

Interfacing Lutron® RadioRA® 2 Systems with Honeywell VISTA-128BPT Security Systems

RadioRA® 2 systems are capable of direct integration with the Honeywell VISTA-128BPT security panel. Integrating a RadioRA® 2 system with a security system enables many new features beyond intrusion alert. By incorporating lighting control, shades, temperature, and small appliance control, RadioRA® 2 systems offer energy savings, convenience, and ambiance that the homeowner can enjoy every day.

Required Components

In order to interface a RadioRA® 2 system with a Honeywell VISTA-128BPT security panel, you will need the following items:

- RadioRA® 2 system installed
- RadioRA® 2 programming software version 5.0 or higher
- Honeywell VISTA-128BPT security panel installed and programmed
 - To enable the extra settings that allow integration (not covered in the Honeywell instructions) see Programming step 2 (page 2) of this document.
- Null Modem Serial Cable or Null Modem Adapter with a Straight-through Serial Cable
- General understanding of RadioRA® 2 systems and Honeywell VISTA-128BPT security panels

Recommended Components

- VT-SERCBL Cable

Programming RadioRA® 2 systems to Interface with Honeywell VISTA Security Panels

Programming a RadioRA® 2 system to interface with a Honeywell VISTA-128BPT security panel is done in five steps:

1. Install and program the Honeywell VISTA-128BPT security system according to the Honeywell instructions.
2. Program the Honeywell VISTA-128BPT security system to enable the extra settings to allow the integration, not covered in the Honeywell instructions:
 - Serial Programming Options for Automation Applications in the Honeywell VISTA-128BPT security panel

Note: The following group of fields **must** be set to use the serial port for automation applications:

 - ***05 Enter 1** to send System Event Messages via RS232 port
 - ***14 Enter 1** to enable Home/Facility Automation Control Input
 - **Enter *94** to change to the next page of program fields
 - **1*70 Event Log Types (Enter 1 in each event log type, there are 5 types)**
 - **1*78 Extended Home Control Events (Enter 1 for extended)**
 - **1*79 Home Control Event Types (Enter 1 in each home control event type, there are 5 types)**
 - **1*80 Enter 1** to send zone fault/restore messages to the RS232 output.
3. Install and program the Lutron® RadioRA® 2 system using RadioRA® 2 programming software version 5.0 or higher.
4. Program appropriate phantom buttons associated with each security action, as described in the following section.
5. Wire the Honeywell VISTA-128BPT security panel to the RadioRA® 2 Main Repeater using the instructions on page 10.

Programming Phantom Buttons for Security

Actions in the security system will send RS232 commands to the RadioRA® 2 system. Each command is associated with a specific phantom button, and each phantom button may be programmed to deliver a desired scene. When a command is received from the security system, the corresponding phantom button is automatically “pressed”. For certain buttons, a “Time of Day” feature has been pre-programmed so that the most appropriate action takes place.

The RadioRA® 2 Main Repeater has 100 phantom buttons available for use with integration. Buttons 76-100 are configured to receive commands from the Honeywell VISTA-128BPT security system.

Security Actions and Associated Phantom Buttons (Partition 1)

This table illustrates the various possible actions from a Honeywell VISTA-128BPT security system and the phantom buttons that will be activated depending on the “Time of Day”. The recommended phantom button scene name is also matched to the phantom button number.

Security Action	Time of Day	Phantom Button(s) Activated	Phantom Button Scene Name(s)*
Arm Away	Day	95 and 92	Away Scene + Away Timeclock Mode
	Night	95 and 92	Away Scene + Away Timeclock Mode
Arm Stay	Day	—	—
	Night	93	Goodnight
Disarm	Day	92 turned off	(Away Timeclock turned off)
	Night	92 turned off; 94	(Away Timeclock turned off); Welcome
Intrusion	Day	98 and 99	Exterior Flash, Interior Full
	Night	98 and 99	Exterior Flash, Interior Full
Emergency	Day	100 and 98	Emergency, Exterior Flash
	Night	100 and 98	Emergency, Exterior Flash

Phantom Buttons and Recommended Programming

This table provides the recommended programming for each phantom button associated with security on the Main Repeater. The “Time of Day,” when various actions will take place, is also specified.

Phantom Button	Security System Partition	Button Type	Recommended Scene	Recommended Programming				
				Lights	Shades	HVAC	Plug-in Modules	Time Clock
100	All	Single/Multi-room scene	Emergency	Interior lights at 25%	Open	—	—	—
99	All	Security mode	Interior Full	Interior lights at 100%	Open	—	—	—
98	All	Security mode	Exterior Flash	Exterior lights flash	—	—	—	—
97	All		Reserved for future use	—	—	—	—	—
96	All		Reserved for future use	—	—	—	—	—
95	1	Single/Multi-room scene	Away Scene	Lights off (delayed off on exit pathway)	Close	—	Off	—
94	1	Single/Multi-room scene	Welcome	Entry, foyer, kitchen lights on to 75%	—	—	—	—
93	1	Single/Multi-room scene	Goodnight	Evening light levels	Close	Set Back	Off	—
92	1	Timeclock mode	Away Timeclock Mode	—	—	Set Back	—	Away Mode
91	1		Reserved for future use	—	—	—	—	—
90	2	Single/Multi-room scene	Away Scene	Lights off (delayed off on exit pathway)	Close	—	Off	—
89	2	Single/Multi-room scene	Welcome	Entry, foyer, kitchen lights on to 75%	—	—	—	—
88	2	Single/Multi-room scene	Goodnight	Evening light levels	Close	Set Back	Off	—
87	2	Timeclock mode	Away Timeclock Mode	—	—	Set Back	—	Away Mode
86	2		Reserved for future use	—	—	—	—	—



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Phantom Buttons and Recommended Programming (continued)

Phantom Button	Security System Partition	Button Type	Recommended Scene	Recommended Programming				
				Lights	Shades	HVAC	Plug-in Modules	Time Clock
85	3	Single/Multi-room scene	Away Scene	Lights off (delayed off on exit pathway)	Close	—	Off	—
84	3	Single/Multi-room scene	Welcome	Entry, foyer, kitchen lights on to 75%	—	—	—	—
83	3	Single/Multi-room scene	Goodnight	Evening light levels	Close	Set Back	Off	—
82	3	Timeclock mode	Away Timeclock Mode	—	—	Set Back	—	Away Mode
81	3		Reserved for future use	—	—	—	—	—
80	4	Single/Multi-room scene	Away Scene	Lights off (delayed off on exit pathway)	Close	—	Off	—
79	4	Single/Multi-room scene	Welcome	Entry, foyer, kitchen lights on to 75%	—	—	—	—
78	4	Single/Multi-room scene	Goodnight	Evening light levels	Close	Set Back	Off	—
77	4	Timeclock mode	Away Timeclock Mode	—	—	Set Back	—	Away Mode
76	4		Reserved for future use	—	—	—	—	—



Security Programming Timelines

When configured according to this application note, the RadioRA® 2 system will automatically respond to commands from the security keypad as outlined in the tables below.

Key	
	Arm Action Initiated
	Disarm Action Initiated
Bold	Active Events
Gray	Inactive Events



RadioRA® 2 Action	Daytime	Sunset	Sunset + 1 hr	Sunset + 2 hr	Sunset + 3 hr			Sunrise	Daytime
	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM		6 AM	7 AM
Security – Interior Full				Interior Lights on Full		Cancel Full	Overnight		
Security – Exterior Flash				Exterior Lights Flash		Cancel Flash			
Welcome Scene						Outside and Entry On			

Arm Stay and Disarm Example





RadioRA® 2 Action	Daytime	Sunset	Sunset + 1 hr	Sunset + 2 hr	Sunset + 3 hr			Sunrise	Daytime
	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM		6 AM	7 AM
Normal Time Clock		Outside Lights On				Outside Lights Dim	Overnight	Outside Lights Off 	
Away Time Clock		Outside Lights On, Foyer On	Kitchen On	Bedroom On	Kitchen Off	Outside Lights Dim, Bedroom Off, Foyer Dim (nightlight)		Outside Lights Off, Foyer Off	
Away Scene									
Goodnight Scene				Evening lighting T-stat adjusted; Shades lowered, Plug-in appliance modules Off					
Welcome Scene									

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Security Programming Timelines (continued)

Key	
	Arm Action Initiated
	Disarm Action Initiated
Bold	Active Events
Gray	Inactive Events

Arm Away and Disarm Example

RadioRA® 2 Action	ARM AWAY			DISARM (Nighttime – Welcome Scene)				Overnight	Sunrise
	Daytime			Sunset	Sunset + 1 hr	Sunset + 2 hr	Sunset + 3 hr		
	4 PM	5 PM	7 PM	8 PM	9 PM	10 PM	11 PM		6 AM
Normal Time Clock			Outside Lights On				Outside Lights Dim		Outside Lights Off
Away Time Clock		T-stat set back	Outside Lights On, Foyer On	Kitchen On	Bedroom On	Kitchen Off	Outside Lights Dim, Bedroom Off, Foyer Dim (nightlight)		Outside Lights Off, Foyer Off
Away Scene		Inside Lights Off (30 min delay on exit pathway) Shades lowered, Plug-in modules Off							
Welcome Scene					Outside and Entry On				
Goodnight Scene									

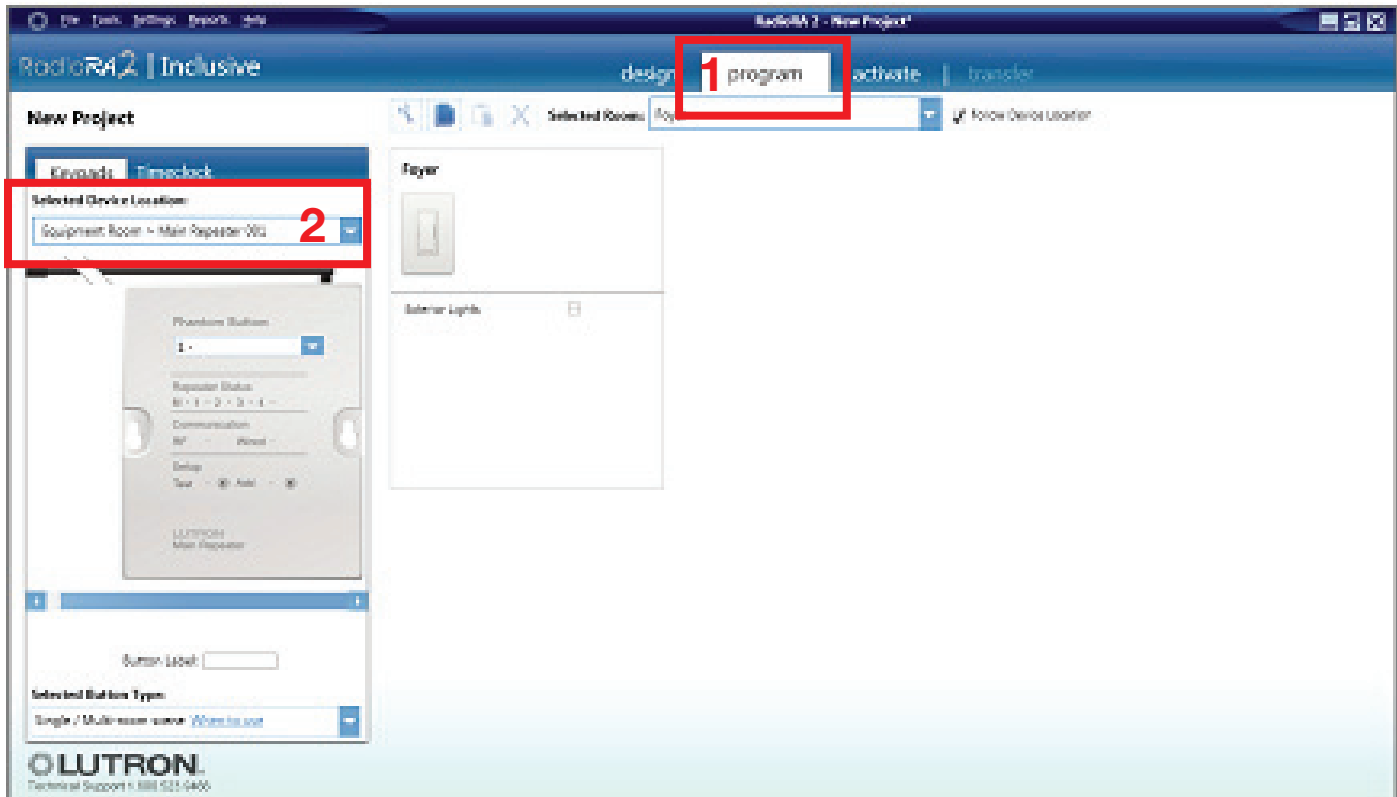
Note: If the Honeywell VISTA-128BPT system has no partitions, use phantom buttons associated with partition 1.
See **Phantom Buttons and Recommended Programming** (page 3) for the phantom button to partition mapping.

Programming the Phantom Buttons

For more in-depth programming instructions, a corresponding Security Training Module can be found online at <http://resi.lutron.com/radiora2> by following the RadioRA® 2 Software Online Training Modules link.

Once the project has been designed in the RadioRA® 2 programming software,

1. Select the **“Program”** tab.
2. Find the Main Repeater using the **“Selected Device Location”** drop-down menu.



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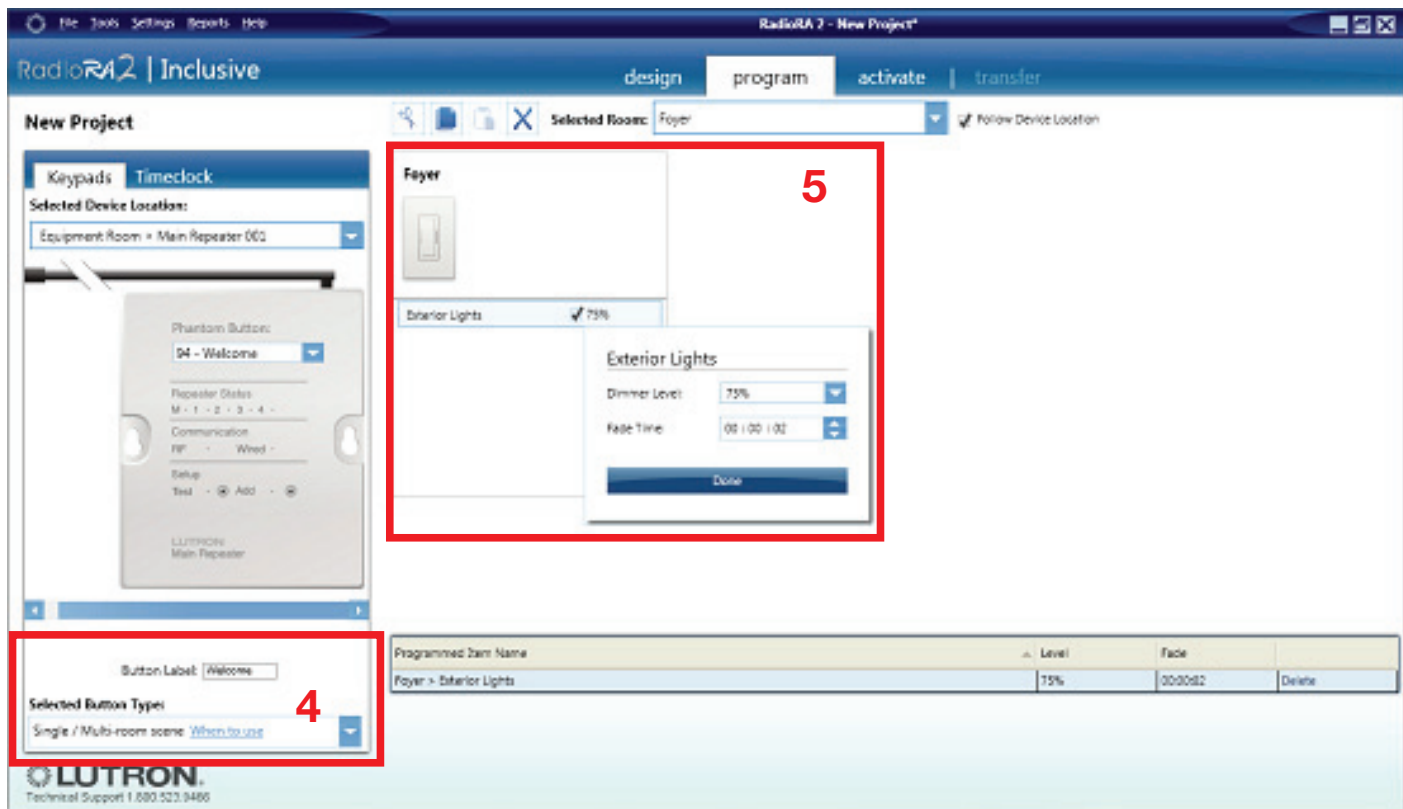
Programming the Phantom Buttons (continued)

4. Choose the appropriate “Selected Button Type”.

5. Program Devices and Levels.

- Repeat steps 2-5 to program any remaining buttons

Note: You must also complete the activation and transfer steps for the programming to take effect.

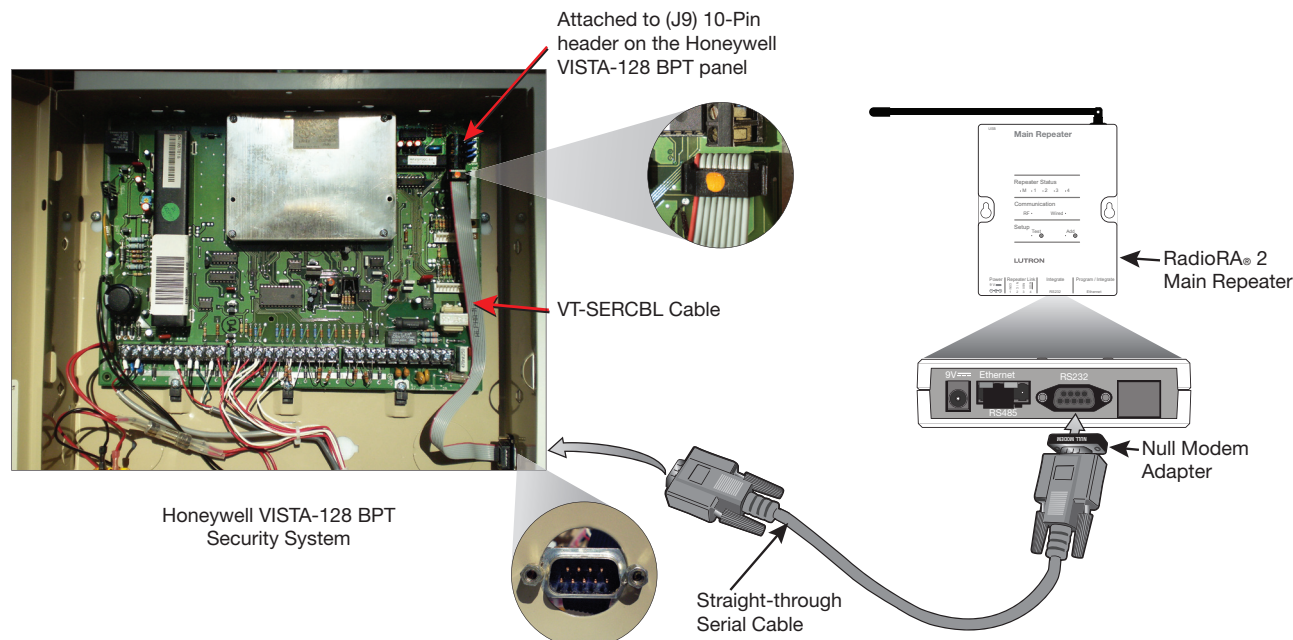


Wiring

Wire the Honeywell VISTA-128BPT security panel to the RadioRA® 2 Main Repeater using one of the following methods:

Recommended Option:

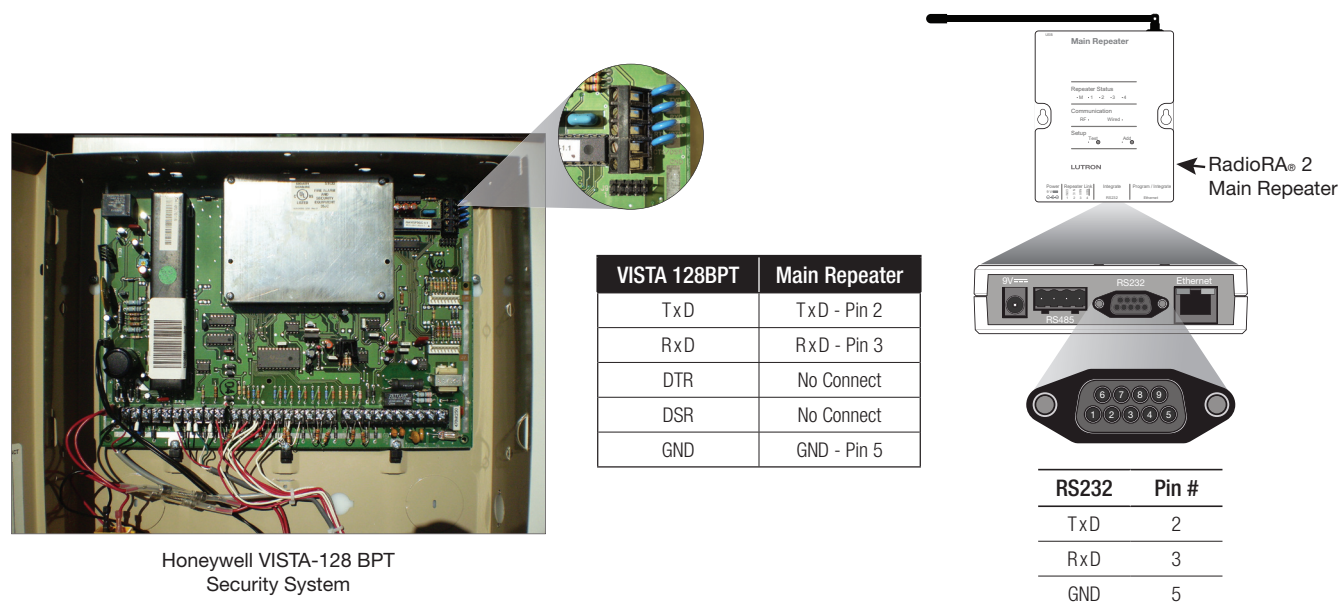
1. Purchase the VT-SERCBL cable, which adapts the 10-pin header (J9) on the Honeywell VISTA-128BPT security panel to a standard DE9M serial connector.




OR

Alternate Option:

2. Connect serial cable wires #2, #3, and #5 directly to the terminal block (TB4) on the Honeywell VISTA-128BPT circuit board.



Note: Normally RS232 connections would be wired with TXD connected to RXD. In this case TXD is wired to TXD and RXD to RXD so that a Null Modem adapter is not needed.

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