



PRT3 Printer Module: C-Bus Programming Instructions

We hope this product performs to your complete satisfaction. Should you have any questions or comments, please visit www.paradox.com and send us your comments.



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Technical Specifications

Parallel Port: Minimum 80 column printer

Serial Port: 1 start bit, 8 data bit, no parity and 1 stop bit (8N1)

Input Voltage: 9 -16 Vdc

Current Consumption: 60mA maximum

Serial Port Baud Rates: 2400, 9600, 19200 or 57600 bps

Event Buffer: 2048 events

Compatibility: EVO48 / EVO96 / EVO192 control panels
 DGP-848 control panel (V4.11 and up)
 DGP-NE96 control panel (V1.60 and up)

Panel Specifications

Feature	EVO48	EVO96	EVO192	DGP-848	DGP-NE96
Zones	48	96	192	48	96
Users	96	999	999	96	999
Areas	4	8	8	4	8

Introduction




The PRT3 Printer Module can be used as an interface between C-Bus and your Digiplex system. When in home automation mode, the Printer Module can receive and send commands to and from the C-Bus PC interface and the Digiplex control panel, linking your building automation capabilities with your security system.

The Printer Module features 30 virtual PGMs for use with its building automation interface capabilities. These PGMs are not related to any physical output on the module, but operate in the same manner and are programmed in the same way as traditional PGMs. A virtual PGM can be used to trigger a response within C-Bus based on an event that has occurred within the Digiplex system. For example, when a user uses the Digiplex system to disarm an area, this event could activate a virtual PGM on the Printer Module and trigger a response within C-Bus, such as turning on a specific light on the premises. See “Virtual PGM Programming” on page 4.

Up to 30 C-Bus entries can be associated with the Printer Module’s virtual PGMs. C-Bus entries allow you to set the commands that will be sent on the C-Bus in relation to events that occur within the Digiplex system. When the state of a virtual PGM on the Printer Module changes, a message is sent by the C-Bus entry that is associated with that virtual PGM. See “C-Bus Entry Options” on page 8.

The Printer Module also features 16 onboard virtual inputs. These inputs are not related to any physical input on the module, but operate in the same manner and are programmed in the same way as a traditional zone input. A virtual input can be programmed to trigger a response from the Digiplex control panel based on an event that has occurred within C-Bus. Using virtual inputs to trigger events within the Digiplex control panel involves associating the Printer Module’s virtual input to a zone or a keyswitch on the control panel. See “Virtual Input Options” on page 14.

In order for C-Bus and the Digiplex control panel to communicate in such a way, the Printer Module’s serial port must be set to communicate using the Clipsal C-Bus Protocol.

-  For a complete list of the Printer Module’s event reporting features, see the *Printer Module V1.0 (PRT3) Instructions*.
-  The PRT3 Printer Module is compatible with C-Bus interface firmware V4.00.00 and higher. C-Bus lighting units must be configured with firmware V1.1 and higher.
-  If the Printer Module fails to connect to the C-Bus PC interface, a trouble will be generated.

Installation

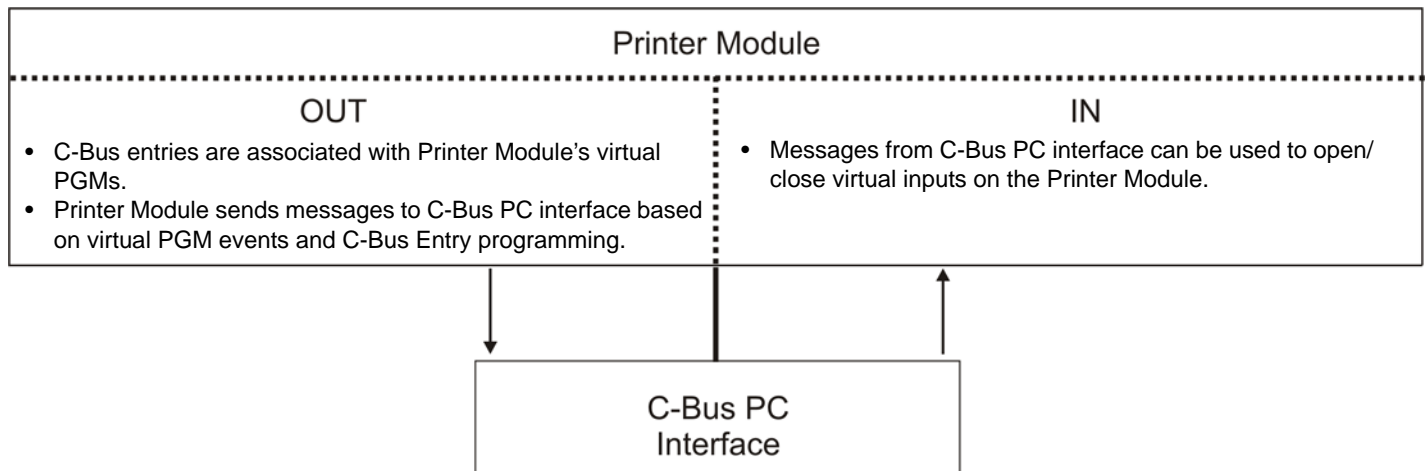
The Printer Module is connected to the control panel’s combus. Connect the four terminals labeled red, black, green, and yellow of the module to the corresponding terminals on the control panel as shown in Figure 2 on page 20. See the *EVO or DGP-848 Reference & Installation Manual* for the maximum allowable installation distance from the control panel.

-  **The C-Bus PC Interface must be connected to the Printer Module’s serial port using a null modem cable only.**

Overview

The following provides of an overview of how the Printer Module communicates with C-Bus.

Figure 1: C-Bus Overview



Programming Sections

The following describes the programming sections which must be set in order for the Printer Module to act as an interface between a Digiplex control panel and a C-Bus PC interface.

To access the Printer Module's programming mode:

1. Press and hold the **[0]** key.
2. Enter the **[INSTALLER CODE]**.
3. Enter section **[953]** (DGP-848) / **[4003]** (EVO).
4. Enter the Printer Module's 8-digit **[SERIAL NUMBER]**.
5. Enter the 3-digit **[SECTION]** you want to program.
6. Enter the required data.

The Printer Module can also be programmed using the WinLoad Security Software (V2.62 or higher) or using the control panel's *Module Broadcast* feature. Refer to the *EVO or DGP-848 Reference & Installation Manual* for more details. Please note that the serial number can be located on the Printer Module's PC board.

Serial Port Setup

The following lists the serial port programming options which must be set in order for the Printer Module to communicate with C-Bus.

Section [016] - Option [1]
Enable Serial Port

When this option is ON (enabled), you can connect the C-Bus PC interface directly to the Printer Module's serial port (9 pins) through the use of a null modem cable. Set option **[4]** to ON when using the Printer Module as an interface between a C-Bus PC interface and the Digiplex system.

Section [016] - Options [2] & [3]
Baud Settings

When a C-Bus PC interface is connected to the Printer Module, the serial port baud rate is automatically set to 9600 baud. Any other baud rate will be overridden.

Section [016] - Option [4]
Serial Port Usage

This option allows you to set the Printer Module's serial port usage to either Event Reporting or Home Automation. Set option **[4]** to ON to set the Printer Module to Home Automation.

Section [016] - Options [5] & [6]
Home Automation Options

This option allows you to select the home automation protocol for the Printer Module. Set option **[5]** to ON and option **[6]** to OFF to select the Clipsal C-Bus Protocol.

Home Automation Settings	
[5]	[6]
OFF	OFF – ASCII Protocol Δ
ON	OFF – Clipsal C-Bus Protocol <input type="checkbox"/>
OFF	ON – N/A
ON	ON – N/A



For more information on the ASCII Protocol, see the ASCII Protocol Programming Instructions on our website at paradox.com.

C-Bus Applications

These sections allow you to enable which C-Bus application(s) the Printer Module can use to send and receive commands. Note that the Printer Module supports communication with the following three C-Bus applications:

Section		Application	Hexadecimal Value
[070]	__ / __	C-Bus lighting Application	\$38
[071]	__ / __	C-Bus Air-conditioning Application	\$AC
[072]	__ / __	C-Bus Security Application	\$DO

 Refer to the appropriate C-Bus documentation for further information on C-Bus applications.

Virtual PGM Programming

The Printer Module supports up to 30 virtual PGMs which are not related to any physical output on the module, but operate in the same manner and are programmed in the same way as traditional PGMs. The tables below offer an example of the virtual PGM programming sections which must be set for virtual PGM 1.

Section [100] : Virtual PGM Options

Option	OFF	ON
[1] and [2] <i>Virtual PGM Deactivation</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Virtual PGM Deactivation Option [1] [2] OFF OFF — No deactivation <input type="checkbox"/> ON OFF — Deactivation event <input type="checkbox"/> OFF ON — Virtual PGM timer <input type="checkbox"/> ON ON — Deactivation event or virtual PGM timer <input type="checkbox"/> </div>	
[3] <i>Virtual PGM Base Time Selection</i>	△ Seconds	<input type="checkbox"/> Minutes
[4] <i>Virtual PGM Resend</i>	△ Message not resent	<input type="checkbox"/> Message resent


Section	Data	Description	Default
[101]	__ / __ / __ (000 to 255) x Base Time	Virtual PGM 1 Timer	005

	Event Group	Feature Group	Start #	End #
Virtual PGM Activation	Section [102] __ / __ / __	Section [103] __ / __ / __	Section [104] __ / __ / __	Section [105] __ / __ / __
Virtual PGM Deactivation	Section [106] __ / __ / __	Section [107] __ / __ / __	Section [108] __ / __ / __	Section [109] __ / __ / __

The following describes the programming sections and options specific to the Printer Module's virtual PGMs. Use the programming tables to document specific settings for all programmed virtual PGMs.

Refer to the table below for a list of the programming sections for all virtual PGMs.

Virtual PGM	Section	Virtual PGM	Section	Virtual PGM	Section	Virtual PGM	Section	Virtual PGM	Section
1	[100] - [109]	7	[160] - [169]	13	[220] - [229]	19	[280] - [289]	25	[340] - [349]
2	[110] - [119]	8	[170] - [179]	14	[230] - [239]	20	[290] - [299]	26	[350] - [359]
3	[120] - [129]	9	[180] - [189]	15	[240] - [249]	21	[300] - [309]	27	[360] - [369]
4	[130] - [139]	10	[190] - [199]	16	[250] - [259]	22	[310] - [319]	28	[370] - [379]
5	[140] - [149]	11	[200] - [209]	17	[260] - [269]	23	[320] - [329]	29	[380] - [389]
6	[150] - [159]	12	[210] - [219]	18	[270] - [279]	24	[330] - [339]	30	[390] - [399]

 For more information on PGM programming, see "Appendix 1: Programming PGMs" on page 21.

Virtual PGM Deactivation Option

When the Virtual PGM Activation Event occurs (see “Virtual PGM Activation Event” on page 7), this option determines when the virtual PGM will return to its normal state (deactivate). Depending on the programmed value, the virtual PGM can stay activated indefinitely. It can also deactivate following a virtual deactivation event (see “Virtual PGM Deactivation Event” on page 7) and/or after the virtual PGM timer has elapsed (see “Virtual PGM Timers” on page 5).

Virtual PGM Deactivation Option	
[1]	[2]
OFF	OFF — No deactivation
ON	OFF — Deactivation event
OFF	ON — Virtual PGM timer
ON	ON — Deactivation event or virtual PGM timer

△ = default setting

Section	Virtual PGM	[1] OFF / [2] OFF	[1] ON / [2] OFF	[1] OFF / [2] ON	[1] ON / [2] ON
[100]	1	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[110]	2	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[120]	3	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[130]	4	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[140]	5	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[150]	6	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[160]	7	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[170]	8	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[180]	9	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[190]	10	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[200]	11	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[210]	12	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[220]	13	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[230]	14	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[240]	15	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[250]	16	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[260]	17	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[270]	18	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[280]	19	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[290]	20	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[300]	21	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[310]	22	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[320]	23	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[330]	24	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[340]	25	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[350]	26	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[360]	27	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[370]	28	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[380]	29	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer
[390]	30	<input type="checkbox"/> no deactivation	△ deactivation event	<input type="checkbox"/> virtual PGM timer	<input type="checkbox"/> deactivation event or virtual PGM timer

Virtual PGM Timers

If the virtual PGM is set to follow its Virtual PGM Timer (see “Virtual PGM Deactivation Option” on page 5), the entered value represents the amount of time that the virtual PGM will remain activated. To program the Virtual PGM Timer, enter a 3-digit value from **000** to **255**. Depending on the Virtual PGM Base Time (see “Virtual PGM Base Time Selection” on page 6), the Virtual PGM Timer will either be in seconds or minutes.

Section	Virtual PGM	Data	Section	Virtual PGM	Data
[101]	1	__/__/__ (000 to 255) x Base time	[251]	16	__/__/__ (000 to 255) x Base time
[111]	2	__/__/__ (000 to 255) x Base time	[261]	17	__/__/__ (000 to 255) x Base time
[121]	3	__/__/__ (000 to 255) x Base time	[271]	18	__/__/__ (000 to 255) x Base time
[131]	4	__/__/__ (000 to 255) x Base time	[281]	19	__/__/__ (000 to 255) x Base time
[141]	5	__/__/__ (000 to 255) x Base time	[291]	20	__/__/__ (000 to 255) x Base time
[151]	6	__/__/__ (000 to 255) x Base time	[301]	21	__/__/__ (000 to 255) x Base time

[161]	7	_/_/_/ (000 to 255) x Base time	[311]	22	_/_/_/ (000 to 255) x Base time
[171]	8	_/_/_/ (000 to 255) x Base time	[321]	23	_/_/_/ (000 to 255) x Base time
[181]	9	_/_/_/ (000 to 255) x Base time	[331]	24	_/_/_/ (000 to 255) x Base time
[191]	10	_/_/_/ (000 to 255) x Base time	[341]	25	_/_/_/ (000 to 255) x Base time
[201]	11	_/_/_/ (000 to 255) x Base time	[351]	26	_/_/_/ (000 to 255) x Base time
[211]	12	_/_/_/ (000 to 255) x Base time	[361]	27	_/_/_/ (000 to 255) x Base time
[221]	13	_/_/_/ (000 to 255) x Base time	[371]	28	_/_/_/ (000 to 255) x Base time
[231]	14	_/_/_/ (000 to 255) x Base time	[381]	29	_/_/_/ (000 to 255) x Base time
[241]	15	_/_/_/ (000 to 255) x Base time	[391]	30	_/_/_/ (000 to 255) x Base time

Section [100] - Option [3]

Virtual PGM Base Time Selection

If option [3] is OFF, the value programmed for the Virtual PGM Timer will be in seconds. If option [3] is ON, the Virtual PGM Timer will be in minutes. △ = default setting

Section	Virtual PGM	[3] OFF	[3] ON	Section	Virtual PGM	[3] OFF	[3] ON
[100]	1	△ seconds	<input type="checkbox"/> minutes	[250]	16	△ seconds	<input type="checkbox"/> minutes
[110]	2	△ seconds	<input type="checkbox"/> minutes	[260]	17	△ seconds	<input type="checkbox"/> minutes
[120]	3	△ seconds	<input type="checkbox"/> minutes	[270]	18	△ seconds	<input type="checkbox"/> minutes
[130]	4	△ seconds	<input type="checkbox"/> minutes	[280]	19	△ seconds	<input type="checkbox"/> minutes
[140]	5	△ seconds	<input type="checkbox"/> minutes	[290]	20	△ seconds	<input type="checkbox"/> minutes
[150]	6	△ seconds	<input type="checkbox"/> minutes	[300]	21	△ seconds	<input type="checkbox"/> minutes
[160]	7	△ seconds	<input type="checkbox"/> minutes	[310]	22	△ seconds	<input type="checkbox"/> minutes
[170]	8	△ seconds	<input type="checkbox"/> minutes	[320]	23	△ seconds	<input type="checkbox"/> minutes
[180]	9	△ seconds	<input type="checkbox"/> minutes	[330]	24	△ seconds	<input type="checkbox"/> minutes
[190]	10	△ seconds	<input type="checkbox"/> minutes	[340]	25	△ seconds	<input type="checkbox"/> minutes
[200]	11	△ seconds	<input type="checkbox"/> minutes	[350]	26	△ seconds	<input type="checkbox"/> minutes
[210]	12	△ seconds	<input type="checkbox"/> minutes	[360]	27	△ seconds	<input type="checkbox"/> minutes
[220]	13	△ seconds	<input type="checkbox"/> minutes	[370]	28	△ seconds	<input type="checkbox"/> minutes
[230]	14	△ seconds	<input type="checkbox"/> minutes	[380]	29	△ seconds	<input type="checkbox"/> minutes
[240]	15	△ seconds	<input type="checkbox"/> minutes	[390]	30	△ seconds	<input type="checkbox"/> minutes

Section [100] - Option [4]

Virtual PGM Resend Option

If option [4] is ON and a Virtual PGM's activation event reoccurs while the virtual PGM is ON, the message sent by the C-Bus entry that is associated with that virtual PGM will be resent. If option [4] is ON and a Virtual PGM's deactivation event reoccurs while the virtual PGM is OFF, the message sent by the C-Bus entry that is associated with that virtual PGM will be resent. △ = default setting

Section	Virtual PGM	[4] OFF	[4] ON	Section	Virtual PGM	[4] OFF	[4] ON
[100]	1	△ message not resent	<input type="checkbox"/> message resent	[250]	16	△ message not resent	<input type="checkbox"/> message resent
[110]	2	△ message not resent	<input type="checkbox"/> message resent	[260]	17	△ message not resent	<input type="checkbox"/> message resent
[120]	3	△ message not resent	<input type="checkbox"/> message resent	[270]	18	△ message not resent	<input type="checkbox"/> message resent
[130]	4	△ message not resent	<input type="checkbox"/> message resent	[280]	19	△ message not resent	<input type="checkbox"/> message resent
[140]	5	△ message not resent	<input type="checkbox"/> message resent	[290]	20	△ message not resent	<input type="checkbox"/> message resent
[150]	6	△ message not resent	<input type="checkbox"/> message resent	[300]	21	△ message not resent	<input type="checkbox"/> message resent
[160]	7	△ message not resent	<input type="checkbox"/> message resent	[310]	22	△ message not resent	<input type="checkbox"/> message resent
[170]	8	△ message not resent	<input type="checkbox"/> message resent	[320]	23	△ message not resent	<input type="checkbox"/> message resent
[180]	9	△ message not resent	<input type="checkbox"/> message resent	[330]	24	△ message not resent	<input type="checkbox"/> message resent
[190]	10	△ message not resent	<input type="checkbox"/> message resent	[340]	25	△ message not resent	<input type="checkbox"/> message resent
[200]	11	△ message not resent	<input type="checkbox"/> message resent	[350]	26	△ message not resent	<input type="checkbox"/> message resent
[210]	12	△ message not resent	<input type="checkbox"/> message resent	[360]	27	△ message not resent	<input type="checkbox"/> message resent
[220]	13	△ message not resent	<input type="checkbox"/> message resent	[370]	28	△ message not resent	<input type="checkbox"/> message resent
[230]	14	△ message not resent	<input type="checkbox"/> message resent	[380]	29	△ message not resent	<input type="checkbox"/> message resent
[240]	15	△ message not resent	<input type="checkbox"/> message resent	[390]	30	△ message not resent	<input type="checkbox"/> message resent

Virtual PGM Activation Event

The Virtual PGM Activation Event determines which event will activate the Printer Module's virtual PGM output(s). The Event Group specifies the event, the Feature Group identifies the source, and the Start # and End # set the range within the Feature Group. Note that Event Groups [064] to [067] may be selected when programming virtual PGMs (see "Appendix 1: Programming PGMs" on page 21).

	Event Group		Feature Group		Start #		End #	
	Section		Section		Section		Section	
Virtual PGM1	[102]	___/___/___	[103]	___/___/___	[104]	___/___/___	[105]	___/___/___
Virtual PGM2	[112]	___/___/___	[113]	___/___/___	[114]	___/___/___	[115]	___/___/___
Virtual PGM3	[122]	___/___/___	[123]	___/___/___	[124]	___/___/___	[125]	___/___/___
Virtual PGM4	[132]	___/___/___	[133]	___/___/___	[134]	___/___/___	[135]	___/___/___
Virtual PGM5	[142]	___/___/___	[143]	___/___/___	[144]	___/___/___	[145]	___/___/___
Virtual PGM6	[152]	___/___/___	[153]	___/___/___	[154]	___/___/___	[155]	___/___/___
Virtual PGM7	[162]	___/___/___	[163]	___/___/___	[164]	___/___/___	[165]	___/___/___
Virtual PGM8	[172]	___/___/___	[173]	___/___/___	[174]	___/___/___	[175]	___/___/___
Virtual PGM9	[182]	___/___/___	[183]	___/___/___	[184]	___/___/___	[185]	___/___/___
Virtual PGM10	[192]	___/___/___	[193]	___/___/___	[194]	___/___/___	[195]	___/___/___
Virtual PGM11	[202]	___/___/___	[203]	___/___/___	[204]	___/___/___	[205]	___/___/___
Virtual PGM12	[212]	___/___/___	[213]	___/___/___	[214]	___/___/___	[215]	___/___/___
Virtual PGM13	[222]	___/___/___	[223]	___/___/___	[224]	___/___/___	[225]	___/___/___
Virtual PGM14	[232]	___/___/___	[233]	___/___/___	[234]	___/___/___	[235]	___/___/___
Virtual PGM15	[242]	___/___/___	[243]	___/___/___	[244]	___/___/___	[245]	___/___/___
Virtual PGM16	[252]	___/___/___	[253]	___/___/___	[254]	___/___/___	[255]	___/___/___
Virtual PGM17	[262]	___/___/___	[263]	___/___/___	[264]	___/___/___	[265]	___/___/___
Virtual PGM18	[272]	___/___/___	[273]	___/___/___	[274]	___/___/___	[275]	___/___/___
Virtual PGM19	[282]	___/___/___	[283]	___/___/___	[284]	___/___/___	[285]	___/___/___
Virtual PGM20	[292]	___/___/___	[293]	___/___/___	[294]	___/___/___	[295]	___/___/___
Virtual PGM21	[302]	___/___/___	[303]	___/___/___	[304]	___/___/___	[305]	___/___/___
Virtual PGM22	[312]	___/___/___	[313]	___/___/___	[314]	___/___/___	[315]	___/___/___
Virtual PGM23	[322]	___/___/___	[323]	___/___/___	[324]	___/___/___	[325]	___/___/___
Virtual PGM24	[332]	___/___/___	[333]	___/___/___	[334]	___/___/___	[335]	___/___/___
Virtual PGM25	[342]	___/___/___	[343]	___/___/___	[344]	___/___/___	[345]	___/___/___
Virtual PGM26	[352]	___/___/___	[353]	___/___/___	[354]	___/___/___	[355]	___/___/___
Virtual PGM27	[362]	___/___/___	[363]	___/___/___	[364]	___/___/___	[365]	___/___/___
Virtual PGM28	[372]	___/___/___	[373]	___/___/___	[374]	___/___/___	[375]	___/___/___
Virtual PGM29	[382]	___/___/___	[383]	___/___/___	[384]	___/___/___	[385]	___/___/___
Virtual PGM30	[392]	___/___/___	[393]	___/___/___	[394]	___/___/___	[395]	___/___/___

Virtual PGM Deactivation Event

If the Virtual PGM Deactivation Option is set to follow the Virtual PGM Deactivation Event (see "Virtual PGM Deactivation Option" on page 5), the virtual PGM will return to its normal state when the event programmed occurs (see table below). The Event Group specifies the event, the Feature Group identifies the source, and the Start # and End # set the range within the Feature Group.

Enter the sections that correspond to the Event Group, Feature Group, Start # and End # of the PGM.

	Event Group		Feature Group		Start #		End #	
	Section		Section		Section		Section	
Virtual PGM1	[106]	___/___/___	[107]	___/___/___	[108]	___/___/___	[109]	___/___/___
Virtual PGM2	[116]	___/___/___	[117]	___/___/___	[118]	___/___/___	[119]	___/___/___
Virtual PGM3	[126]	___/___/___	[127]	___/___/___	[128]	___/___/___	[129]	___/___/___
Virtual PGM4	[136]	___/___/___	[137]	___/___/___	[138]	___/___/___	[139]	___/___/___
Virtual PGM5	[146]	___/___/___	[147]	___/___/___	[148]	___/___/___	[149]	___/___/___
Virtual PGM6	[156]	___/___/___	[157]	___/___/___	[158]	___/___/___	[159]	___/___/___
Virtual PGM7	[166]	___/___/___	[167]	___/___/___	[168]	___/___/___	[169]	___/___/___

Virtual PGM8	[176]	___	[177]	___	[178]	___	[179]	___
Virtual PGM9	[186]	___	[187]	___	[188]	___	[189]	___
Virtual PGM10	[196]	___	[197]	___	[198]	___	[199]	___
Virtual PGM11	[206]	___	[207]	___	[208]	___	[209]	___
Virtual PGM12	[216]	___	[217]	___	[218]	___	[219]	___
Virtual PGM13	[226]	___	[227]	___	[228]	___	[229]	___
Virtual PGM14	[236]	___	[237]	___	[238]	___	[239]	___
Virtual PGM15	[246]	___	[247]	___	[248]	___	[249]	___
Virtual PGM16	[256]	___	[257]	___	[258]	___	[259]	___
Virtual PGM17	[266]	___	[267]	___	[268]	___	[269]	___
Virtual PGM18	[276]	___	[277]	___	[278]	___	[279]	___
Virtual PGM19	[286]	___	[287]	___	[288]	___	[289]	___
Virtual PGM20	[296]	___	[297]	___	[298]	___	[299]	___
Virtual PGM21	[306]	___	[307]	___	[308]	___	[309]	___
Virtual PGM22	[316]	___	[317]	___	[318]	___	[319]	___
Virtual PGM23	[326]	___	[327]	___	[328]	___	[329]	___
Virtual PGM24	[336]	___	[337]	___	[338]	___	[339]	___
Virtual PGM25	[346]	___	[347]	___	[348]	___	[349]	___
Virtual PGM26	[356]	___	[357]	___	[358]	___	[359]	___
Virtual PGM27	[366]	___	[367]	___	[368]	___	[369]	___
Virtual PGM28	[376]	___	[377]	___	[378]	___	[379]	___
Virtual PGM29	[386]	___	[387]	___	[388]	___	[389]	___
Virtual PGM30	[396]	___	[397]	___	[398]	___	[399]	___

C-Bus Entry Options

C-Bus entries allow you to set the commands that will be sent on the C-Bus in relation to events that occur within the Digiplex system. When the state of a virtual PGM on the Printer Module changes, a message is sent by the C-Bus entry that is associated with that virtual PGM. Up to 30 C-Bus entries can be associated with the Printer Module's virtual PGMs. Multiple C-Bus entries can be associated with a single virtual PGM.



It is not necessary for group addresses to be assigned to physical outputs in order to be sent to the C-Bus PCI interface.

The tables below offer an example of the C-Bus entry programming sections which must be set for C-Bus entry 1.

Section [400] : C-Bus Entry Options

Option		OFF	ON												
[1]	<i>Application Selection</i>	<input checked="" type="checkbox"/> Lighting	<input type="checkbox"/> Air Conditioning												
[2] and [3]	<i>ON Command</i>	<table border="1"> <tr><td colspan="2">C-Bus ON Commands</td></tr> <tr><td>[2]</td><td>[3]</td></tr> <tr><td>OFF</td><td>OFF — None Δ</td></tr> <tr><td>ON</td><td>OFF — ON !</td></tr> <tr><td>OFF</td><td>ON — OFF !</td></tr> <tr><td>ON</td><td>ON — ON ramp* !</td></tr> </table>		C-Bus ON Commands		[2]	[3]	OFF	OFF — None Δ	ON	OFF — ON !	OFF	ON — OFF !	ON	ON — ON ramp* !
C-Bus ON Commands															
[2]	[3]														
OFF	OFF — None Δ														
ON	OFF — ON !														
OFF	ON — OFF !														
ON	ON — ON ramp* !														
[4] and [5]	<i>OFF Command</i>	<table border="1"> <tr><td colspan="2">C-Bus OFF Commands</td></tr> <tr><td>[4]</td><td>[5]</td></tr> <tr><td>OFF</td><td>OFF — None Δ</td></tr> <tr><td>ON</td><td>OFF — ON !</td></tr> <tr><td>OFF</td><td>ON — OFF !</td></tr> <tr><td>ON</td><td>ON — OFF ramp* !</td></tr> </table>		C-Bus OFF Commands		[4]	[5]	OFF	OFF — None Δ	ON	OFF — ON !	OFF	ON — OFF !	ON	ON — OFF ramp* !
C-Bus OFF Commands															
[4]	[5]														
OFF	OFF — None Δ														
ON	OFF — ON !														
OFF	ON — OFF !														
ON	ON — OFF ramp* !														

* Not used with air-conditioning

Section	Data	Description	Default
[401]	___ (001 to 030)	Virtual PGM Association	000
[402]	___ (000 to 255)	ON Group Address Variable	000
[403]	___ (000 to 015)	↓ON Ramp Period	000*

[404]	_/_/_ (000 to 255)	ON Ramp Final Level	000*
[405]	_/_/_ (000 to 255)	OFF Group Address Variable	000
[406]	_/_/_ (000 to 015)	OFF Ramp Period	000*
[407]	_/_/_ (000 to 255)	OFF Ramp Final Level	000*

*Not used with air-conditioning (values ignored if selected)

Refer to the table below for a list of the programming sections for all virtual PGMs.

C-Bus Entry	Section	C-Bus Entry	Section	C-Bus Entry	Section	C-Bus Entry	Section	C-Bus Entry	Section
1	[400] - [407]	7	[460] - [467]	13	[520] - [527]	19	[580] - [587]	25	[640] - [647]
2	[410] - [417]	8	[470] - [477]	14	[530] - [537]	20	[590] - [597]	26	[650] - [657]
3	[420] - [427]	9	[480] - [487]	15	[540] - [547]	21	[600] - [607]	27	[660] - [667]
4	[430] - [437]	10	[490] - [497]	16	[550] - [557]	22	[610] - [617]	28	[670] - [677]
5	[440] - [447]	11	[500] - [507]	17	[560] - [567]	23	[620] - [627]	29	[680] - [687]
6	[450] - [457]	12	[510] - [517]	18	[570] - [577]	24	[630] - [637]	30	[690] - [697]

The following describes the programming sections and options specific to the C-Bus entries. Use the programming tables to document specific settings for all programmed C-Bus entries.

Section [400] - Option [1]
Application Selection

When option [1] is OFF, C-Bus entries are associated with **lighting** application. When option [1] is ON, C-Bus entries are associated with **air-conditioning** application.

△ = default setting

Section	C-Bus Entry	[1] OFF	[1] ON	Section	C-Bus Entry	[1] OFF	[1] ON
[400]	1	△ lighting	<input type="checkbox"/> air-conditioning	[550]	16	△ lighting	<input type="checkbox"/> air-conditioning
[410]	2	△ lighting	<input type="checkbox"/> air-conditioning	[560]	17	△ lighting	<input type="checkbox"/> air-conditioning
[420]	3	△ lighting	<input type="checkbox"/> air-conditioning	[570]	18	△ lighting	<input type="checkbox"/> air-conditioning
[430]	4	△ lighting	<input type="checkbox"/> air-conditioning	[580]	19	△ lighting	<input type="checkbox"/> air-conditioning
[440]	5	△ lighting	<input type="checkbox"/> air-conditioning	[590]	20	△ lighting	<input type="checkbox"/> air-conditioning
[450]	6	△ lighting	<input type="checkbox"/> air-conditioning	[600]	21	△ lighting	<input type="checkbox"/> air-conditioning
[460]	7	△ lighting	<input type="checkbox"/> air-conditioning	[610]	22	△ lighting	<input type="checkbox"/> air-conditioning
[470]	8	△ lighting	<input type="checkbox"/> air-conditioning	[620]	23	△ lighting	<input type="checkbox"/> air-conditioning
[480]	9	△ lighting	<input type="checkbox"/> air-conditioning	[630]	24	△ lighting	<input type="checkbox"/> air-conditioning
[490]	10	△ lighting	<input type="checkbox"/> air-conditioning	[640]	25	△ lighting	<input type="checkbox"/> air-conditioning
[500]	11	△ lighting	<input type="checkbox"/> air-conditioning	[650]	26	△ lighting	<input type="checkbox"/> air-conditioning
[510]	12	△ lighting	<input type="checkbox"/> air-conditioning	[660]	27	△ lighting	<input type="checkbox"/> air-conditioning
[520]	13	△ lighting	<input type="checkbox"/> air-conditioning	[670]	28	△ lighting	<input type="checkbox"/> air-conditioning
[530]	14	△ lighting	<input type="checkbox"/> air-conditioning	[680]	29	△ lighting	<input type="checkbox"/> air-conditioning
[540]	15	△ lighting	<input type="checkbox"/> air-conditioning	[690]	30	△ lighting	<input type="checkbox"/> air-conditioning

Section [400] - Options [2] and [3]
ON Commands

This option allows you to choose the type of command that will be sent through the C-Bus entry after the state of its associated virtual PGM changes from OFF to ON. The types of commands include ON, OFF or ramp.

C-Bus ON Commands	
[2]	[3]
OFF	OFF — None
ON	OFF — ON
OFF	ON — OFF
ON	ON — ON ramp*

△ = default setting

Section	C-Bus Entry	[2] OFF / [3] OFF	[2] ON / [3] OFF	[2] OFF / [3] ON	[2] ON / [3] ON*
[400]	1	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[410]	2	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[420]	3	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[430]	4	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[440]	5	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[450]	6	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[460]	7	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[470]	8	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[480]	9	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[490]	10	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[500]	11	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[510]	12	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[520]	13	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[530]	14	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[540]	15	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[550]	16	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[560]	17	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[570]	18	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[580]	19	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[590]	20	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[600]	21	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[610]	22	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[620]	23	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[630]	24	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[640]	25	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[650]	26	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[660]	27	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[670]	28	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[680]	29	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[690]	30	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp

* Not used with air conditioning

Section [400] - Options [4] and [5]

OFF Commands

This option allows you to choose the type of command that will be sent through the C-Bus entry after the state of its associated virtual PGM changes from ON to OFF. The types of commands include ON, OFF or ramp.

C-Bus OFF Commands	
[4]	[5]
OFF	OFF - None
ON	OFF - ON
OFF	ON - OFF
ON	ON - OFF ramp*

△ = default setting

Section	C-Bus Entry	[4] OFF / [5] OFF	[4] ON / [5] OFF	[4] OFF / [5] ON	[4] ON / [5] ON*
[400]	1	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[410]	2	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[420]	3	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[430]	4	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[440]	5	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[450]	6	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[460]	7	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[470]	8	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[480]	9	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[490]	10	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[500]	11	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[510]	12	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp

[520]	13	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[530]	14	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[540]	15	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[550]	16	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[560]	17	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[570]	18	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[580]	19	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[590]	20	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[600]	21	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[610]	22	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[620]	23	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[630]	24	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[640]	25	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[650]	26	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[660]	27	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[670]	28	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[680]	29	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp
[690]	30	△ none	<input type="checkbox"/> on	<input type="checkbox"/> off	<input type="checkbox"/> ramp

* Not used with air conditioning

Section [401]

Virtual PGM Association

The Virtual PGM Association section allows you to associate a C-Bus entry (or entries) with one of the Printer Module's virtual PGMs. Enter **001-030** to individually assign each C-Bus entry to a virtual PGM. Multiple C-Bus entries can be associated with the same virtual PGM.

Section	C-Bus Entry	Associated PGM	Section	C-Bus Entry	Associated PGM
[401]	1		[551]	16	
[411]	2		[561]	17	
[421]	3		[571]	18	
[431]	4		[581]	19	
[441]	5		[591]	20	
[451]	6		[601]	21	
[461]	7		[611]	22	
[471]	8		[621]	23	
[481]	9		[631]	24	
[491]	10		[641]	25	
[501]	11		[651]	26	
[511]	12		[661]	27	
[521]	13		[671]	28	
[531]	14		[681]	29	
[541]	15		[691]	30	

Section [402]

ON Group Address Variable

The ON Group Address Variable section allows you to assign which C-Bus group will receive the programmed ON command (see "ON Commands" on page 9). Enter **000-255** to assign each C-Bus entry to a group address.



It is not necessary for group addresses to be assigned to physical outputs in order to be sent to the C-Bus PCI interface.



For further information on Group Address Variables, refer to the appropriate C-Bus documentation.

Section	C-Bus Entry	ON Group Address Variable	Section	C-Bus Entry	ON Group Address Variable
[402]	1		[552]	16	
[412]	2		[562]	17	
[422]	3		[572]	18	
[432]	4		[582]	19	

[442]	5		[592]	20	
[452]	6		[602]	21	
[462]	7		[612]	22	
[472]	8		[622]	23	
[482]	9		[632]	24	
[492]	10		[642]	25	
[502]	11		[652]	26	
[512]	12		[662]	27	
[522]	13		[672]	28	
[532]	14		[682]	29	
[542]	15		[692]	30	

Section [403]*

ON Ramp Period *Not used with air conditioning

The ON Ramp Period section allows you to assign a ramp time value when an ON Ramp command has been set (see "ON Commands" on page 9). The following table lists the Ramp Period programmed values and their corresponding real-time values.

Ramp Period Programmed Value	Real-Time Value	Ramp Period Programmed Value	Real-Time Value	Ramp Period Programmed Value	Real-Time Value	Ramp Period Programmed Value	Real-Time Value
000	Instant	004	20s	008	90s	012	7min
001	4s	005	30s	009	2min	013	10min
002	8s	006	40s	010	3min	014	15min
003	12s	007	60s	011	5min	015	17min


Enter **000-015** to assign each C-Bus entry an ON Ramp Period.

Section	C-Bus Entry	ON Ramp Period	Section	C-Bus Entry	ON Ramp Period
[403]	1		[553]	16	
[413]	2		[563]	17	
[423]	3		[573]	18	
[433]	4		[583]	19	
[443]	5		[593]	20	
[453]	6		[603]	21	
[463]	7		[613]	22	
[473]	8		[623]	23	
[483]	9		[633]	24	
[493]	10		[643]	25	
[503]	11		[653]	26	
[513]	12		[663]	27	
[523]	13		[673]	28	
[533]	14		[683]	29	
[543]	15		[693]	30	

Section [404]*

ON Ramp Final Level * Not used with air conditioning

The ON Ramp Final Level section allows you to assign a final level of light intensity when an ON Ramp command has been set (see "ON Commands" on page 9). Enter **000-255** to assign each C-Bus entry an ON Ramp Final Level.

 For further information on lighting intensity levels associated with the ON Ramp command, refer to the appropriate C-Bus documentation.

Section	C-Bus Entry	ON Ramp Final Level	Section	C-Bus Entry	ON Ramp Final Level
[404]	1		[554]	16	
[414]	2		[564]	17	
[424]	3		[574]	18	
[434]	4		[584]	19	

[444]	5		[594]	20	
[454]	6		[604]	21	
[464]	7		[614]	22	
[474]	8		[624]	23	
[484]	9		[634]	24	
[494]	10		[644]	25	
[504]	11		[654]	26	
[514]	12		[664]	27	
[524]	13		[674]	28	
[534]	14		[684]	29	
[544]	15		[694]	30	

Section [405]

OFF Group Address Variable

The OFF Group Address Variable section allows you to assign which C-Bus group will receive the programmed OFF command (see “OFF Commands” on page 10). Enter **000-255** to assign each C-Bus entry to a group address.



It is not necessary for group addresses to be assigned to physical outputs in order to be sent to the C-Bus PCI interface.

For further information on Group Address Variables, refer to the appropriate C-Bus documentation.

Section	C-Bus Entry	OFF Group Address Variable	Section	C-Bus Entry	OFF Group Address Variable
[405]	1		[555]	16	
[415]	2		[565]	17	
[425]	3		[575]	18	
[435]	4		[585]	19	
[445]	5		[595]	20	
[455]	6		[605]	21	
[465]	7		[615]	22	
[475]	8		[625]	23	
[485]	9		[635]	24	
[495]	10		[645]	25	
[505]	11		[655]	26	
[515]	12		[665]	27	
[525]	13		[675]	28	
[535]	14		[685]	29	
[545]	15		[695]	30	

Section [406]*

OFF Ramp Period

* Not used with air conditioning


The OFF Ramp Period section allows you to assign a ramp time value when an OFF Ramp command has been set (see “OFF Commands” on page 10). Enter **000-015** to assign each C-Bus entry an OFF Ramp Period.

Section	C-Bus Entry	OFF Ramp Period	Section	C-Bus Entry	OFF Ramp Period
[406]	1		[556]	16	
[416]	2		[566]	17	
[426]	3		[576]	18	
[436]	4		[586]	19	
[446]	5		[596]	20	
[456]	6		[606]	21	
[466]	7		[616]	22	
[476]	8		[626]	23	
[486]	9		[636]	24	
[496]	10		[646]	25	
[506]	11		[656]	26	
[516]	12		[666]	27	

[526]	13		[676]	28	
[536]	14		[686]	29	
[546]	15		[696]	30	

Section [407]*	
OFF Ramp Final Level	* Not used with air conditioning

The OFF Ramp Final Level section allows you to assign a final level of light intensity when an OFF Ramp command has been set (see “OFF Commands” on page 10). Enter **000-255** to assign each C-Bus entry an OFF Ramp Final Level.

 For further information on lighting intensity levels associated with the OFF Ramp command, refer to the appropriate C-Bus documentation.

Section	C-Bus Entry	OFF Ramp Final Level	Section	C-Bus Entry	OFF Ramp Final Level
[407]	1		[557]	16	
[417]	2		[567]	17	
[427]	3		[577]	18	
[437]	4		[587]	19	
[447]	5		[597]	20	
[457]	6		[607]	21	
[467]	7		[617]	22	
[477]	8		[627]	23	
[487]	9		[637]	24	
[497]	10		[647]	25	
[507]	11		[657]	26	
[517]	12		[667]	27	
[527]	13		[677]	28	
[537]	14		[687]	29	
[547]	15		[697]	30	

Virtual Input Options

The Printer Module features 16 virtual inputs. The virtual inputs' open/close state can change based on an event that has occurred within C-Bus. The following describes the programming sections and options specific to the Printer Module's virtual inputs. Virtual inputs must be programmed with the appropriate C-Bus application, group address variable and type of command which will cause the virtual input to react (open/close).

The tables below offer an example of the virtual input programming sections which must be set for virtual input 1.

Section [700] : Virtual Input Options

Option		OFF	ON												
[1]	Enabling Virtual Input	<input type="checkbox"/> Disabled	<input type="checkbox"/> Enabled												
[2]	C-Bus Application Selection	<input type="checkbox"/> Lighting	<input type="checkbox"/> Air-conditioning												
[3] and [4]	Virtual Input Close	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td colspan="2" style="text-align: center;">Virtual Input Close Option</td></tr> <tr><td>[3]</td><td>[4]</td></tr> <tr><td>OFF</td><td>OFF – Close Command <input type="checkbox"/></td></tr> <tr><td>ON</td><td>OFF – Virtual Input Timer <input type="checkbox"/></td></tr> <tr><td>OFF</td><td>ON – Close Command or Virtual Input Timer <input type="checkbox"/></td></tr> <tr><td>ON</td><td>ON – N/A</td></tr> </table>		Virtual Input Close Option		[3]	[4]	OFF	OFF – Close Command <input type="checkbox"/>	ON	OFF – Virtual Input Timer <input type="checkbox"/>	OFF	ON – Close Command or Virtual Input Timer <input type="checkbox"/>	ON	ON – N/A
Virtual Input Close Option															
[3]	[4]														
OFF	OFF – Close Command <input type="checkbox"/>														
ON	OFF – Virtual Input Timer <input type="checkbox"/>														
OFF	ON – Close Command or Virtual Input Timer <input type="checkbox"/>														
ON	ON – N/A														
[5]	Virtual Input Base Time Selection	<input type="checkbox"/> Seconds	<input type="checkbox"/> Minutes												

Section	Data	Description	Default
[701]	_/_/_ (000 to 255) x Base Time	Virtual Input 1 Timer	005

[702]	_/_/_ (000 to 255)	Virtual Input 1 Open Group Address Variable	000
[703]	_/_/_ (000 to 002)	Virtual Input 1 Open Command	000*
[704]	_/_/_ (000 to 255)	Virtual Input 1 Close Group Address Variable	000
[705]	_/_/_ (000 to 002)	Virtual Input 1 Close Command	000*
[706]	_/_/_ (000 to 255)	Ramp Threshold	000*

*Ramp command not used with air conditioning

Refer to the table below for a list of the programming sections for all virtual inputs.

Virtual Input	Section	Virtual Input	Section	Virtual Input	Section	Virtual Input	Section
1	[700] - [706]	5	[740] - [746]	9	[780] - [786]	13	[820] - [826]
2	[710] - [716]	6	[750] - [756]	10	[790] - [796]	14	[830] - [836]
3	[720] - [726]	7	[760] - [766]	11	[800] - [806]	15	[840] - [846]
4	[730] - [736]	8	[770] - [776]	12	[810] - [816]	16	[850] - [856]

The following describes the programming sections and options specific to the Printer Module's virtual inputs. Use the programming tables to document specific settings for all programmed virtual inputs.

Section [700] - Option [1]
Enabling Virtual Input Option

Each virtual input must be individually enabled. Set option [1] to ON to enable the virtual input.

△ = default setting

Section	Virtual Input	[1] OFF	[1] ON	Section	Virtual Input	[1] OFF	[1] ON
[700]	1	△ disabled	<input type="checkbox"/> enabled	[780]	9	△ disabled	<input type="checkbox"/> enabled
[710]	2	△ disabled	<input type="checkbox"/> enabled	[790]	10	△ disabled	<input type="checkbox"/> enabled
[720]	3	△ disabled	<input type="checkbox"/> enabled	[800]	11	△ disabled	<input type="checkbox"/> enabled
[730]	4	△ disabled	<input type="checkbox"/> enabled	[810]	12	△ disabled	<input type="checkbox"/> enabled
[740]	5	△ disabled	<input type="checkbox"/> enabled	[820]	13	△ disabled	<input type="checkbox"/> enabled
[750]	6	△ disabled	<input type="checkbox"/> enabled	[830]	14	△ disabled	<input type="checkbox"/> enabled
[760]	7	△ disabled	<input type="checkbox"/> enabled	[840]	15	△ disabled	<input type="checkbox"/> enabled
[770]	8	△ disabled	<input type="checkbox"/> enabled	[850]	16	△ disabled	<input type="checkbox"/> enabled

Section [700] - Option [2]
C-Bus Application Selection

Each virtual input must be programmed to use a specific C-Bus application to monitor C-Bus activity. If option [2] is OFF, **lighting** application is used. If option [2] is ON, **air-conditioning** application is used.

△ = default setting

Section	Virtual Input	[2] OFF	[2] ON	Section	Virtual Input	[2] OFF	[2] ON
[700]	1	△ lighting	<input type="checkbox"/> air-conditioning	[780]	9	△ lighting	<input type="checkbox"/> air-conditioning
[710]	2	△ lighting	<input type="checkbox"/> air-conditioning	[790]	10	△ lighting	<input type="checkbox"/> air-conditioning
[720]	3	△ lighting	<input type="checkbox"/> air-conditioning	[800]	11	△ lighting	<input type="checkbox"/> air-conditioning
[730]	4	△ lighting	<input type="checkbox"/> air-conditioning	[810]	12	△ lighting	<input type="checkbox"/> air-conditioning
[740]	5	△ lighting	<input type="checkbox"/> air-conditioning	[820]	13	△ lighting	<input type="checkbox"/> air-conditioning
[750]	6	△ lighting	<input type="checkbox"/> air-conditioning	[830]	14	△ lighting	<input type="checkbox"/> air-conditioning
[760]	7	△ lighting	<input type="checkbox"/> air-conditioning	[840]	15	△ lighting	<input type="checkbox"/> air-conditioning
[770]	8	△ lighting	<input type="checkbox"/> air-conditioning	[850]	16	△ lighting	<input type="checkbox"/> air-conditioning

Virtual Input Close Option

The virtual input can be closed by either receiving a virtual input close command, after a timer elapses or either. This option determines how the virtual input will close.

Virtual Input Close Option	
[3]	[4]
OFF	OFF – Close Command
ON	OFF – Virtual Input Timer
OFF	ON – Close Command or Virtual Input Timer
ON	ON – N/A

△ = default setting

Section	Virtual Input	[3] OFF / [4] OFF	[3] ON / [4] OFF	[3] OFF / [4] ON
[700]	1	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[710]	2	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[720]	3	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[730]	4	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[740]	5	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[750]	6	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[760]	7	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[770]	8	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[780]	9	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[790]	10	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[800]	11	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[810]	12	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[820]	13	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[830]	14	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[840]	15	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer
[850]	16	△ close command	<input type="checkbox"/> virtual input timer	<input type="checkbox"/> close command or virtual input timer

Virtual Input Timers

If the virtual input is set to follow its Virtual Input Timer, the entered value represents the amount of time that the virtual input will remain open. To program the Virtual Input Timer, enter a 3-digit value from **000** to **255**. Depending on the Virtual Input Base Time (see “Virtual Input Base Time Selection” on page 16), the Virtual Input Timer will either be in seconds or minutes.

Section	Virtual Input	Timer Data	Section	Virtual Input	Timer Data
[701]	1	__/__/__ (000 to 255) x Base time	[781]	9	__/__/__ (000 to 255) x Base time
[711]	2	__/__/__ (000 to 255) x Base time	[791]	10	__/__/__ (000 to 255) x Base time
[721]	3	__/__/__ (000 to 255) x Base time	[801]	11	__/__/__ (000 to 255) x Base time
[731]	4	__/__/__ (000 to 255) x Base time	[811]	12	__/__/__ (000 to 255) x Base time
[741]	5	__/__/__ (000 to 255) x Base time	[821]	13	__/__/__ (000 to 255) x Base time
[751]	6	__/__/__ (000 to 255) x Base time	[831]	14	__/__/__ (000 to 255) x Base time
[761]	7	__/__/__ (000 to 255) x Base time	[841]	15	__/__/__ (000 to 255) x Base time
[771]	8	__/__/__ (000 to 255) x Base time	[851]	16	__/__/__ (000 to 255) x Base time

Virtual Input Base Time Selection

If option [5] is OFF, the value programmed for the Virtual Input Timer will be in seconds. If option [5] is ON, the Virtual Input Timer will be in minutes. The following table lists the base time sections and their respective virtual inputs.

△ = default setting

Section	Virtual Input	[5] OFF	[5] ON	Section	Virtual Input	[5] OFF	[5] ON
[700]	1	△ seconds	<input type="checkbox"/> minutes	[780]	9	△ seconds	<input type="checkbox"/> minutes
[710]	2	△ seconds	<input type="checkbox"/> minutes	[790]	10	△ seconds	<input type="checkbox"/> minutes
[720]	3	△ seconds	<input type="checkbox"/> minutes	[800]	11	△ seconds	<input type="checkbox"/> minutes

[730]	4	△ seconds	<input type="checkbox"/> minutes	[810]	12	△ seconds	<input type="checkbox"/> minutes
[740]	5	△ seconds	<input type="checkbox"/> minutes	[820]	13	△ seconds	<input type="checkbox"/> minutes
[750]	6	△ seconds	<input type="checkbox"/> minutes	[830]	14	△ seconds	<input type="checkbox"/> minutes
[760]	7	△ seconds	<input type="checkbox"/> minutes	[840]	15	△ seconds	<input type="checkbox"/> minutes
[770]	8	△ seconds	<input type="checkbox"/> minutes	[850]	16	△ seconds	<input type="checkbox"/> minutes

Section [702]

Virtual Input Open Group Address Variable

The Virtual Input Open Group Address Variable section allows you to set which C-Bus group will cause a virtual input on the Printer Module to open. Enter **000-255** to assign which group address variable will trigger a virtual input to open.



For further information on Group Address Variables, refer to the appropriate C-Bus documentation.

Section	Virtual Input	Open Group Address Variable	Section	Virtual Input	Open Group Address Variable
[702]	1		[782]	9	
[712]	2		[792]	10	
[722]	3		[802]	11	
[732]	4		[812]	12	
[742]	5		[822]	13	
[752]	6		[832]	14	
[762]	7		[842]	15	
[772]	8		[852]	16	

Section [703]

Virtual Input Open Command

The Virtual Input Open Command section sets the state of a virtual input to open when an ON, OFF or Ramp command occurs within C-Bus. The open command is based on the Open Group Address Variable and on the C-Bus application selected above. Enter **000** to set the virtual input to open in response to an ON command, **001** to set the virtual input to open in response to an OFF command or **002** to set the virtual input to open in response to a Ramp command.

△ = default setting

Section	Virtual Input	ON	OFF	Ramp*	Section	Virtual Input	ON	OFF	Ramp*
[703]	1	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[783]	9	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[713]	2	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[793]	10	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[723]	3	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[803]	11	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[733]	4	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[813]	12	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[743]	5	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[823]	13	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[753]	6	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[833]	14	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[763]	7	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[843]	15	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[773]	8	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[853]	16	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002

* Not used with air conditioning

Virtual Input Close Group Address Variable

The Virtual Input Open Group Address Variable section allows you to set which C-Bus group will cause a virtual input on the Printer Module to close. Enter **000-255** to assign which group address variable will trigger a virtual input to close.



For further information on Group Address Variables, refer to the appropriate C-Bus documentation.

Section	Virtual Input	Close Group Address Variable	Section	Virtual Input	Close Group Address Variable
[704]	1		[784]	9	
[714]	2		[794]	10	
[724]	3		[804]	11	
[734]	4		[814]	12	
[744]	5		[824]	13	
[754]	6		[834]	14	
[764]	7		[844]	15	
[774]	8		[854]	16	

Virtual Input Close Command

The Virtual Input Close Command section sets the state of a virtual input to close when an ON, OFF or Ramp command occurs within C-Bus. The close command is based on the Close Group Address Variable and on the C-Bus application selected above. Enter **000** to set the virtual input to close in response to an ON command, **001** to set the virtual input to close in response to an OFF command or **002** to set the virtual input to close in response to a Ramp command.

△ = default setting

Section	Virtual Input	ON	OFF	Ramp*	Section	Virtual Input	ON	OFF	Ramp*
[705]	1	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[785]	9	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[715]	2	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[795]	10	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[725]	3	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[805]	11	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[735]	4	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[815]	12	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[745]	5	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[825]	13	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[755]	6	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[835]	14	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[765]	7	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[845]	15	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002
[775]	8	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002	[855]	16	△ 000	<input type="checkbox"/> 001	<input type="checkbox"/> 002

* Not used with air conditioning

Ramp Threshold

* Not used with air conditioning

The Ramp Threshold section allows you to set a threshold level to Ramp commands occurring within C-Bus. To open a virtual input, the Ramp's Final Level must be greater or equal to the threshold value. To close a virtual input, the Ramp's Final level must be lower than the threshold value. Enter **000-255** to set the virtual input's threshold level.

Section	Virtual Input	Ramp Threshold	Section	Virtual Input	Ramp Threshold
[706]	1		[786]	9	
[716]	2		[796]	10	
[726]	3		[806]	11	
[736]	4		[816]	12	
[746]	5		[826]	13	
[756]	6		[836]	14	
[766]	7		[846]	15	
[776]	8		[856]	16	

Security Report

Security reports are messages sent between the PRT3 and the C-Bus. Messages that are received by the C-Bus can be used to trigger automated events.

Section	Data	Description	Default
[900]	_/_/_ (001 to 008)†	Area affected by security application	001

Section 901	Report Options	OFF	ON
[1]	Global Security report*	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[2]	System Armed / Disarmed	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[3]	Entry / Exit delay	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[4]	Zone in alarm / Zone in alarm restore (zones 01 to 80)‡	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[5]	Fire Alarm / Fire Alarm Restore	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[6]	Silent Alarm Report / Silent Alarm Restore	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[7]	Panic Alarm	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[8]	Future use	<input type="checkbox"/> = N/A	<input type="checkbox"/> = N/A

* If Global Security report is disabled, all options in sections [901] and [902] will also be disabled.

Section 902	Report Options	OFF	ON
[1]	Low Battery / Low Battery Restored (zones 01 to 80)‡	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[2]	AC Failure / AC Failure restore	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[3]	Ready to arm / Not ready to arm	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[4]	Zone open / Zone ok (zones 01 to 80)‡	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[5]	Zone tamper / Zone tamper restore (zones 01 to 80)‡	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[6]	Zone Bypassed (zones 01 to 80)‡	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[7]	User Code entered on Keypad	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable
[8]	TLM Trouble/TLM Trouble Restore	<input type="checkbox"/> = Disable	<input checked="" type="checkbox"/> = Enable

Section 903	Messages from C-Bus	OFF	ON
[1]	Arm system*	<input type="checkbox"/> = Forbid	<input checked="" type="checkbox"/> = Allow
[2]	Raise alarm**	<input type="checkbox"/> = Forbid	<input checked="" type="checkbox"/> = Allow
[3]	C-Bus tamper / C-Bus tamper restore***	<input type="checkbox"/> = Forbid	<input checked="" type="checkbox"/> = Allow
[4]	Future use	<input type="checkbox"/> = N/A	<input type="checkbox"/> = N/A
[5]	Future use	<input type="checkbox"/> = N/A	<input type="checkbox"/> = N/A
[6]	Future use	<input type="checkbox"/> = N/A	<input type="checkbox"/> = N/A
[7]	Future use	<input type="checkbox"/> = N/A	<input type="checkbox"/> = N/A
[8]	Future use	<input type="checkbox"/> = N/A	<input type="checkbox"/> = N/A

† Depends on number of areas in panel (see "Panel Specifications" on page 1).

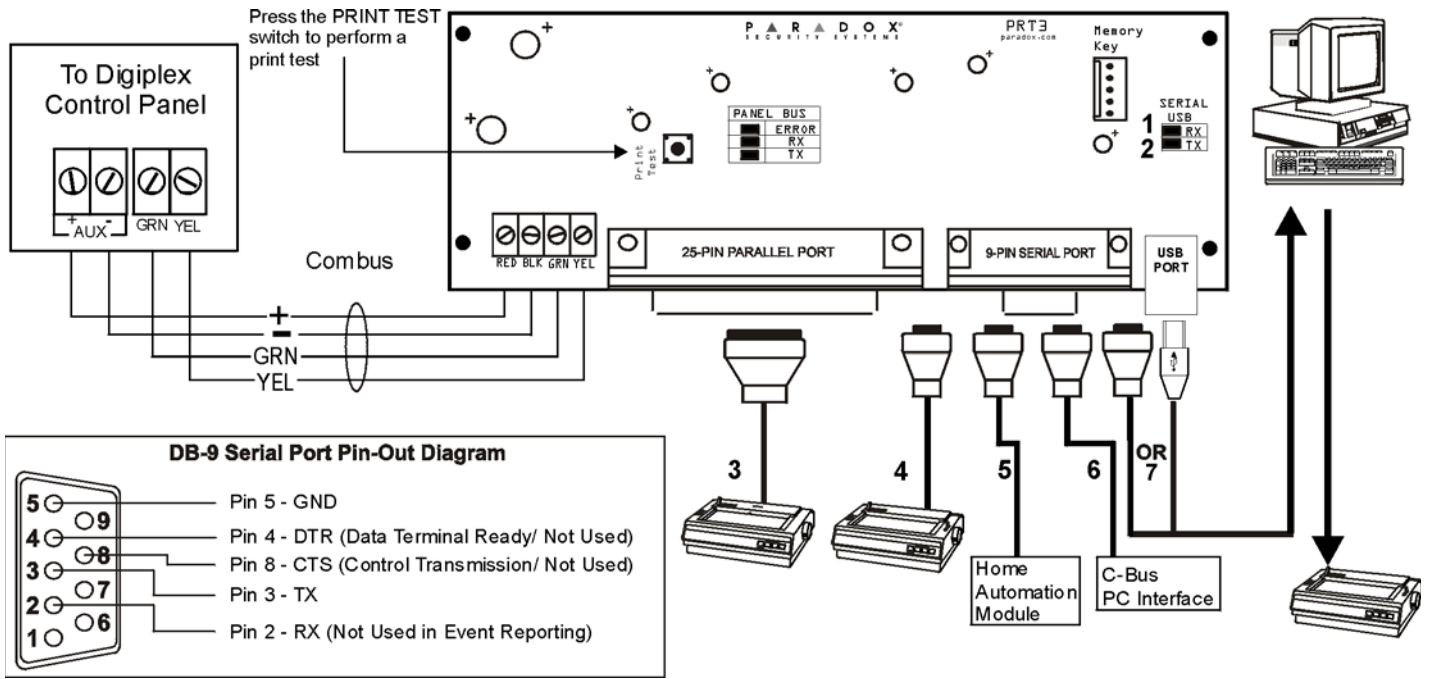
‡ Due to C-Bus limitation, only zones 01 from zones 80 can be reported, C-Bus Network will ignore all others.


* Must enable One-touch regular arming option in the control panel.


** Alarm will be raised as a Panic Alarm to chosen areas.


*** Tamper from C-Bus will be reported as a Printer tamper.

Figure 2: .PRT3 Connection



 Remove AC power and battery before adding a module to the system. Refer to the panel's *Reference and Installation Manual* for the maximum allowable installation distance from the control panel.

 Printer cable length must not exceed 25ft.

 For information on using the printer Module as an interface with home automation modules, see the *ASCII Protocol programming* instructions or *C-BUS Programming* instructions.

1. Green "RX" LED: Flashes when the Printer Module is receiving data through the serial port only.
2. Red "TX" LED: Flashes when the Printer Module is transmitting data through the serial port only.
3. 25-Pin Parallel Port: Connect the Printer Module's 25-pin parallel port to any dot matrix printer.
Note: The dot matrix printer must support a minimum of 80 columns.
4. 9-Pin Serial Port: Connect the Printer Module's 9-Pin serial port to a dot matrix printer.
Note: The dot matrix printer must support a minimum of 80 columns.
5. 9-pin Serial Port: Connect the Printer Module's 9-pin serial port to a home automation module.
6. 9-pin Serial Port: Connect C-Bus to the Printer Module using a **null modem cable**.
7. 9-pin Serial Port: Connect either the Printer Module's USB or 9-pin serial port to a computer's COM port to view the control panel's events on the computer's monitor. The events display on the monitor can then be printed through the printer connected to the computer.

Appendix 1: Programming PGMs

A PGM is a programmable output that toggles to its opposite state (i.e. a normally open PGM will close) when a specific event occurs in the system. For example, a PGM can be used to reset smoke detectors, activate strobe lights, open/close garage doors and much more.

PGM Activation Event

The PGM Activation Event determines which event from what source will activate the PGM. The Event Group specifies the event, the Feature Group identifies the source, and the Start # and End # sets the range within the Feature Group (see PGM Programming Table below).

For example, the PRT3 can activate Virtual PGM1 when the area is armed by User Access Codes 256 to 260. Therefore:
 Event Group section **[102]** = 010 "Arming with User Code"
 Feature Group section **[103]** = 001 "User Codes 256 to 511"
 Start # section **[104]** = 000 (representing user code 256)
 End # section **[105]** = 004 (representing user code 260)

Enter the sections that correspond to the Event Group, Feature Group, Start # and End # of the desired PGM and enter the data as required.

PGM Deactivation Option

Once the PGMs are activated, they can deactivate when another event occurs or after a period of time. The PGM Deactivation Option determines which method is used, the PGM Deactivation Event or the PGM Timer. Enter the section that corresponds to the desired PGM and enable or disable the option.

PGM Deactivation Event

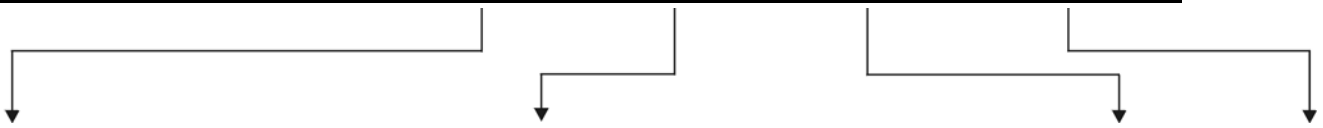
When the PGM Deactivation Option (see above) is disabled, the PGM Deactivation Event determines which event from what source will return the PGM to its original state. The Event Group specifies the event, the Feature Group identifies the source, and the Start # and End # determine the range within the Feature Group. The complete PGM Programming Table appears below.

For example, the PRT3 can deactivate Virtual PGM1 when zone 3 opens. Therefore:
 Event Group section **[106]** = 001 "Zone is Open"
 Feature Group section **[107]** = 000 "Zone Numbers"
 Start # section **[108]** = 003
 End # section **[109]** = 003

Enter the sections that correspond to the Event Group, Feature Group, Start # and End # of the desired PGM and enter the data as required.

PGM Programming Table

		Event Group		Feature Group		Start #		End #	
PGM Activation Event	PGM	___/___	___/___	___/___	___/___	___/___	___/___	___/___	___/___
PGM Deactivation Event	PGM	___/___	___/___	___/___	___/___	___/___	___/___	___/___	___/___



Event Group	Event	Feature Group	Feature	Start #	End #
000	Zone is OK	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
001	Zone is Open	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
002	Zone is Tampered	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
003	Zone is in Fire Loop Trouble	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used

Event Group	Event	Feature Group	Feature	Start #	End #
004	Non-reportable Event	000	TLM Trouble (see NOTE 3 on page 27)	000	000
			Smoke detector reset	001	001
			Arm with no entry delay	002	002
			Arm in Stay mode	003	003
			Arm in Away mode	004	004
			Full arm when in Stay mode	005	005
			Voice module access	006	006
			Remote control access	007	007
			PC Fail to communicate	008	008
			Midnight	009	009
			NEware User Login	010	010
			NEware User Logout	011	011
			User Initiated Callup	012	012
			Force Answer	013	013
			Force Hangup	014	014
255	Any non-reportable event	Not Used	Not Used		
005	User Code entered on Keypad	000	User Codes 000 to 255	000 to 255	000 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
006	User/Card Access on door	000	Door Numbers	001 to 032	001 to 032
		255	Any door number	Not Used	Not Used
007	Bypass Programming Access	000	One-touch Bypass Programming	000	000
		000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
008	TX Delay Zone Alarm	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
009	Arming with Master	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
010	Arming with User Code	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
011	Arming with Keyswitch	000	Keyswitch numbers	001 to 032	001 to 032
		255	Any keyswitch number	Not Used	Not Used
012	Special Arming	000	Auto Arming	000	000
			Arming by WinLoad	001	001
			Late to Close	002	002
			No Movement Arming	003	003
			Partial Arming	004	004
			One-touch Arming	005	005
			Future Use	006	006
			Future Use	007	007
			(InTouch) Voice Module Arming	008	008
			255	Any special arming event	Not Used

Event Group	Event	Feature Group	Feature	Start #	End #
013	Disarm with Master	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
014	Disarm with User Code	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
015	Disarm with Keypad	000	Keypad numbers	001 to 032	001 to 032
		255	Any keypad	Not Used	Not Used
016	Disarm after alarm with Master	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
017	Disarm after alarm with User Code	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
018	Disarm after alarm with Keypad	000	Keypad numbers	001 to 032	001 to 032
		255	Any keypad	Not Used	Not Used
019	Alarm Cancelled with Master	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
020	Alarm Cancelled with User Code	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
021	Alarm Cancelled with Keypad	000	Keypad numbers	001 to 032	001 to 032
		255	Any keypad	Not Used	Not Used
022	Special Disarm Events	000	Auto Arm Cancelled	000	000
			One-touch Stay/Instant Disarm	001	001
			Disarming with WinLoad	002	002
			Disarming with WinLoad after alarm	003	003
			WinLoad cancelled alarm	004	004
			Future Use	005	005
			Future Use	006	006
			Future Use	007	007
		(InTouch) Voice Module Disarming	008	008	
255	Any special disarm event	Not Used	Not Used		
023	Zone Bypassed	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
024	Zone in Alarm	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
025	Fire Alarm	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
026	Zone Alarm Restore	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used

Event Group	Event	Feature Group	Feature	Start #	End #
027	Fire Alarm Restore	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
028	Early to Disarm by User	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
029	Late to Disarm by User	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
030	Special Alarm	000	Emergency Panic (Keys 1 & 3)	000	000
			Medical Panic (Keys 4 & 6)	001	001
			Fire Panic (Keys 7 & 9)	002	002
			Recent Closing	003	003
			Police Code	004	004
			Global Shutdown	005	005
		255	Any special alarm event	Not Used	Not Used
031	Duress Alarm by User	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	001 to 255	001 to 255
		002	User Codes 512 to 767	001 to 255	001 to 255
		003	User Codes 768 to 999	001 to 231	001 to 231
		255	Any User Code	Not Used	Not Used
032	Zone Shutdown	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
033	Zone Tamper	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
034	Zone Tamper Restore	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
035	Special Tamper	000	Keypad Lockout	000	000
036	Trouble Event	000	TLM Trouble (see NOTE 2 on page 27)	000	000
			AC Failure	001	001
			Battery Failure	002	002
			Auxiliary Current Limit	003	003
			Bell Current Limit	004	004
			Bell Absent	005	005
			Clock Trouble	006	006
		Global Fire Loop	007	007	
255	Any trouble event	Not Used	Not Used		
037	Trouble Restore	000	TLM Trouble	000	000
			AC Failure	001	001
			Battery Failure	002	002
			Auxiliary Current Limit	003	003
			Bell Current Limit	004	004
			Bell Absent	005	005
			Clock Trouble	006	006
		Global Fire Loop	007	007	
255	Any trouble restore event	Not Used	Not Used		

Event Group	Event	Feature Group	Feature	Start #	End #
038	Module Trouble	000	Combus Fault	000	000
			Module Tamper	001	001
			ROM/RAM error	002	002
			TLM Trouble	003	003
			Fail to Communicate	004	004
			Printer Fault	005	005
			AC Failure	006	006
			Battery Failure	007	007
		Auxiliary Failure	008	008	
		255	Any module trouble	Not Used	Not Used
039	Module Trouble Restore	000	Combus Fault	000	000
			Module Tamper	001	001
			ROM/RAM error	002	002
			TLM Trouble	003	003
			Fail to Communicate	004	004
			Printer Fault	005	005
			AC Failure	006	006
			Battery Failure	007	007
		Auxiliary Failure	008	008	
		255	Any module trouble restore event	Not Used	Not Used
040	Fail to Communicate on telephone Number	000	Telephone Number	001 to 004	001 to 004
		255	Any telephone number	Not Used	Not Used
041	Low Battery on Zone	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
042	Zone Supervision Trouble	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
043	Low Battery on Zone Restored	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
044	Zone Supervision Trouble Restored	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
045	Special Events	000	Power up after total power down	000	000
			Software reset (Watchdog)	001	001
			Test Report	002	002
			Future Use	003	003
			WinLoad In (connected)	004	004
			WinLoad Out (disconnected)	005	005
			Installer in programming	006	006
		Installer out of programming	007	007	
		255	Any special event	Not Used	Not Used
046	Early to Arm by User	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
047	Late to Arm by User	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
048	Utility Key	000	Utility Key 001 to 064†	001 to 064	001 to 064
		255	Any Utility Key†	Not Used	Not Used

†: see page 27

*: see page 27

Event Group	Event	Feature Group	Feature	Start #	End #
049	Request for Exit	000	Door Numbers	001 to 032	001 to 032
		255	Any door number	Not Used	Not Used
050	Access Denied	000	Door Numbers	001 to 032	001 to 032
		255	Any door number	Not Used	Not Used
051	Door Left Open Alarm	000	Door Numbers	001 to 032	001 to 032
		255	Any door number	Not Used	Not Used
052	Door Forced Alarm	000	Door Numbers	001 to 032	001 to 032
		255	Any door number	Not Used	Not Used
053	Door Left Open Restore	000	Door Numbers	001 to 032	001 to 032
		255	Any door number	Not Used	Not Used
054	Door Forced Open Restore	000	Door Numbers	001 to 032	001 to 032
		255	Any door number	Not Used	Not Used
055	Intellizone Triggered	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
056	Zone Excluded on Force Arming	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
057	Zone Went Back to Arm Status	000	Zone Numbers	001 to 192	001 to 192
		255	Any zone number	Not Used	Not Used
058	New Module Assigned on Combustion	000	Module Address	001 to 254	001 to 254
		255	Any module	Not Used	Not Used
059	Module Manually Removed From Combustion	000	Module Address	001 to 254	001 to 254
		255	Any module	Not Used	Not Used
060 - 061	Future Use	Future Use	Future Use	Future Use	Future Use
062	Access Granted to User	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
063	Access Denied to User	000	User Codes 001 to 255	001 to 255	001 to 255
		001	User Codes 256 to 511	000 to 255	000 to 255
		002	User Codes 512 to 767	000 to 255	000 to 255
		003	User Codes 768 to 999	000 to 231	000 to 231
		255	Any User Code	Not Used	Not Used
064	Status 1	See Note 1 on page 27	Armed	000	000
			Force Armed	001	001
			Stay Armed	002	002
			Instant Armed	003	003
			Strobe Alarm	004	004
			Silent Alarm	005	005
			Audible Alarm	006	006
Fire Alarm	007	007			
065	Status 2	See Note 1 on page 27	Ready	000	000
			Exit Delay	001	001
			Entry Delay	002	002
			System in Trouble	003	003
			Alarm in Memory	004	004
			Zones Bypassed	005	005
			Bypass, Master, Installer Programming	006	006
Keypad Lockout	007	007			

Event Group	Event	Feature Group	Feature	Start #	End #
066	Status 3	See Note 1 on page 27	Intellizone Delay Engaged (see Note 4 on page 27)	000	000
			Fire Delay Engaged	001	001
			Auto Arm	002	002
			Arming with Voice Module (set until Exit Delay finishes)	003	003
			Tamper	004	004
			Zone Low Battery	005	005
			Fire Loop Trouble	006	006
			Zone Supervision Trouble	007	007
067	Future Use	Future Use	Future Use	Future Use	Future Use

NOTE 1: 000 = Occurs in all areas enabled in the system (refer to the appropriate control panel Programming Guide).
001 = Area 1 003 = Area 3 005 = Area 5 (EVO96/EVO192/DGP-NE96 only) 007 = Area 7 (EVO96/EVO192/DGP-NE96 only)
002 = Area 2 004 = Area 4 006 = Area 6 (EVO96/EVO192/DGP-NE96 only) 008 = Area 8 (EVO96/EVO192/DGP-NE96 only)
255 = Occurs in at least one area enabled in the system.

NOTE 2: This TLM trouble event can only be used with DGP-NE96 control panels that have two dialers.

NOTE 3: This TLM trouble event can only be used with control panels that have one dialer.

NOTE 4: This event cannot be used for a module's PGM programming.

*If a Keyswitch Input is used, the input must be defined as "Generates a Utility Key Event on Open" or "Generates a Utility Key Event on Open and Close". If a remote control is used, the remote control button must be defined as a Utility Key button.

†: Actions that Activate a Utility Key Event:

Utility Key Event	Actions			
	Keypad Utility Keys	Keyswitch Inputs (definition = [3])	Keyswitch Inputs (definition = [4])	Remote Control
Utility Key Event 1	[1] & [2]	KS** Input 1 opens	KS** Input 1 opens	Utility Key 1 RC button [‡]
Utility Key Event 2	[4] & [5]	KS** Input 2 opens	KS** Input 1 closes	Utility Key 2 RC button [‡]
Utility Key Event 3	[7] & [8]	KS** Input 3 opens	KS** Input 2 opens	Utility Key 3 RC button [‡]
Utility Key Event 4	[CLEAR] & [0] or [*] & [0]	KS** Input 4 opens	KS** Input 2 closes	Utility Key 4 RC button [‡]
Utility Key Event	Actions			
	Keypad Utility Keys	Keyswitch Inputs (definition = [3])	Keyswitch Inputs (definition = [4])	Remote Control
Utility Key Event 5	[2] & [3]	KS** Input 5 opens	KS** Input 3 opens	Utility Key 5 RC button [‡]
Utility Key Event 6	[5] & [6]	KS** Input 6 opens	KS** Input 3 closes	N/A
Utility Key Event 7	[8] & [9]	KS** Input 7 opens	KS** Input 4 opens	N/A
Utility Key Event 8	[0] & [ENTER] or [0] & [#]	KS** Input 8 opens	KS** Input 4 closes	N/A
Utility Key Event 9	N/A	KS** Input 9 opens	KS** Input 5 opens	N/A
Utility Key Event 10	N/A	KS** Input 10 opens	KS** Input 5 closes	N/A
Utility Key Event 11	N/A	KS** Input 11 opens	KS** Input 6 opens	N/A
Utility Key Event 12	N/A	KS** Input 12 opens	KS** Input 6 closes	N/A
Utility Key Event 13	N/A	KS** Input 13 opens	KS** Input 7 opens	N/A
Utility Key Event 14	N/A	KS** Input 14 opens	KS** Input 7 closes	N/A
Utility Key Event 15	N/A	KS** Input 15 opens	KS** Input 8 opens	N/A
Utility Key Event 16	N/A	KS** Input 16 opens	KS** Input 8 closes	N/A
Utility Key Event 17	N/A	KS** Input 17 opens	KS** Input 9 opens	N/A
Utility Key Event 18	N/A	KS** Input 18 opens	KS** Input 9 closes	N/A
i	N/A	i	i	N/A
Utility Key Event 31	N/A	KS** Input 31 opens	KS** Input 16 opens	N/A
Utility Key Event 32	N/A	KS** Input 32 opens	KS** Input 16 closes	N/A
Utility Key Event 33	N/A	N/A	KS** Input 17 opens	N/A
Utility Key Event 34	N/A	N/A	KS** Input 17 closes	N/A
i	N/A	N/A	i	N/A
Utility Key Event 63	N/A	N/A	KS** Input 32 opens	N/A
Utility Key Event 64	N/A	N/A	KS** Input 32 closes	N/A

** Keyswitch

[‡] Refer to the Magellan™ Reference and Installation Manual for remote control button programming instructions.

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