K07C: Grafica Color Keypad V1.0

PARADOX SECURITY SYSTEMS

Reference and Installation Manual

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One or more of the following US patents may apply: 7046142, 6215399, 6111256, 6104319, 5920259, 5886632, 5721542, 5287111, 5119069, 5077549 and RE39406 and other pending patents may apply. Canadian and international patents may also apply.

Table of Contents

Overview 5
- Description 5
- Features 5

Installation 6
- Viewing Angle 6
- Keypad Cover Clearance 6
- Mounting the Metal Wall Plate 7
- Connecting Grafica 7
- Keypad Input 9
- Temperature Sensors 9
- Mounting Grafica 10
- Removing Grafica 11
- Firmware Upgrade 12

Imperial System Programming 12

EVO/DGP System Programming 12
- Entering Module Programming Mode 13
- Programming Methods 13
- Feature Select Programming 13
- Decimal Programming 13
- Hexadecimal Programming 13
- Keypad Options 14
- Temperature Broadcast 18
- EVO/DGP Programming Sections 20

Specifications

Power input	Typically 12 to 16 Vdc
Current consumption	120 mA (at maximum backlight setting)
Number of inputs	1
Temperature sensors	1 built-in, 1 optional external temperature sensor (TEMP07)
Locate indication	Blue LED flashes
Multibus/Combus fault indication	Fault indication message will appear on the LCD screen.
Anti-tamper switch	Yes (optional)
Display	TFT screen (Thin Film Transistor). Under electrostatic-discharge (ESD) conditions the screen may go blank. To reset the screen press any key or wait one minute. Screen size: 9cm (3.5”) Screen resolution: 320x240 Colors: 64k colors
Compatibility	Imperial V32 EVO48/192 DGP-NE96 DGP-848 **NOTE:** Imperial systems require BabyWare V1.0.300 and higher. Refer to the Imperial System Guide.

Chapter 1: Overview

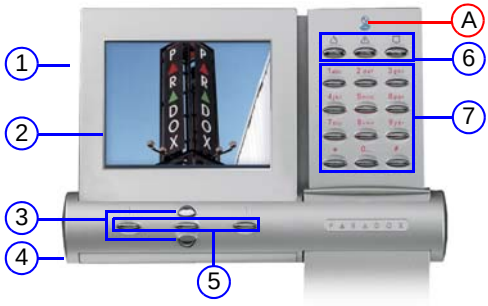
Description

Grafica sets a new milestone for keypads in the security industry. With its full color LCD screen, Grafica offers the unique ability to view zone locations on floor plan drawings.

Other features include a photo screensaver, downloadable tunes and bitmaps for many functions, a smart search engine for users and zones, and an alarm clock.

Features

- Photo screensaver
- Downloadable tunes and bitmaps
- Smart search engine for users and zones
- Alarm clock
- Indoor temperature sensor
- Outdoor temperature sensor (optional)
- 14 one-touch action buttons
- 3 keypad-activated panic alarms
- Adjustable backlight and volume



1. SD memory card slot
2. Color LCD screen
3. Scroll keys - navigation
4. Temperature sensor
5. Action keys - selection
6. Panic keys
7. Alphanumeric keys

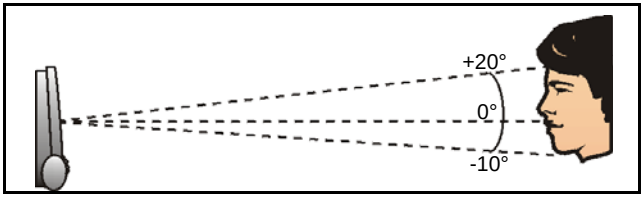
A) Power light:
On = AC power
Off = Power failure
Flash = System is locating the keypad

Chapter 2: Installation

Viewing Angle

Grafica's graphic LCD screen is best viewed from an angle between 20° and -10° (see Figure 1). Be sure to install the Grafica keypad at a height and in a direction that provides the best viewing angle.

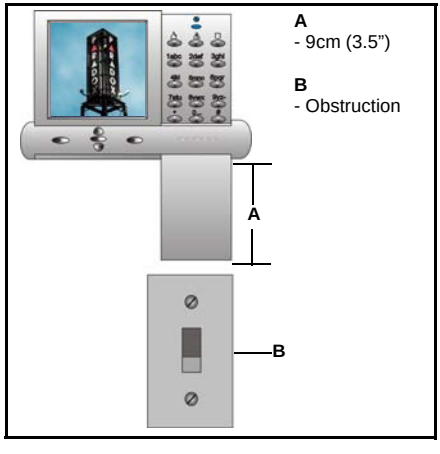
Figure 1



Keypad Cover Clearance

Grafica's keypad cover requires sufficient space in order to open properly. Ensure a clearance of approximately 9cm (3.5in) between the bottom of the keypad and possible obstructions such as a light switch that may prevent the keypad from opening properly (see Figure 2).

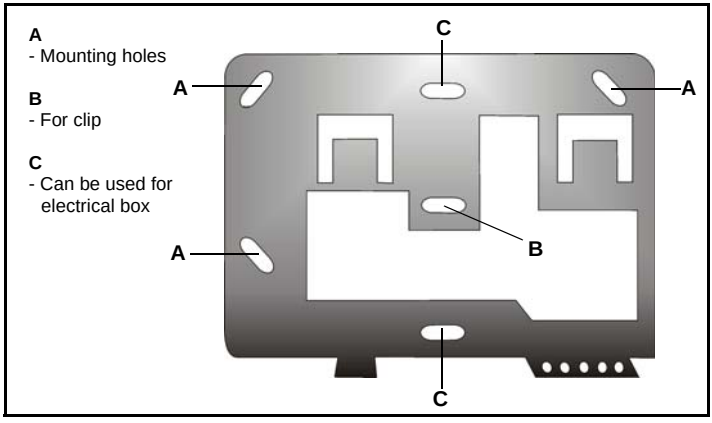
Figure 2



Mounting the Metal Wall Plate

1. Place metal wall plate to desired position.
2. Drill and insert screws into holes labeled “A” (see Figure 3). Both the top and bottom center holes “C” can be used for an electrical box.

Figure 3

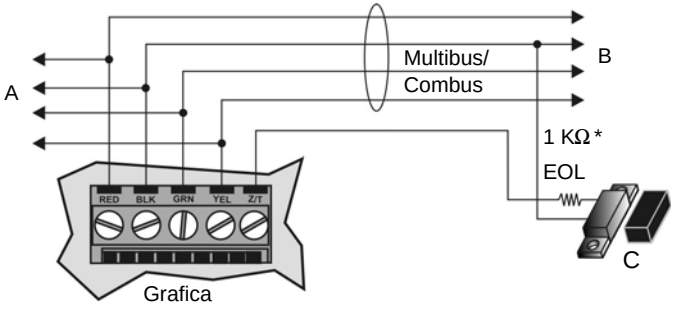


Connecting Grafica

Grafica connects to the control panel’s Multibus/Combus in a star and/or daisy chain configuration. The Multibus/Combus consists of four wires that provide power and two-way communication between the control panel and all modules connected to it. Connect the four terminals labelled **RED**, **BLK**, **GRN** and **YEL** of the module to the corresponding terminals on the control panel (see Figure 4 on page 8). For the maximum allowable installation distance, refer to the *Imperial System Guide* or the *EVO/DGP Reference & Installation Manual*.

Figure 4

Connecting Grafica with Keypad Input



- * The keypad zone follows the control panel's EOL definition. The zone speed is set at 600mS and cannot be programmed.

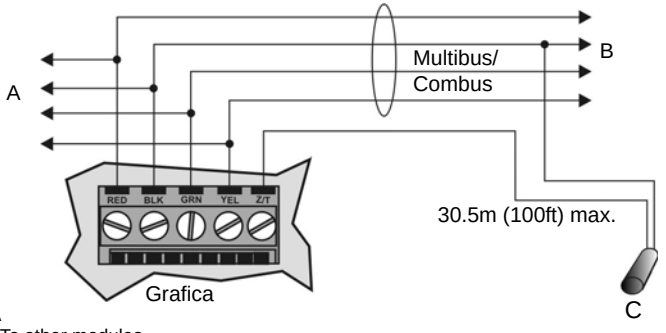
A
- To other modules

B
- To control panel

C
- Door Contact

Figure 5

Connecting Grafica with Temp. Sensor



A
- To other modules

B
- To control panel

C
- Temperature Sensor (TEMP07)

Keypad Input

Grafica's keypad input can be utilized as a zone input or as an input for the optional temperature sensor (see Optional External Temperature Sensor). Refer to Figure 5 on page 8 for connection instructions.

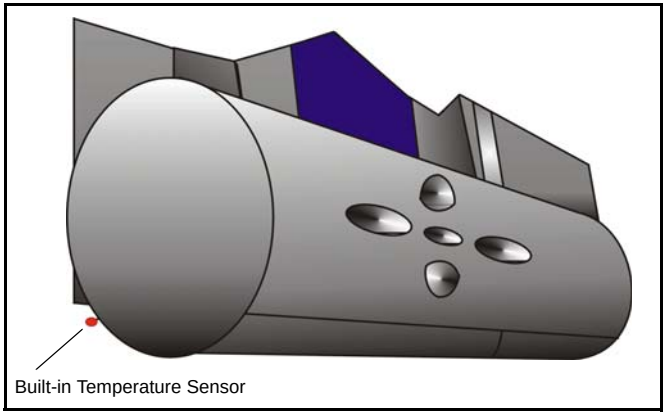
Temperature Sensors

Grafica offers a built-in temperature sensor and an optional external temperature sensor.

Built-in Temperature Sensor

If the *Inside Temp. ON* option is enabled, the built-in temperature sensor's (see Figure 6) reading will display on the System Status screen next to the word "IN". If another temperature sensor is required, see Optional External Temperature Sensor.

Figure 6



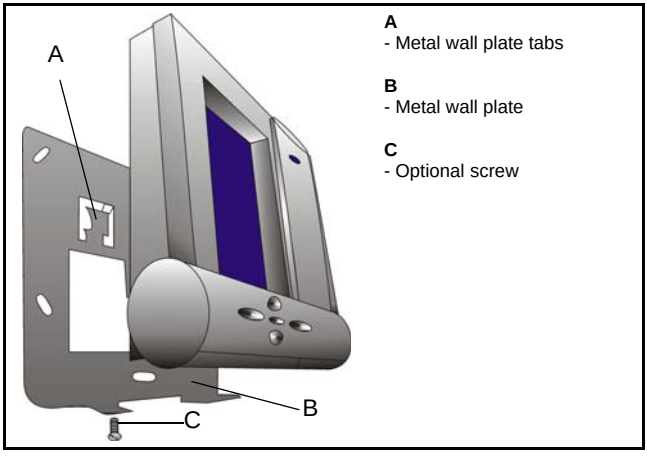
Optional External Temperature Sensor

Grafica offers an optional external temperature sensor (TEMP07) that connects to Grafica's keypad input (see Keypad Input). If the *Outside Temp. ON* option is enabled, the sensor's reading will display on the System Status screen next to the word "OUT".

Mounting Grafica

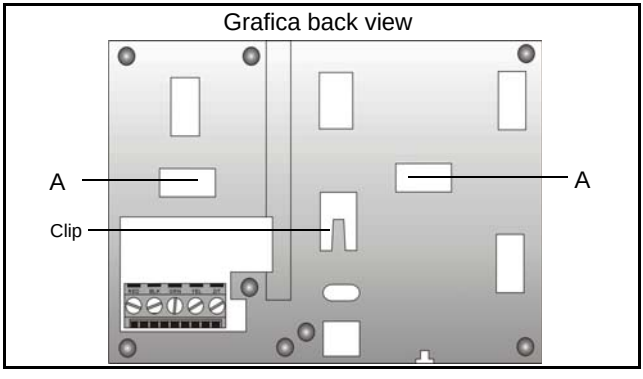
1. Place Grafica's back plate flush against the mounted metal wall plate "B" (see Figure 7).

Figure 7



2. Slide Grafica's open slots labeled "A" (see Figure 8) onto the metal wall plate's tabs labeled "A" (see Figure 7).

Figure 8



3. Gently apply downward pressure to snap Grafica onto the metal wall plate.

4. You may insert the optional screw “C” under the Grafica keypad through the space in the metal wall plate’s left tab (see Figure 7 on page 10).

Removing Grafica

1. If required, remove the optional screw (see Figure 7 on page 10).
2. Gently slide the unit upwards with your hands until it separates from the metal wall plate (see Figure 9).

Figure 9

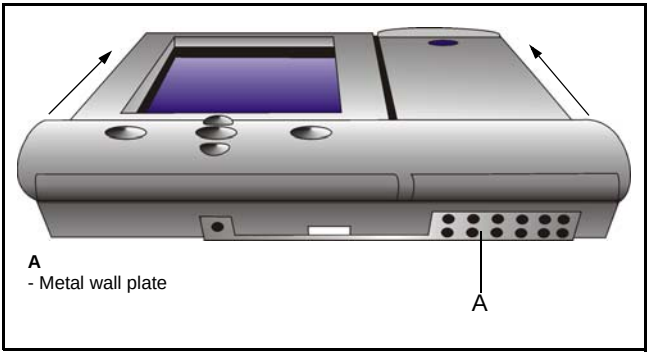
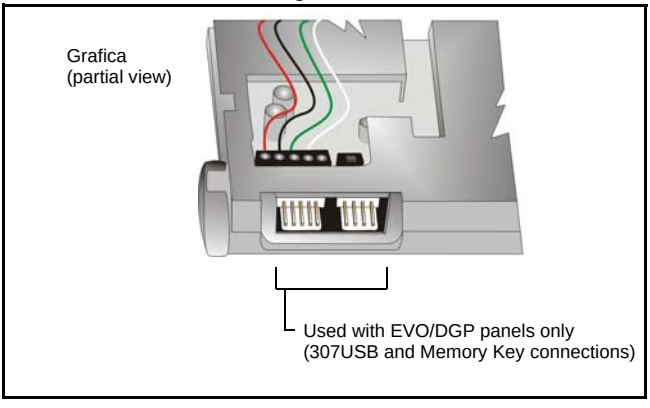


Figure 10



Firmware Upgrade

Imperial Systems

The K07C is firmware upgradeable remotely via the V32 controller's Multibus at 57.6Kbps. Using BabyWare connect to the V32 account using any of the connection methods (direct connect, IP static, or IP DNS). Right-click the desired module and select Upgrade. When communicating through the Internet, BabyWare will indicate whether the panel or any of the bus modules have a newer firmware version available. A firmware upgrade for a single module or group of modules will take usually less than 10 minutes, which keeps system downtime to a minimum.

EVO/DGP Systems

Upgrade Grafica's firmware version using the 307USB Direct Connect Interface (see 4-pin connection in Figure 10 on page 11) and In-Field Paradox Upgrade Software. For firmware upgrade instructions, go to paradox.com > Software >WinLoad, and locate the Firmware Upgrade Instructions document.

NOTE: You must first disconnect the keypad's GRN and YEL combus wires before following instructions.

Chapter 3: Imperial System Programming

For Imperial systems, all Grafica programming and options are set using BabyWare software. For more information, refer to the BabyWare instructions in the Imperial System Guide.

NOTE: Floor plans, tones and graphics can be downloaded to Grafica using BabyWare.

Chapter 4: EVO/DGP System Programming

For EVO and DGP systems, Grafica programming is done through the panel's Module Programming Mode. Grafica can also be programmed using the WinLoad Installer Upload/Download Software. For more information, refer to the WinLoad instructions or visit our Web site at www.paradox.com. We strongly recommend that you read this entire manual before you begin programming.

NOTE: Floor plans, tones and graphics can be downloaded to Grafica using WinLoad V2.6 or higher and NEware V2.0 or higher.

Entering Module Programming Mode

Like all other keypads in the system, Grafica is programmed through the control panel. To do so, you must enter the panel's Module Programming Mode:

1. From Normal Mode press and hold the **[0]** key.
2. Enter the **[INSTALLER CODE]** (by default 000000).
3. Enter section **[4003]**.
4. Enter Grafica'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 Grafica keypad. Use the scroll and action keys (see Figure 1 on page 6) to navigate through desired sections.

NOTE: The keypad's serial number is located on the PCB, or enter section **[0000]** in step 3 to view Grafica's version and serial number.

Programming Methods

The following methods can be used when programming the Grafica keypad:

Feature Select Programming

You can program sections by enabling or disabling options. Within these sections, keys **[1]** to **[8]** or scroll keys represent a specific Grafica option. Use the scroll keys to highlight the desired option and press the corresponding action key to enable or disable the option. An "**X**" will appear to indicate that the option is enabled. Press the appropriate action key to save the status of the selected options.

Decimal Programming

Some sections require the entry of a decimal value. For this method, any value from 000 to 255 can be entered.

Hexadecimal Programming

Some sections require the entry of hexadecimal values **A** to **F**. Press the **[#]** key to scroll through these values. If the value is left unchanged for two seconds, Grafica will automatically select it and move forward to the next digit.

Keypad Options

The following sections detail Grafica's programing options for EVO/DGP systems.

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, enable the option that corresponds to the desired partition. By default, partitions 1 to 8 are enabled.

NOTE: Options **[5]** to **[8]** are not available with DGP-848 systems.

Display Code Entry

SECTION [002]: OPTION [1]

This option determines whether the user's code # (PIN) is displayed on the LCD screen when entering the PIN.

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

Option **[1]** ON = Code # (PIN) digits will be displayed

Display Exit Delay

SECTION [002]: OPTION [2]

Based on the user's needs, an Exit Delay Timer can be programmed to provide the user time to exit the partition before the system is armed. If this option is enabled, the Exit Delay Timer's countdown will appear on the LCD screen next to the hourglass icon.

Option **[2]** OFF = Exit delay time will not appear

Option **[2]** ON = Exit delay time will appear (default)

Display Entry Delay

SECTION [002]: OPTION [3]

Based on the user's needs, an Entry Delay Timer can be programmed to provide the user time to enter their code # (PIN) before the alarm is triggered. If this option is enabled, the Entry Delay Timer's countdown will appear on the graphic LCD screen next to the hourglass icon.

Option **[3]** OFF = Does not display Entry Delay Timer

Option **[3]** ON = Displays Entry Delay Timer (default)

Confidential Mode

SECTION [002]: OPTIONS [4] AND [5]

WARNING: For UL installations, Confidential Mode must be disabled (option [4] = OFF)

If Confidential Mode is enabled and actions are not performed on the Grafica keypad for a period of time, the screen will display the time, date and all LEDs on the keypad will turn off until either a key is pressed, or an code # is entered. The period of time in which no action is performed is defined by the Confidential Mode Timer (see "Confidential Mode Timer" on page 17).

Grafica will switch from Confidential Mode to Normal Mode when a key is pressed or a code # (PIN) is entered. In normal mode, Grafica displays the date, time and the status of the zones for every partition assigned to the keypad. In addition, the alarm memory, bypassed zones and troubles will also be displayed.

SECTION [002]: OPTION [4]

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

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

SECTION [002]: OPTION [5]

Option **[5]** OFF = Exit confidential mode by entering an code # (PIN) (default)

Option **[5]** ON = Exit confidential mode by pressing any key

NOTE: Section **[002]** option **[5]** will work only if option **[4]** in section **[002]** is enabled.

Exit Delay Beep

SECTION [002]: OPTION [6]

The keypad can beep once every second or play a selected tone during the Exit Delay Timer. During the final 10 seconds only the beep tone will be heard (at a faster interval) to provide a final warning before the area is armed.

Option **[6]** OFF = Exit Delay beep is disabled

Option **[6]** ON = Exit Delay beep is enabled (default)

Keypad Input Type

SECTION [002]: OPTION [7]

Grafica's keypad input (see "Keypad Input" on page 9) can be utilized as a zone or as an input for an optional external temperature sensor

(see “Optional External Temperature Sensor” on page 9). If set as a temperature input, Grafica represents it as the outside temperature on the System Status screen next to the word “OUT”.

Option **[7]** OFF = Temperature sensor input (default)

Option **[7]** ON = Zone input

Keypad Tamper

SECTION [002]: OPTION [8]

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

Option **[8]** OFF = Grafica’s tamper option is disabled (default)

Option **[8]** ON = Grafica’s tamper option is enabled

Beep on Trouble

SECTION [003]: 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 occurs from one of the trouble groups. The intermittent beep will remain activated until the user enters Grafica’s Trouble Display or if the trouble is resolved. For a list of troubles, see the appropriate control panel’s *Reference and Installation Manual*. The intermittent beep will be re-initialized whenever the trouble condition reoccurs.

System and Clock Trouble Beep

SECTION [003]: OPTION [1]

Option **[1]** OFF = Beep disabled (default)

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

Communicator Trouble Beep

SECTION [003]: OPTION [2]

Option **[2]** OFF = Beep disabled

Option **[2]** ON = Beep on: Communicator Troubles (default)

Module and Combus Trouble Beep

SECTION [003]: OPTION [3]

Option **[3]** OFF = Beep disabled (default)

Option **[3]** ON = Beep on: Module and Combus Troubles

All Zone Trouble Beep

SECTION [003]: OPTION [4]
Option **[4]** OFF = Beep disabled (default)
Option **[4]** ON = Beep on: All Zone Troubles

Time Format

SECTION [003]: OPTION [7]
Option **[7]** OFF = 24 hour format (default)
Option **[7]** ON = 12 hour format: AM/PM

Date Format

SECTION [003]: OPTION [8]
Option **[8]** OFF = Date format: yy-mm-dd (default)
Option **[8]** ON = Date format: dd-mm-yy

Confidential Mode Timer

SECTION [004]
Section **[004]** determines the amount of time that must elapse without performing an action on the keypad before the keypad enters Confidential Mode (see “Confidential Mode” on page 15). The Confidential Mode Timer can be any value from 005 to 255 seconds (default: 120 seconds).

Temperature Calibration

SECTION [005] = OUTSIDE TEMPERATURE CALIBRATION
SECTION [006] = INSIDE TEMPERATURE CALIBRATION
The outside temperature reading is that given by the optional external temperature sensor (see “Optional External Temperature Sensor” on page 9) when connected to Grafica’s input. The inside temperature reading is that given by Grafica’s built-in temperature sensor (see “Built-in Temperature Sensor” on page 9). If the temperature reading is inaccurate, enter a calibration value in the corresponding section to adjust the reading. Enter a value between 000 to 254 (000 and 128 = no calibration value). When in Celsius, every value from 001 to 127 adds .5 degrees, and every value from 129 to 254 subtracts .5 degrees, to the temperature display. When in Fahrenheit, every value from 001 to 127 adds 1 degree, and every value from 129 to 254 subtracts 1 degree, to the temperature display.

Temperature Broadcast

Using sections [007] to [011], you can define which temperature readings are used for which purpose. For example, a Grafica keypad is installed in the main house as well as the guest house. The indoor temperature from the guest house keypad can be displayed as the outdoor temperature of the main house keypad, allowing you to monitor the indoor temperatures of both buildings.

Indoor Temperature From Another Grafica

SECTION [007]: OPTION [1]
Option **[1]** OFF = Disabled (default)
Option **[1]** ON = Enabled
NOTE: Use this section in conjunction with sections **[008]** and **[009]**.

Outdoor Temperature From Another Grafica

SECTION [007]: OPTION [2]
Option **[2]** OFF = Disabled (default)
Option **[2]** ON = Enabled
NOTE: Use this section in conjunction with sections **[010]** and **[011]**.

Send Indoor/Outdoor Temp. to Other Grafica Keypads

SECTION [007]: OPTION [4]
Option **[4]** OFF = Disabled (default)
Option **[4]** ON = Enabled

For Indoor Temp., Import all Temp. Data From:

SECTION [008]
When section **[007]** option **[1]** is enabled, enter the serial number of the Grafica keypad from which you would like to import temperature data.

Which Imported Temp. Value is Displayed as Indoor Temp.

SECTION [009]
When a Grafica serial number is entered in section **[008]**, the keypads indoor and outdoor temperatures are sent. Select which incoming value will be displayed as the keypad's indoor temperature.
Indoor temperature = **(001)**
Outdoor temperature = **(002)**

For Outdoor Temp., Import all Temp. Data From:

SECTION [010]
When section **[007]** option **[2]** is enabled, enter the serial number of the Grafica keypad from which you would like to import temperature data.

Which Imported Temp. Value is Displayed as Outdoor Temp.

SECTION [011]
When a Grafica serial number is entered in section **[010]**, the keypads indoor and outdoor temperatures are sent. Select which incoming value will be displayed as the keypad's outdoor temperature.
Indoor temperature = **(001)**
Outdoor temperature = **(002)**

Section [001]: Keypad Partition Assignment			
Option		**OFF**	**ON**
[1]	Partition 1	☐ Disabled	△ **Enabled**
[2]	Partition 2	☐ Disabled	△ **Enabled**
[3]	Partition 3	☐ Disabled	△ **Enabled**
[4]	Partition 4	☐ Disabled	△ **Enabled**
[5]	Partition 5	☐ Disabled	△ **Enabled**
[6]	Partition 6	☐ Disabled	△ **Enabled**
[7]	Partition 7	☐ Disabled	△ **Enabled**
[8]	Partition 8	☐ Disabled	△ **Enabled**

Section [002]: General Options 1			
Option		**OFF**	**ON**
[1]	Display code entry	△ **Disabled**	☐ Enabled
[2]	Display exit delay	☐ Disabled	△ **Enabled**
[3]	Display entry delay	☐ Disabled	△ **Enabled**
[4]	Confidential mode	△ **Disabled**	☐ Enabled
[5]	To exit confidential mode *	△ **Enter Code**	☐ Press key
[6]	Exit delay beep	☐ Disabled	△ **Enabled**
[7]	Keypad input type	△ **Temp. Sensor**	☐ Zone
[8]	Keypad tamper	△ **Disabled**	☐ Enabled

***** Must be enabled through option **[4]** in section **[002]** first.

Section [003]: Beep on Trouble			
Option		**OFF**	**ON**
[1]	System & clock trouble beep	△ **Disabled**	☐ Enabled
[2]	Communicator trouble beep	△ Disabled	☐ **Enabled**
[3]	Module & combus trouble beep	△ **Disabled**	☐ Enabled
[4]	All zone trouble beep	△ **Disabled**	☐ Enabled
[5]	Future use	☐ --	☐ --
[6]	Future use	☐ --	☐ --
[7]	Time format 24h / AM PM	△ **24h**	☐ AM /PM
[8]	Date display	△ **yy-mm-dd**	☐ dd-mm-yy

Default Setting: 120 seconds

Section [004]: Confidential Mode Timer		
Data	___/___/___	(005 to 255 seconds)

Section [005]: Outside Temperature Calibration		
Data	___/___/___	(001 to 254; 000 and 128 = no calibration value)

Section [006]: Inside Temperature Calibration		
Data	___/___/___	(001 to 254; 000 and 128 = no calibration value)

Section [007]: Temperature Options			
Option		**OFF**	**ON**
[1]	Indoor temperature from another Grafica	△ **Disabled**	☐ Enabled
[2]	Outdoor temperature from another Grafica	△ **Disabled**	☐ Enabled
[3]	Future Use	☐ N/A	☐ N/A
[4]	Send indoor / outdoor temperature to other Grafica keypads	△ **Disabled**	☐ Enabled
[5]-[8]	All Zone Trouble Beep	☐ N/A	☐ N/A

Section [008]: For Indoor Temp., Import all Temp. Data From:		
Data	__/__/__/__/__/__/__/__	(Another Grafica's serial #)

Section [009]: Which of the Imported Temp. Values Will be Displayed as Indoor Temp.		
Data	___/___/___	(001 = Internal / 002 = External)

Section [010]: For Outdoor Temp., Import all Temp. Data From:		
Data	__/__/__/__/__/__/__/__	(Another Grafica's serial #)

Section [011]: Which of the Imported Temp. Values Will be Displayed as Outdoor Temp.		
Data	___/___/___	(001 = Internal / 002 = External)

Section [100]: Download From Memory Key
Download data from memory key

Section [110]: Copy to Memory Key
Upload data to memory key

Index

Numerics

12/24 hour time 17

A

All zone trouble beep 17
AM/PM 17

B

Beep 16, 17
Beep - exit delay 15
Beep on trouble 16

C

Clock trouble beep 16
Code entry 14
Combus trouble beep 16
Communicator trouble beep 16
Confidential mode 15
Confidential mode timer 17
Connections 7
Cover clearance 6

D

Date format 17
Decimal programming 13
DGP-848 14
Display code entry 14
Display exit delay 14

E

Entry delay 14
EOL definition 8
EVO/DGP systems 12
Exit delay 14
Exit delay beep 15

F

Feature select programming 13
Firmware upgrade 12

H

Hexadecimal programming 13
Hourglass icon 14

I

Imperial systems 12
Indoor temperature 18
Input 9
Input type 15
Installation height 6

K

Keypad clearance 6
Keypad Input 9
Keypad input type 15
Keypad options 14
Keypad tamper 16

M

Metal wall plate 7
Module programming mode 13
Module trouble beep 16
Mounting 7, 10

O

Outdoor temperature 18
Overview 5

P

Partition 14
Partition assignment 14
Programming methods 13
Programming mode 13
Programming sections 20

R

Removing Grafica 11

S

Sections 20
Specifications 4
System trouble beep 16

T

Tamper 16
Temperature - indoor/outdoor 18
Temperature broadcast 18
Temperature calibration 17
Temperature sensor 9
Time format 17
Trouble - beep 16

U

UL installations 15
Upgrade firmware 12
Uploading/downloading data 19

V

Viewing angle 6

W

Wall plate 7
Wiring 7

Z

Zone trouble beep 17

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