the level of RF noise that it receives. If the RF noise level stays too high for more than 30 seconds, the DGP will send an RF Jam message to the panel. The panel sends a SIA or CID "RF Interference" message to the Monitoring station. (See table 3 on page 18 for the event codes)

Alliance panel firmware AL-40XX.04.05.10 or greater is required for this feature to function correctly.

Adding a Repeater to Increase Sensor Coverage

Introduction

Repeaters provide wider and more reliable coverage for the Wireless DGP by re-transmitting signals in environments where the wireless sensor's normal range is restricted.

NOTE: The Repeater is not a UL Listed device.

How repeater self-monitoring works

- The Repeater monitors its hardware tamper input terminals on the repeaters PCB. The hardware tampers must be installed correctly and sealed for the sensor tamper condition from the Wireless DGP to restore.
- The Repeater checks its battery every 15 minutes. If the voltage falls below 10.2 V it transmits a Battery Low condition. The condition will be restored when the battery voltage rises above 11.0 V.
- The Repeater checks the AC supply and reports a fail if AC power is unavailable for more than 15 minutes.
- The repeater sends supervision messages to the Wireless DGP.

Installation Procedure

To install the repeater use the same procedure you used to program a sensor. See page 16. Ensure all Repeater DIP switches (1 to 8) are in the OFF position.

Repeater monitoring status

The Repeater transmits a number of status options. To monitor the status of the repeater, program it into the Wireless DGP database, one Wireless DGP per Alliance system, using the **same procedure as programming a wireless sensor**; i.e. activate the tamper input with the Wireless DGP in zone-programming mode. See the table below for the repeater monitoring states.

Table 6: Repeater monitoring states

This table lists the Repeater monitoring states and Ademco Contact ID error codes.

Repeater Function	State	Zone State	Section	Ademco Contact ID	SIA small	SIA large
Tamper	Tamper	Short	Yes	E383 xx Cyyy ☼	TAYYY ☼	TAYYY ☼
	Tamper Restored	Sealed	Yes	R383 xx Cyyy ☼	TRYYY ☼	TRYYY ☼
Battery Low	Battery Volts Low	**	Yes	E384 xx Cyyy ☼	XTYYY	XTYYY
	Battery Volts Restored	**	Yes	R384 xx Cyyy ☼	XRYYY	XRYYY
Mains Fail ****	Mains Failed	Unsealed	Yes	E140 xx Cyyy ☼ ***	UAYYY ☼	UAYYY ☼
(repeater only)	Mains Restored	Sealed	Yes	R140 xx Cyyy ☼ ***	URYYY ☼	URYYY ☼
Symbols used above						
**	Zone State unaffected					
***	Reporting code is definable in panel databases. The default is 140.					
****	Use the Alliance System user menu 12-Test Zone to check Repeater Mains Fail condition					
xx	Area number 1 to 16					
yyy	Zone number 001 to 256					
☼	See the AL-4017 Programming Manual. Reporting Codes are definable in panel zone database.					

Requesting Technical Support

Technical Support contact details

	<u>Sales</u>	<u>Technical Support</u>
Phone:	800-457-2556	800-648-7424
Fax:	503-691-7566	503-691-7568

Ordering Sensors, Fobs and Repeaters

Contact your local GE Interlogix supplier or contact sales at GE Interlogix for more information.

Table 7: Product ordering codes

Use these codes to order the products below.

Wireless DGP compatible sensor	Stock Code
1-button SAW keychain touchpad	60-707-01-95R
SAW door/window sensor	60-670-95R
Recessed micro door/window sensor	60-741-95
SAW PIR motion sensor	60-639-95R
Wireless ShatterPro glassbreak sensor	60-873-95
Water-resistant pendant panic sensor	60-578-10-95

FCC Compliance

This device complies with Part 15 of the FCC rules. Operation is subject to the following three conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.
3. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Specifications

**Table 8:
Technical
specifications**

Compatibility	<ul style="list-style-type: none"> • Alliance System Panel firmware AL-40xx.04.05.10 and above. • GE Interlogix 319.5 MHz (crystal and SAW) Learn Mode wireless sensors <p>Verified by UL as Compatible Devices:</p> <ul style="list-style-type: none"> • SAW door/window sensor 60-670-95R • Recessed micro door/window sensor 60-741-95 • SAW PIR motion sensor 60-639-95R • Water resistant pendant panic sensor 60-578-10-95 <p>Not verified by UL as Compatible Devices:</p> <ul style="list-style-type: none"> • 1-button SAW keychain touchpad, 60-707-01-95R • Wireless ShatterPro glassbreak sensor, 60-873-95
Wireless Zones	<ul style="list-style-type: none"> • 16 or 32 per Wireless DGP (Programmable)
Power required	<ul style="list-style-type: none"> • 12 V DC nominal (13.8 V Max) • 30 mA maximum
Storage Temperature	<ul style="list-style-type: none"> • -30° to 140°F (-34° to 60°C)
Operating Temperature	<ul style="list-style-type: none"> • 32° to 120°F (0° to 49°C)
Maximum Humidity	<ul style="list-style-type: none"> • 90% relative humidity, non-condensing
Wireless Signal Range	<ul style="list-style-type: none"> • 1500 feet (460 meters) nominal • 2000 feet (610 meters) typical open air • May vary with application
Dimensions	<ul style="list-style-type: none"> • Without antenna: (H x W x D): 5.2" (133 mm) x 4.1" (104 mm) x 1.0" (25 mm) • With antenna: H = 11.6" (296 mm)