Integration Note

Manufacturer:	Ademco
Model Number(s):	**VISTA–128FBP, VISTA–250FBP**
Core Module Version:	5.0 Build 620 or later
Comments:	
Document Revision Date:	8/6/2013

OVERVIEW AND SUPPORTED FEATURES

The **Ademco Vista 128FBP, 250FBP** are security panels that integrate with the **g!** system using an RS-232 serial connection. The panel requires the model 4100 SM serial interface module to enable the RS-232 communication between the **g!** system controller and the control panel.

Integration of the security system provides monitoring and control from any touch screen or computer both locally and remotely. Additionally, events occurring in the security system can trigger system commands in other sub-systems in the home. For example, a burglar alarm can turn all the lights on and send out email alerts.

THESE PANELS SUPPORT THE FOLLOWING FEATURES:

Arm – Disarm: Arm and disarm from the Viewer interface is supported for partition number 1 only. Status information is available for all partitions.

Zone Status: Zone status information is available for all zones (in any partition), and is properly shown in the Viewer. See exceptions below.

History View: The history view is properly supported on any Viewer.

Auto Zone and Partition Detection: After a zone has been faulted the **g!** system will automatically detect the zone number, partition number and zone name.

THESE PANELS DO NOT SUPPORT THE FOLLOWING FEATURES:

Zone Bypass: Zones cannot be bypassed from the **g!** interface, only from the Ademco keypads. In the Ademco panel zones can be configured to automatically bypass if they are faulted when arming the panel. Using this feature works well to overcome this limitation.

Auto Arm: Arming as a System Command from the Event Mapper is not supported with this panel.

Zone Status: Zone status information for entry and exit zones is **not communicated** to **g!** during entry and exit delays.

Entry/Exit Delay: This panel will not notify **g!** that it is in entry or exit delay, as a result entry/exit delay as a System Trigger or Condition and Announce Security Events is not supported with this panel.

Multiple Access Codes: Only one access code can be used to arm and disarm the panel from the **g!** interface.

Relays: The relays on the panel can **not** be controlled from the **g!** interface or the Event Mapper.

Panic Button: The **g!** interface cannot send a panic command to the Ademco panel.

BPE Panel: BPE Panels are not supported by Elan.

Any feature not specifically noted as supported should be assumed to be unsupported.

INSTALLATION OVERVIEW

1. Install the security system and program the panel for the RS-232 interface.   Connect J2 to the alarm control panel. Connect violet wire to #3 TDX on the 4100sm, Connect Red on J2 to #6 RDX. Connect aux power + from alarm panel terminal 11 to #8 + Pwr and aux power – alarm terminal 12 to #7 –Pwr. Do not extend the flying lead from J2 as it can not be extended.

2. Run a Cat5 wire from the **g!** system to the security panel and test the cable. Max wire run is 25 feet from the 4100sm to the com port.

3. Test the security panel, zone sensors and keypads for functionality.

4. Connect the **g!** system to the panel electrically. This step requires a DB-25 Male to DB-9 Female adapter that is not included in the Ademco / First Alert connector kit.

5. On the security tab in the Configurator add a communication device and security panel and confirm communication between the panel and the **g!** system. See **Configuration Details** below.

6. Fault all the zones in the system. Faulting the zone sends a message to the **g!** system which then automatically adds the zone in the Configurator. Zones that can't be easily faulted must be added by hand. Confirm that all zones are visible in the Configurator and properly associated with their partition. Optionally change the names for each zone and partition with the Configurator.

7. Enter the User # for the access code that will be used from the **g!** interface in the Configurator under partition 1. See **Note 1** in **Configuration Details** section below.

8. Test the arming and disarming capability from a computer or touch screen and confirm history function.

CONNECTION METHODS
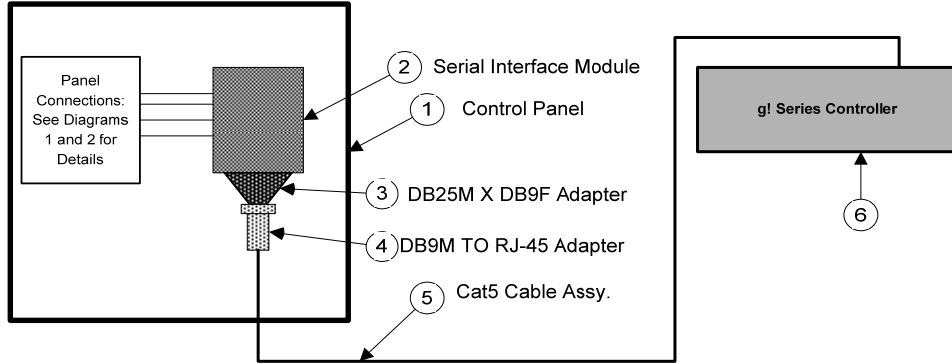
BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	Control Panel	Ademco/First Alert	128BP,250BP,FA1660C	RS-232	Various	
2	Serial Interface Module	Ademco	4100SM	RS-232	DB-25 Male x Terminal Strip	
3	DB25M X DB9F Adapter	Belkin	F2L088	RS-232	DB-25 Male X DB-9 Female	Not included with 4100SM
4	DB9M to RJ45 Adapter	ELAN	HA-CB-307	RS-232	DB-9 Male X RJ-45 Female	
5	Cat5 Cable	Installer	N/A	RS-232	RJ-45 Male X RJ-45 Male	Must terminate all 8 conductors
6	g! Series Controller	ELAN	Various (e.g. HC12)	RS-232	RJ-45 Female	Use COM1, 2, 3, or 4

The following diagram shows how to wire the 4100SM to the FBP panel.
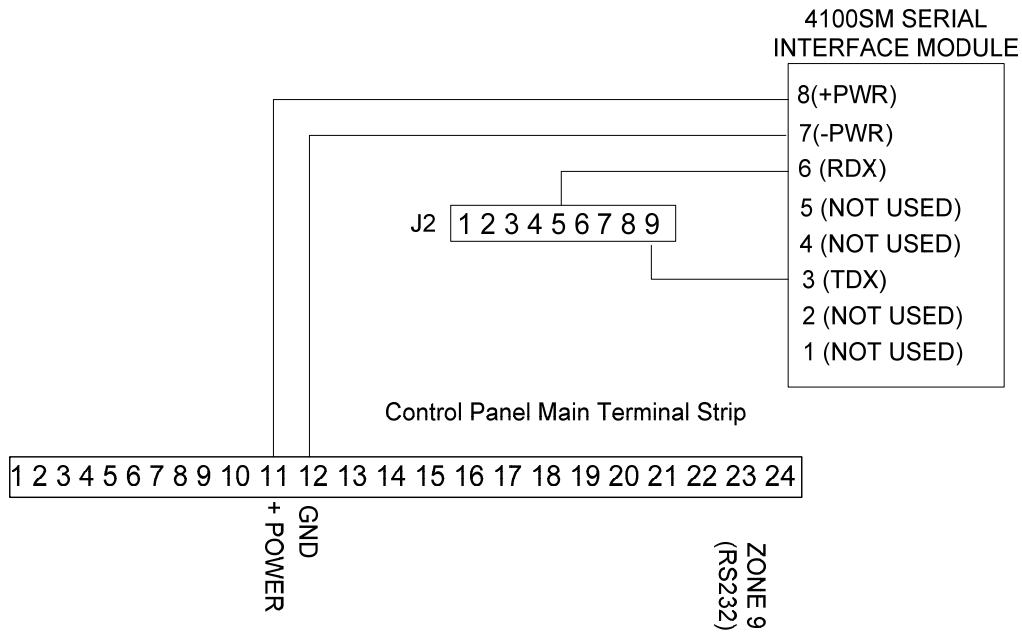
Notes:

1. See the back of the panel door for terminal locations.

Conductor Number	Security Panel Terminal Number	Serial Interface Module Terminal Number	Notes
1	11 (AUX PWR)	8 (+PWR)	See panel door for panel terminal locations
2	12(AUX GND)	7 (-PWR)	See panel door for panel terminal locations
3	5 on J2	6(RXD)	Red wire -See panel door for panel terminal locations
4	9 on J2	3(TXD)	Violet wire -See panel door for panel terminal locations

DIAGRAM 2: SECURITY PANEL TO SERIAL INTERFACE CONNECTION DETAILS: BPE SERIES

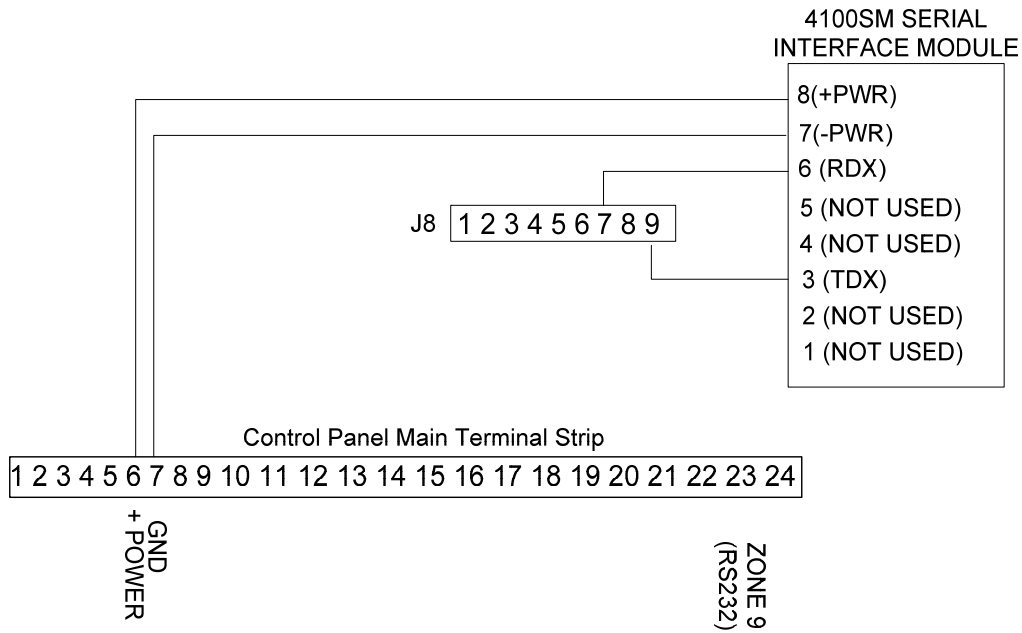The following diagram shows how to wire the 4100SM to the BPE panel.

4100SM SERIAL
INTERFACE MODULE

```
                                                    8(+PWR)
                                                    7(-PWR)
                                                    6 (RDX)
              J8  1 2 3 4 5 6 7 8 9                 5 (NOT USED)
                                                    4 (NOT USED)
                                                    3 (TDX)
                                                    2 (NOT USED)
                                                    1 (NOT USED)
```

Control Panel Main Terminal Strip

```
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
```

GND
+ POWER

ZONE 9
(RS232)

Notes:

1. See the back of the panel door for terminal locations.

Conductor Number	Security Panel Terminal Number	Serial Interface Module Terminal Number	Notes
1	6 (AUX PWR)	8 (+PWR)	See panel door for panel terminal locations
2	7 (AUX GND)	7 (-PWR)	See panel door for panel terminal locations
3	7 on J8	6(RXD)	Brown wire -See panel door for panel terminal locations
4	9 on J8	3(TXD)	Black wire- see panel door for terminal locations

PANEL PROGRAMMING

Before communication can start between the ELAN system and the Ademco panel there are several fields that need to be changed in the panel configuration. You will need the installer access code to enter the programming mode.

To enter programming mode press the installer code and then [8000]. Once in programming mode, changing the value of a field can be accomplished by pressing [*] + [Field #] + [Value]. The keypad will ding 3 times and advance to the next field after the value had been entered. For example: Programming field 70 to a value of 11111 requires the following key strokes [*] + [70] + [1] + [1] + [1] + [1] + [1]. To exit the programming mode, press [*] + [99]. If you cannot gain entry to the programming menu using the installer code then this method of access may be locked out on the device. The only way to access the unit in that case is by pressing [*] and [#] simultaneously within 30 seconds of the device powering up. The panel will need to be disconnected from power and the backup battery to create this condition.

Step	Instructions	Comments
1	Press [Installer Code] + [8000]	Enter programming mode on page (0)
2	Press [*] + [05] + [1]	Sets field *05 to 1 and enables **System Events Notify**
3	Press [*] + [14] + [1]	Sets field *14 to 1 and enables **RS-232 Input**
4	Press [*] + [19] + [1]	Sets field *19 to 1 and enables **RS-232 Input**
5	Press [*] + [94]	Changes to the next page(1)
6	Press [*] + [70] + [1]+[1]+[1]+[1] +[1] **or** [1]+[1]+[1]+[1]+[1]+[1]	Sets field 1*70 to 11111 and enables **Event log types Alarm, Check, Bypass, Open/Close and System**
7	Press [*] + [72] + [1]	Sets field 1*72 to 1 and enables the **Event Log Printer On- Line Printer**
8	Press [*] + [73] + [0]	Sets field 1*73 to and enables a **Baud Rate of 1200**
9	Press [*] + [80] +[1]	(***BPE Series Only***) Sets field 1*80 to 1 and enables **Log Faults and Restores**. **See Note below**
10	Press [*] + [94]	Changes to the next page (2)
11	Press [*] + [30] + [0]	Sets field 2*30 to disable **Pager**
12	Press [*] + [99]	To change to previous page (1)
13	Press [*] + [99]	To change to previous page (0)
14	Press [*] + [99]	To exit programming mode

Note: This setting is **undocumented** in the BPE manual, however the BPE series panels **will not** provide feedback to the **g!** controller unless this setting is in place.

UL   Using the RS232 input for automation is not permitted in UL installations.

g! CONFIGURATION DETAILS

The following table provides settings used in the **g!** Configurator when connecting to the Ademco panel. Please refer to the *Configurator Reference Guide* for more details.

- o "<Select>" Select the appropriate item from the list (or drop-down) in the Configurator.

- o "<User Defined>", etc. Type in the desired name for the item.

- o "<Auto Detect>", etc. The system will auto detect this variable.

- o "<Defined in Security System>" The security installer must provide the information to you.

Devices	Variable Name	Setting	Comments
Communication Devices	**Name**	<User Defined> (Default: **Security**)	
	Type	**Serial Port**	
	Communication Type	**Standard Connection**	
	Location	<User Defined> (Not Required)	
	Com Port	<Select>	
Security Panels	**Name**	<User Defined> (Default: **Ademco VISTA-128BP,250BP,FA1660C**)	
	Device Type	**Ademco VISTA-128BP,250BP,FA1660C**	
	Location	<User Defined> (Not Required)	
	Comm Device	<Select> (Default: **Secuirty**)	
		Name Show Auto Keys	
	Disarm	**Disarm Yes NO 4**	
	Mode 1	**Stay Yes NO 4**	
	Mode 2	**Away Yes NO 4**	
Partions	**Name**	<User Defined>	
	User Number	<Defined in Security System> (See Note 1)	
	Show Partition	**Yes**	
	Areas in Partition	<User Defined> (Not Required)	
Zones	**Name**	<User Defined>	
	Enable Bypass	**No** (See Note 2)	
	Exists in Partition	<Select> (See Note 3)	
Notes:			
1. Only partition number 1 can be armed or disarmed from the **g!** interface. Ask the security installer for the **User Number** in partition number 1 that corresponds to your Pass Code.			
Alternatively, go to a security keypad in the partition and enter your Pass Code +[*]+[*} to display the **User Number** that matches that Pass Code.			
2. Ademco does not support bypassable zones from external automation systems.			
3. For each zone, add the partitions in which that zone is a part.			

COMMON MISTAKES

1. Failing to test the Cat5 cable assembly. It is easy to make a mistake when terminating the Cat5 cable with the RJ-45 connectors. Always use a LAN tester to check for continuity and shorts.

2. Using a Cat5 patch cable without all 8 conductors. Some Ethernet patch cables only have the 4 conductors (1,2,3,6) needed for Ethernet communications. These cables will not work as patch cables for RS-232 communications. Visually inspect the clear plastic connectors to determine if all 8 wires are present.

3. Connecting a zone to terminal 23 on the security panel. The FBP series does not connect to a zone input but uses J2. The J2 flying lead can not be extended.

4. Using the wrong **User Number** for partition number 1. Arming or disarming partition number 1 requires the correct User Number for your Pass Code in partition number 1. To retrieve the **User Number** for your Pass Code in partition number 1, go to a keypad in partition number 1 and enter your Pass Code +[*]+[*]: this will display the **User Number** on the keypad.

5. Using a null modem to connect the RS-232 port. The Ademco serial connections do not require a null modem when connecting to a **g!** system controller. The 4100SM kit has many type of serial adapters, use only the ones specified above.

6. Using the incorrect ELAN DB-9 to RJ-45 adapter to connect to the security panel hardware. At the panel, use the HACB307.

7. Failing to plug the Cat5 cable assembly into the correct port. Make sure the RJ-45 connector is plugged into the same port (COM1, 2, 3 or 4) that is specified in the Configurator.

8. Failing to install a system keypad. In the event of an alarm, the Ademco system will disconnect the RS232 interface, meaning the alarm cannot be canceled from a **g!** Viewer.

9. Incorrect Settings for zone numbering. If duplicate zones/wrong zone numbers are auto-populating in the system, check the Security Panel Settings field. (6.2 and newer builds only)

10. Using a BPE panel. The Ademco BPE panel is not supported.