



## LCD Keypad V2.0



DGP2-641BL

## Reference and Installation Manual





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## 1.0 Introduction

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Thank you for choosing Paradox Security Systems. Digiplex security systems offer advanced technology and provide reliable security protection and powerful features that are easy to use. The elegant and user-friendly LCD Keypad allows easy access to the security system's functions and information at the touch of a button. Since all programming is accomplished through the keypad, please read this manual carefully.

### 1.1 Specifications

Power input:	12 to 16 Vdc, 80mA maximum
PGM current limit:	50 mA
Number of inputs:	1
Power indication:	Yellow LED on
Locate indication:	Green and yellow LEDs flash simultaneously
Bus fault indication:	Red and yellow LEDs flash alternately
Anti-tamper switch:	Yes (also used to deactivate locate)
LCD:	Super Twisted Nematic display (STN), wide viewing angle, 2 lines of 16 characters, backlight and contrast adjustable
Compatibility:	Any Digiplex control panel

## 2.0 Installation

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The LCD keypad (DGP2-641BL) is connected to the control panel's combus in a star and/or daisy chain configuration. The 4-wire combus provides power and two-way communication between the control panel and all modules connected to it. Connect the four terminals labeled red, black, green and yellow of each keypad to the corresponding terminals on the control panel (refer to Figure 2.1 on page 3). Refer to *DGP-848* or *DGP-NE96 Reference & Installation Manual* for the maximum allowable installation distance from the control panel.

### 2.1 Connecting Keypad Zones

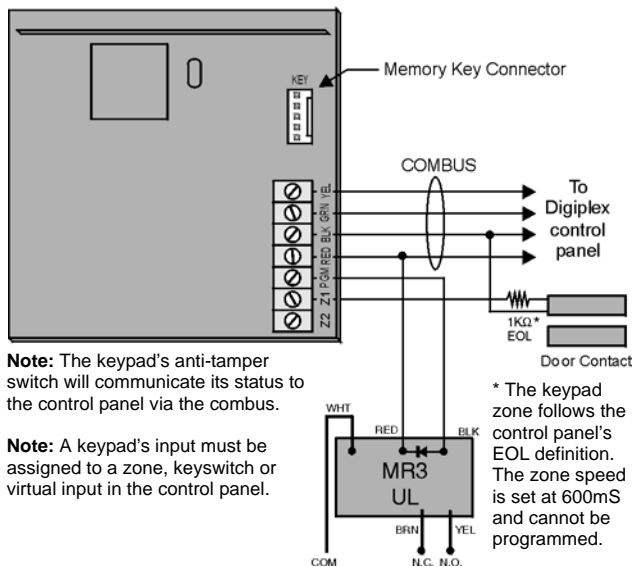
Each keypad has one traditional hardwired input terminal, allowing you to connect one detector or door contact directly to the keypad. For example, a door contact located at the entry point of an establishment can be wired directly to the input terminal of the entry point keypad instead of wiring the door contact all the way to the control panel.

Connect the device to the keypad's input terminal as shown in Figure 2.1 on page 3. In order to communicate its status to the control panel, the keypad's input must be assigned to a zone in the control panel and the zone's parameters must be defined. For more information on zone assignment, please refer to *DGP-848* or *DGP-NE96 Reference & Installation Manual*. Please note that even with the ATZ (zone doubling) feature enabled, the keypad supports only one detection device.

## 2.2 Programmable Output

Each keypad has one on-board PGM. A PGM is a programmable output that switches to its opposite state (i.e. a normally open PGM will close) when a specific event has occurred in the system (refer to section 5.0 on page 14). Upon activation, the PGM can provide 50mA to any device connected to it. If the current drawn is to exceed the current limit, a relay should be connected to the PGM as shown in Figure 2.1.

Figure 2.1: Connecting the Keypad and Keypad Zone  
LCD Keypad (DGP2-641)



## 3.0 Programming

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To program the DGP2-641BL keypad, enter Module Programming Mode and then enter the desired section followed by the required data. When programming the keypad, use the keypad's programming sheets (found in the *Digiplex Modules' Programming Guide*) to keep track of which sections were programmed and how. We strongly recommend you read this entire manual before you begin programming.

The LCD keypad can also be programmed using the **WinLoad** Security System Management Software. For more information, refer to the WinLoad instructions or visit our website at [www.paradox.ca](http://www.paradox.ca).

### 3.1 Entering Module Programming Mode

The keypad, like all other modules in the system, is programmed through the control panel. To do so, you must first enter Module Programming Mode:

1. From Normal Mode press and hold the **[0]** key.
2. Enter the **[INSTALLER CODE]** (Default: 000000).
3. Enter section **[953]** (DGP-848) / **[4003]** (DGP-NE96).
4. Enter the keypad's 8-digit **[SERIAL NUMBER]**.
5. Enter the 3-digit **[SECTION]** you want to program.
6. Enter the required **[DATA]**.

The control panel will then redirect all programming to the selected keypad. Every time the **[CLEAR]** key is pressed it will revert to the preceding step, unless entering in data in which case it will erase the current data entry. Please note that the



serial number is located on the keypad's PC board or enter section **[000]** in Step 3 to view the keypad's serial number.

## 3.2 Programming Methods

The following methods can be used when programming the keypad:

### 3.2.1 Feature Select Programming

Some sections are programmed by enabling or disabling options. Within the sections, numbers from **[1]** to **[8]** represent a specific keypad option. Press the key corresponding to the desired option and the digit will appear in the display. This means the option is enabled. Press the key again to remove the digit from the display thereby disabling the option. Press **[ENTER]** when options are set.

### 3.2.2 Decimal Programming

Some sections require that a decimal value be entered. In this method, any digit from 000 to 255 can be entered.

## 3.3 Module Broadcast

The control panel's Module Broadcast feature can be used to copy the contents of one keypad to one or more keypads.

1. From Normal Mode press and hold the **[0]** key.
2. Enter **[INSTALLER CODE]** (Default: 000000).
3. Enter section **[954]** (DGP-848) / **[4004]** (DGP-NE96).
4. Enter the **[SERIAL #]** of the source keypad. The *source* is the programmed keypad whose data you want to copy to other keypads.
5. Enter the **[SERIAL #]** of the destination keypads. The *destination* is the keypad(s) you want to program with the

source's data. If you want to program more than one keypad with the source's data, enter the serial numbers of the keypads one at a time.

6. Once you have entered the serial numbers of the keypads you want to program, press the **[ACC]** key.

### 3.4 Memory Key

Sections **[510]** and **[520]**

Download information to and from an LCD keypad using the memory key (PMC-3).

Section **[510]** = Download all from the memory key (LCD keypad sections **[001]** to **[396]** and all messages) to the LCD keypad.

Section **[520]** = Copy the LCD keypad sections **[001]** to **[396]** and all messages to the memory key.



***Only the PMC-3 memory key will function with the LCD keypad.***

### 3.5 Download Contents of Memory Key to Keypad

Section **[510]**

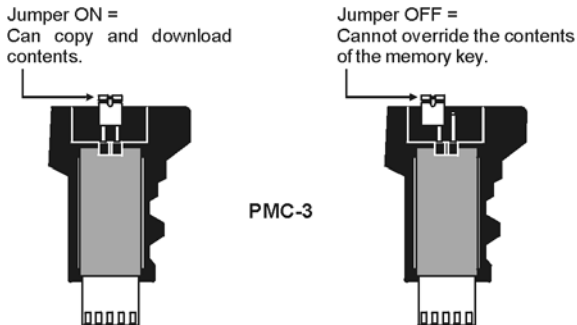
1. Insert the memory key into the keypad's connector labelled "KEY" (refer to Figure 2.1 on page 3).
2. To download the contents of the memory key, enter the keypad's programming mode and enter section **[510]**.
3. When the keypad emits a confirmation beep, wait 5 seconds and remove the memory key after the second confirmation beep.

### 3.6 Copy the Keypad Contents to the Memory Key

#### Section [520]

1. Insert the memory key onto the keypad's connector labelled "KEY" (refer to Figure 2.1 on page 3). Ensure that the write protect jumper is ON (refer to Figure 3.1).
2. To copy the contents to the memory key, enter the keypad's programming mode and enter section [520].
3. After the confirmation beep, wait 5 seconds and remove the memory key after the second confirmation beep. Set the memory key's jumper to OFF if you do not wish to accidentally overwrite its contents (refer to Figure 3.1).

Figure 3.1: PMC-3 Jumper Settings



## 4.0 System Options

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### 4.1 Partition Assignment

Section [001]: Options [1] to [8]

Each keypad in the system can be assigned to one or more partitions. In section [001], options [1] to [8] represent partitions 1 through 8 respectively. To assign the keypad to a partition, simply enable the option that corresponds to the desired partition. By default, partitions 1 to 8 are enabled.



***Section [001] options [5] to [8] can only be used if the keypad is connected to a DGP-NE96 control panel.***

### 4.2 Display Access Code Entry

Section [003]: Option [1]

The digits of the user access codes can be displayed on the LCD screen when they are entered.

Option [1] OFF = Digits are replaced by a \* (default)

Option [1] ON = Access Code digits will be displayed

### 4.3 Display Exit Delay Timer

Section [003]: Option [2]

Based on the user's needs, an Exit Delay Timer will be programmed to provide the user time to exit the partition before the system is armed. The Exit Delay Timer's countdown can be displayed on the LCD screen.

Option [2] OFF= Will not display Exit Delay timer (default)

Option [2] ON= LCD screen will display Exit Delay timer

## 4.4 Display Entry Delay Timer

Section **[003]**: Option **[3]**

Based on the user's needs, an Entry Delay Timer will be programmed to provide the user time to enter their user access code before the alarm is triggered. The Entry Delay Timer's countdown can be displayed on the LCD screen.

Option **[3]** OFF= Will not display the Entry Delay Timer  
(default)

Option **[3]** ON= LCD screen will display Entry Delay Timer

## 4.5 Confidential Mode

Section **[003]**: Options **[4]** and **[5]**

If the Confidential Mode is enabled and no actions are performed on the keypad for a period of time, the LCD screen will appear as shown in Figure 4.1 (page 10) and the "AC" and "STATUS" LED will be off until either a button is pressed or an access code is entered. The period of time in which no action is performed is defined by the Confidential Mode Timer (005-255 seconds; refer to section 4.6 on page 10). Confidential Mode is activated by enabling option **[4]**. Option **[5]** regulates whether the LCD screen will be activated at the touch of a button or only when an access code is entered.

Once the LCD screen is activated (by code or button), Normal Mode will appear and display the date and time as shown in Figure 4.1 on page 10. The status of the areas, the open zones for every area the keypad is assigned, the Alarm Memory Display (if necessary) and the Trouble Display (if necessary. See *DGP-848 or DGP-NE96 User Manual*) will also scroll on the LCD screen.

Option **[4]** OFF = Normal Mode (default)

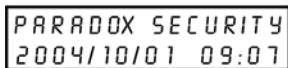
Option **[4]** ON = Confidential Mode

Option **[5]** OFF = LCD screen activated by entering an access code (default)

Option **[5]** ON = LCD screen activated by pressing a button

Figure 4.1: LCD Screen

in *Normal Mode*:



PARADOX SECURITY  
2004/10/01 09:07

in *Confidential Mode*:



CONFIDENTIAL  
2004/10/01 09:07

## 4.6 Confidential Mode Timer

### Section **[007]**

Section **[007]** determines the amount of time without action before the keypad enters Confidential Mode. For more information on Confidential Mode, refer to “Confidential Mode” on page 9. The Confidential Mode Timer can be set from 005 seconds to 255 seconds. Default: 120 seconds.

## 4.7 Time Display Option

### Section **[003]**: Option **[8]**

The LCD keypad comes with a time display option that can display the date as year/month/day or as day/month/year.

Option **[8]** OFF = Date displayed as yy/mm/dd (default)

Option **[8]** ON = Date displayed as dd/mm/yy

## 4.8 Muting

Section [004]: Option [1]

The keypad can be programmed **not** to emit audible sounds, including Chimed zones. During Muting, the keypad will **only** emit the Confirmation Beep, Rejection Beep, and beep when a button is pressed.

Option [1] OFF = Audible sounds (default)

Option [1] ON = Mute

## 4.9 Beep on Exit Delay

Section [004]: Option [2]

The keypad can beep once every second during the Exit Delay Timer. During the final 10 seconds, it will beep more rapidly to provide a final warning before the area is armed.

Option [2] OFF= Exit Delay beep disabled

Option [2] ON= Exit Delay beep enabled (default)

## 4.10 Chime on Zone Closure

Section [004]: Option [4]

During the Chime Zone Time Period that the user sets, the keypad can emit an intermittent beep whenever a zone with the Chime feature enabled closes (see *DGP-848* or *DGP-NE96 User Manual* for details on Chime Zones). If the user does not set the Chime Zone Time Period and this option is enabled, the Chime Zones will always beep upon closure.

Option [4] OFF = Chime on Zone Closure disabled (default)

Option [4] ON = Chime on Zone Closure enabled

## 4.11 Beep on Trouble

Section [005]: Options [1] to [4]

Potential troubles have been sorted into groups. With these options enabled, the keypad will emit an intermittent beep tone whenever a trouble condition from the Trouble Groups occurs in the system. The intermittent beep will remain activated until the user enters the Trouble Display or if the trouble is resolved. For a list of the troubles, see the *DGP-848* or *DGP-NE96 Reference and Installation Manual*. The intermittent beep will be re-initialized whenever the trouble condition re-occurs.

Option [1] OFF = Beep disabled: System Troubles and Clock Loss (default)

Option [1] ON = Beep enabled: System Troubles and Clock Loss

Option [2] OFF = Beep disabled: Communicator Troubles (default)

Option [2] ON = Beep enabled: Communicator Troubles

Option [3] OFF = Beep disabled: Module and Bus Troubles (default)

Option [3] ON = Beep enabled: Module and Bus Troubles

Option [4] OFF = Beep disabled: all Zone Troubles (default)

Option [4] ON = Beep enabled: all Zone Troubles

## 4.12 Keypad Tamper Enable

Section [006]: Option [5]

When tamper is enabled and the keypad's on-board anti-tamper switch is triggered, the keypad will send a Tamper report to the control panel via the combus.



Option **[5]** OFF = Keypad's tamper is disabled (default)

Option **[5]** ON = Keypad's tamper is enabled

### 4.13 Combust Voltmeter

The combust Voltmeter provides a real-time display of the voltage so you can verify if the bus is supplying sufficient power at the keypad's location. The readings will appear on the LCD screen. A reading of 10.5V indicates that the voltage is too low. This may occur when too many modules are connected to the bus, a module is installed too far from the panel or if the system is running on the battery. In some cases adding an external power supply may correct the situation.

1. From Normal Mode press and hold the **[0]** key.
2. Enter the **[INSTALLER CODE]** (Default: 000000).
3. Press **[ACC]**.



*The voltage may drop during the control panel battery test.*

## 5.0 Programmable Output Options

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### 5.1 PGM State

Section [006]: Option [1]

The keypad's on-board PGM can be set as normally open or normally closed. When an open PGM is activated, it will close the circuit from ground and enable any devices connected to it. When a closed PGM is activated, it will open the circuit and disable any devices connected to it. When the PGM Activation Event occurs (see section 5.6), the PGM will switch to its opposite state (i.e. open to closed or closed to open).

Option [1] OFF= PGM is Normally Open (default)

Option [1] ON= PGM is Normally Closed



*The PGM can provide 50mA to any device connected to it.*

### 5.2 PGM Deactivation Mode

Section [006]: Option [2]

If the keypad is in PGM Timed Mode, the keypad's on-board PGM will be deactivated according to the PGM Timer (see section 5.5 below) instead of the PGM Deactivation Event.

Option [2] OFF = Deactivates on PGM Deactivation Event (default)

Option [2] ON = PGM will deactivate according to the PGM Timer

## 5.3 PGM Base Time

Section **[006]**: Option **[3]**

If the keypad's on-board PGM is set in PGM Timed Mode (see section 5.2 on page 14) you must define whether the value programmed in section **[008]** is in minutes or seconds.

Option **[3]** OFF = PGM Base Time is 1 second (default)

Option **[3]** ON = PGM Base Time is 1 minute

## 5.4 PGM Override

Section **[006]**: Option **[4]**

When the PGM override is enabled, the keypad's on-board PGM will ignore PGM Activation Events (section 5.6 on page 16), PGM Deactivation Events (section 5.7 on page 16), and PGM Timers (section 5.5 on page 15). It will remain in its normal state until the PGM Override is disabled. This option may be used to test the PGM connections.

Option **[4]** OFF = PGM Override disabled (default)

Option **[4]** ON = PGM Override enabled

## 5.5 PGM Timer

Section **[008]**

If the keypad's on-board PGM is in PGM Timed Mode, the value programmed in section **[008]** represents how long the PGM will remain in its opposite state (see section 5.1 on page 14) after being activated. To program the timer, enter a 3-digit decimal value (000 to 255) in section **[008]**. The 3-digit value will be multiplied by the PGM Base Time of 1 second or 1 minute (see section 5.3 above). Default: 5 seconds.

## 5.6 PGM Activation Event

Sections [009] to [012]

The PGM Activation Event determines which event will activate the keypad's on-board PGM output. The *Event Group* specifies the event, the *Feature Group* identifies the source, and the *Start #* and *End #* sets the range within the Feature Group. Use the PGM Programming Table in the *Digiplex Modules' Programming Guide* to program the keypad's PGM Activation Event.

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

	Event Group	Feature Group	Start #	End #
PGM	[009]	[010]	[011]	[012]

## 5.7 PGM Deactivation Event

Sections [013] to [016]

If the PGM Deactivation Option (section 5.2 on page 14) is set to follow the PGM Deactivation event, the PGM will return to its normal state when the event programmed in sections [013] to [016] occurs. The *Event Group* specifies the event, the *Feature Group* identifies the source, and the *Start #* and *End #* sets the range within the Feature Group. Use the PGM Programming Table in the *Digiplex Modules' Programming Guide* to program the keypad's PGM Activation Event.

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

	Event Group	Feature Group	Start #	End #
PGM	[013]	[014]	[015]	[016]

## 6.0 Message Programming

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Sections **[101]** to **[148]**, **[200]** to **[204]**, and **[301]** to **[396]**

Each section contains one message with a maximum of 16 characters. For more details and to record any changes, use the *Digiplex Modules' Programming Guide*.



*The DGP-NE96 control panel has up to 8 partitions, 96 zones and up to 999 user codes. The LCD keypad only allows you to program the messages for up to 4 partitions, 48 zones and 96 user codes. The rest of the messages can be programmed directly into the DGP-NE96 control panel. Refer to the DGP-NE96 Reference & Installation Manual and to the DGP-NE96 Programming Guide for more details.*

Section **[101]** to **[148]** = “Zone 01” to “Zone 48” respectively

Section **[200]** = “Paradox Security”

Section **[201]** to **[204]** = “First Area”, “Second Area”, “Third Area”, and “Fourth Area” respectively

Section **[301]** to **[396]** = “Code 01” to “Code 96” respectively

After entering the section corresponding to the desired message, use the Message Programming Keys (refer to Table 6.1 on page 18) and the Special Function Keys (refer to page 18) to change the message to suit your installation needs. For example, section **[101]** “ZONE 01” can be changed to “FRONT DOOR”.

Table 6.1: Message Programming Keys

Key	Press Key Once	Press Key Twice	Press Key Three Times
[1]	A	B	C
[2]	D	E	F
[3]	G	H	I
[4]	J	K	L
[5]	M	N	O
[6]	P	Q	R
[7]	S	T	U
[8]	V	W	X
[9]	Y	Z	

## 6.1 Special Function Keys

### [STAY] - Insert Space

Pressing the [STAY] key inserts a blank space in the current cursor position.

### [FORCE] - Delete

Pressing the [FORCE] key will delete the character or blank space found at the current cursor position.

### [ARM] - Delete Until the End

Pressing the [ARM] key will delete all characters and spaces to the right of the cursor and at the cursor's position.

### [DISARM] - Numeric Keys / Alphanumeric Keys

Every time the [DISARM] key is pressed it will toggle numeric keys to alphanumeric keys and vice versa. Numeric: Keys [0] to [9] represent numbers 0 to 9.

**[BYP]** - Lower Case / Upper Case

Every time the **[BYP]** key is pressed it will toggle the case setting from lower to upper case and vice versa.

**[MEM]** - Special Characters

After pressing the **[MEM]** key, the cursor will turn into a flashing black square. Using Table 6.2 on page 20, enter the 3-digit number that represents the desired symbol.

Table 6.2: Special Characters Catalog

032	048	064	080	096	112	128	144	160	176	192	208
	Ø	ƒ	P	`	p	Û	Ê	-	§	∅	·
033	049	065	081	097	113	129	145	161	177	193	209
!	1	A	Q	a	q	Ù	È	î	-	Ł	
034	050	066	082	098	114	130	146	162	178	194	210
"	2	B	R	b	r	Ú	É	ï	ıj	ı	ı
035	051	067	083	099	115	131	147	163	179	195	211
#	3	C	S	c	s	Ü	Ë	í	↑	ıı	
036	052	068	084	100	116	132	148	164	180	196	212
\$	4	D	T	d	t	û	ê	ï	↓	ıı	
037	053	069	085	101	117	133	149	165	181	197	213
%	5	E	U	e	u	ù	è	ì	↶	ıı	
038	054	070	086	102	118	134	150	166	182	198	214
&	6	F	V	f	v	ú	é	ñ	ıı	ıı	÷
039	055	071	087	103	119	135	151	167	183	199	215
'	7	G	W	g	w	ô	ë	ñ	ıı	ıı	
040	056	072	088	104	120	136	152	168	184	200	216
(	8	H	X	h	x	ò	å	ñ	→	ıı	
041	057	073	089	105	121	137	153	169	185	201	217
)	9	I	Y	i	y	ó	ä	-	↓	ıı	ıı
042	058	074	090	106	122	138	154	170	186	202	218
*	:	J	Z	j	z	-	å	ıı	↑	ıı	ıı
043	059	075	091	107	123	139	155	171	187	203	219
+	;	K	[	k	{	ıı	â	ıı	↓	Å	x
044	060	076	092	108	124	140	156	172	188	204	220
,	<	L	*	ıı	ıı	ıı	à	-	ıı	ıı	®
045	061	077	093	109	125	141	157	173	189	205	221
-	=	M	]	m	}	ıı	á	-	ıı	ıı	©
046	062	078	094	110	126	142	158	174	190	206	222
.	>	N	^	n	→	ıı	ä	ıı	ıı	ıı	ıı
047	063	079	095	111	127	143	159	175	191	207	223
/	?	O	-	o	←	ıı	Ä	ıı	ıı	ıı	ıı



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