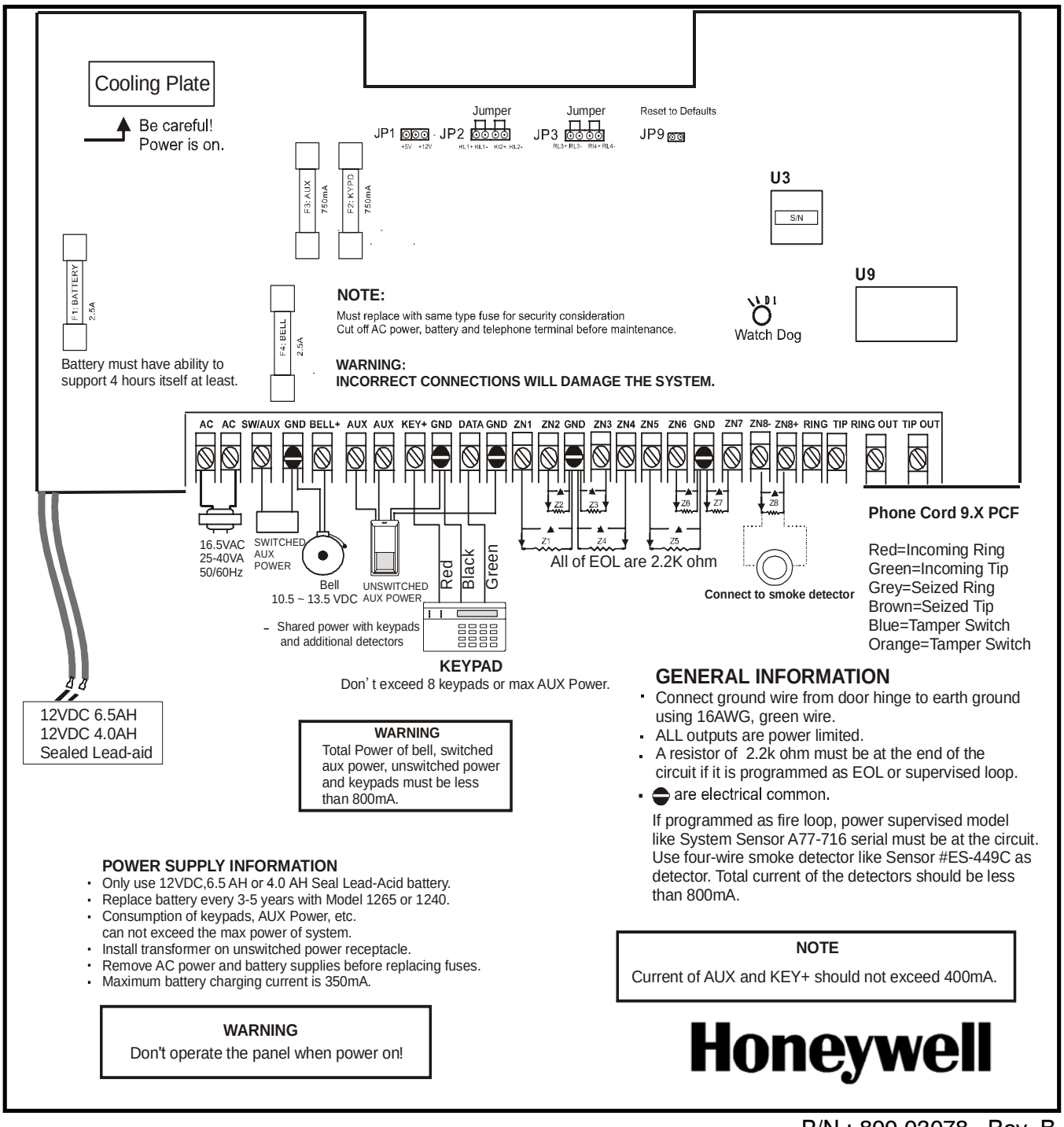
Honeywell

SYSTEM 238C PLUS II Installation Manual



WARNING
Total Power of bell, switched aux power, unswitched power and keypads must be less than 800mA.

GENERAL INFORMATION

- Connect ground wire from door hinge to earth ground using 16AWG, green wire.
- ALL outputs are power limited.
- A resistor of 2.2k ohm must be at the end of the circuit if it is programmed as EOL or supervised loop.
- ⊖ are electrical common.

If programmed as fire loop, power supervised model like System Sensor A77-716 serial must be at the circuit. Use four-wire smoke detector like Sensor #ES-449C as detector. Total current of the detectors should be less than 800mA.

POWER SUPPLY INFORMATION

- Only use 12VDC,6.5 AH or 4.0 AH Seal Lead-Acid battery.
- Replace battery every 3-5 years with Model 1265 or 1240.
- Consumption of keypads, AUX Power, etc. can not exceed the max power of system.
- Install transformer on unswitched power receptacle.
- Remove AC power and battery supplies before replacing fuses.
- Maximum battery charging current is 350mA.

NOTE
Current of AUX and KEY+ should not exceed 400mA.

WARNING
Don't operate the panel when power on!

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Table of Contents

BEFORE YOU START

Overview of This Manual

This manual contains basic installation and programming information for the SYSTEM 238C PLUS II. For additional information about using or programming the system, please refer to the LED Keypad Manual, Alpha Keypad Manual, or Commander II/Monitor II Operating Manual.

Accuracy

This manual has been carefully checked for accuracy. However, Honeywell assumes no liability for inaccuracies or actions resulting from the use of this manual. In addition, Honeywell reserves the right to modify the SYSTEM 238C PLUS II hardware, software, and manuals without prior notice.

INSTALLATION

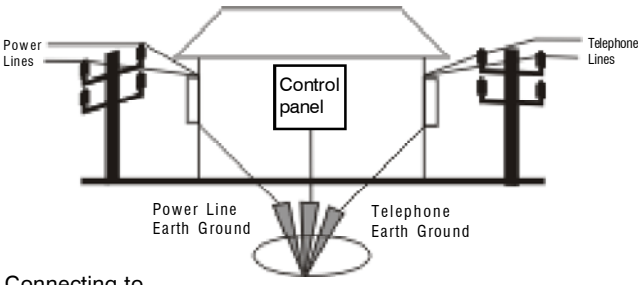
Mounting

The SYSTEM 238C PLUS II should be mounted in a location which allows convenient access to AC power, telephone connections, and earth ground.

- Remove the circuit board from the cabinet. This will prevent possible damage to the circuit board when removing the knock-outs.
- Remove the knock-outs.
- Mark the screw mounting holes on the wall.
- Mount the cabinet at the desired height and pass the cables through the knock-outs.
- Replace the circuit board, remembering to connect the ground lug to the lower left corner of the circuit board.
- Reconnect the spade lug to the lower door hinge. This provides the earth ground connection for the door.

Earth Ground

To ensure the effectiveness of the lightning and transient protection circuits, the control panel must be connected to "Earth Ground". Ideally, this should be a common ground to the power lines, telephone system, and security system. This type of ground, called a "Unified Earth Ground", provides the best protection. The ground connection, from a grounding rod, cold water pipe or other established ground point, is made to the green jacketed wire providing a ground to the panel housing.



Connecting to Earth Ground

WIRING THE PANEL

Standby Battery

The SYSTEM 238C PLUS II is designed to operate with a 12V, 6. 5 AH, sealed lead-acid battery (Model 1265). Do not use non-rechargeable batteries or batteries other than sealed lead-acid. **It is recommended that you replace the standby battery every three to five years**.

Connect the red lead to the battery positive terminal and the black lead to the battery negative. The battery is reverse-polarity protected by a 2.5 A, fast-blow fuse (F1).

AC Power

Terminal Label:
AC

AC power is supplied by a 16.5 VAC, 25 - 40 VA/50Hz transformer. The secondary coil of the transformer is connected to terminals 1and 2 of the panel, using at least 18 AWG (1.02 mm) wire to reduce voltage drops.**Plug the input of the transformer into unswitched socket. Don't use leakage protection socket.**The transformer should be placed on the wall appropriately.

AC Power Failure

If an AC power failure lasts more than a customized time, the keypads will display a system trouble. An AC failure report will be sent, if programmed. When the AC power is restored for five minutes, a restoral report will be sent.

Precautions

☞ **Do not share the secondary of the transformer with other devices. A foreign ground can damage the power supply, voiding the warranty.**

☞ **Do not use any transformer other than that specified in the AC Power section above.**

Available Power
The maximum total power available from the **Audible**, **AUX** (**Switched** and **Unswitched**), and **Keypad** is 800 mA. The switched auxiliary, unswitched auxiliary, and keypads share the same power bus. Combined power for these outputs should not exceed 500 mA.
NOTE: The switched 40mA power available on Loop 8 is part of the 500mA AUX power.

Audible Output

Terminal Label:
BELL & GND

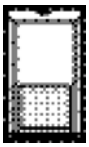
The BELL terminal provides up to 800mA at 10.5 - 15 VDC . The output type(steady, pulse etc.) and audible time are programmable.

Fuse F4
The BELL terminal is protected by a 2.5 A, 3 AG fast-blow fuse (F4).

NOTE: If any fuse opens, remove AC and DC power, remove the short or overload condition, then replace the fuse before restoring power. **Do not substitute the fuse with a higher rated fuse**.

Electromagnetic Interference
Vibrating horns can produce electromagnetic interference (EMI). While EMI will not damage the SYSTEM 238C PLUS II, it can cause transmission errors and misdialing. To minimize EMI, install a 0.01 mfd, 100V capacitor across the terminals of the horn. The capacitor must be located in the horn.

Auxiliary Power



Terminal Labels:
SW/AUX, GND & AUX

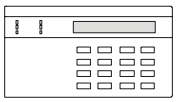
The **SW/AUX** terminal provides positive 10 - 14 VDC power for devices that require switched power for resetting. Typical devices are glass-break and smoke detectors.

The **GND** terminal provides power common.

The **AUX** terminal supplies uninterrupted positive power.

Fuse F3
The **SW/AUX** and **AUX** terminals are protected by a 0.75A, 3 AG, fast-blow fuse (F3).

Keypad Power



Terminal Labels:
KEY+,GND, DATA

The **GND** terminal (black) is common terminal of AUX and KEY+.

The **KEY+** terminal (red) provides 11 - 14 VDC keypad power.

The **DATA** terminal (green) is data from the keypad to the panel.

Maximum wire length for connecting any keypad is 500' (152 m) of 22 AWG (0.643 mm) copper wire.

The SYSTEM 238C PLUS II is capable of addressing up to 4 Alpha keypads. LED keypads do not require addressing. Each LED keypad uses 35 mA of current. Each LCD keypad uses 64 mA of current. 238C PLUS II can drive up to eight LED keypads or four LCD keypads.

Fuse F2
The KEY+ terminal is protected by a 0.75A, 3 AG, fast-blow fuse (F2).

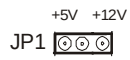
Exterior Relays Drive Terminals

RL1+, RL1- ,RL2+, RL2-, RL3+, RL3- ,RL4+ and RL4- are connected to the windings of four exterior relays. For RL1+/- and RL2+/-, the maximum drive current of each pair of drive terminals is 100mA while that of RL3+/- and RL4+/- is 35mA.

Descriptions of drive terminals:

RL1+	Winding's Positive Terminal of Exterior Relay 1
RL1-	Winding's Negative Terminal of Exterior Relay 1
RL2+	Winding's Positive Terminal of Exterior Relay 2
RL2-	Winding's Negative Terminal of Exterior Relay 2
RL3+	Winding's Positive Terminal of Exterior Relay 3
RL3-	Winding's Negative Terminal of Exterior Relay 3
RL4+	Winding's Positive Terminal of Exterior Relay 4
RL4-	Winding's Negative Terminal of Exterior Relay 4

NOTE: RL1+/-, RL2+/- ,RL3+/- and RL4+/- are shorted by default.To enable their functions, remove the jumpers.



Configuring Jumper of Exterior Relays
The drive type of exterior relays is determined by JP1. If +12V and middle terminals are shorted, it can drive 12V exteriors. If +5V and middle terminals are shorted, it can drive 5V exteriors. The middle and +5V terminals are shorted by default. To drive exterior relay which consumes more power,short +12V and middle terminals.

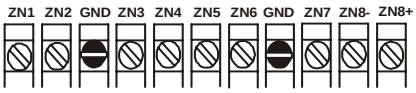
NOTE: Be sure to remove the jumpers of RL1+/-, RL2+/- , RL3+/- and RL4+/- before shorting JP1.

Reset to Defaults
Short pin 1and 2 of DEFAULT, then system will be reset to defaults after power on.

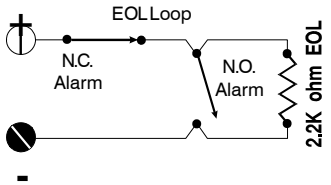
NOTE: Do remove the jumpers as soon as the system resets to default.

Loop Inputs

Terminal Labels:
ZN1 - ZN8 & GND



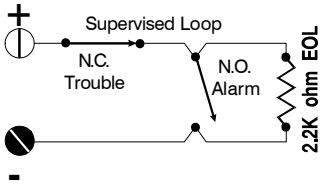
System 238C PLUS II Loop Terminals



Each loop is independently configured through programming. Loops can be wired with an open circuit switch, or closed circuit switch, or with a 2.2K ohm end-of-line (EOL) resistor.

When programmed as EOL, either an open or a short will be reported as an alarm if the system is in an armed state.

System 238C PLUS II Loop Terminals



When operated as a Supervised Loop, an open will be reported as a Trouble, regardless of system status (armed or disarmed). A short on the loop will be reported as an alarm if the system is armed, but will have no effect if the system is disarmed.

Loop 8

Terminals ZN8+ & ZN8- are standard loop that can power 2-wire device. It supplies 10-12.5VDC at 25mA. Use loop 8 to power 2-wire glassbreake and smoke detectors.
Terminals ZN8+ & ZN8- are used to wire loop 8, and can not be shared by other loops. When using loop 8 to power devices, connect the positive terminal to ZN8+ and negative terminal to ZN8-.

Installing Tamper Switch

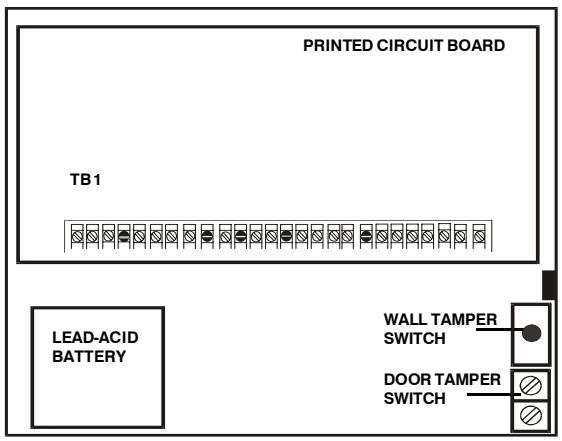
SYSTEM 238C PLUS II cabinet uses the **ADEMCO Model 19** tamper switch. The cabinet is constructed to accommodate two switches. One tamper switch is for the door tamper switch and the other is for the wall tamper switch. The switches are factory-installed and wired in series.

To connect the tamper switches:

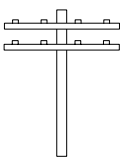
1. Connect the tamper switch wires from the tamper terminals (see diagram below) to a dedicated zone of the control panel. The switches are wired with 12" (30.5 cm) leads to allow connection to any zone input.
2. Program the dedicated zone as desired: NC, EOL, 24-hour, etc.

Once the tamper switches are installed, opening the cabinet door or removing the cabinet from the wall will result in a tamper signal at the panel.

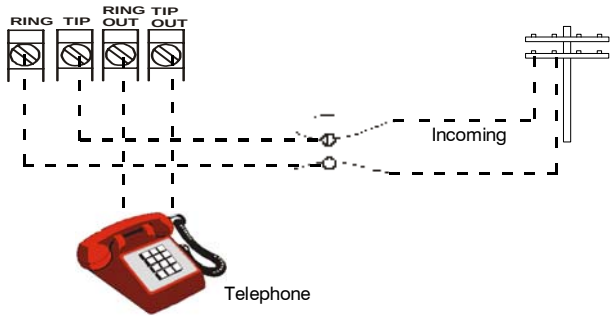
Tamper Switches installed in the SYSTEM 238C PLUS II cabinet



Telephone Interface



Connect the SYSTEM 238C PLUS II to the phone line using ordinary 2-wire phone line. Each 2-wire phone line has two Rings and two Tips which can be pluged into relative terminals on the 238C PLUS II control panel. Connect the phone line as outlined below:



9.X PCF

When using the 9.X PCF or 9.XPCF to connect 238C PLUS II panel to the phone line, connect them as follows:

RED = ring	BROWN = seized tip
GREEN = tip	BLUE and ORANGE = tamper
GRAY = seized ring	YELLOW and BLACK = not used

SYSTEM START-UP

Five minutes after the panel is powered up, it will dynamically test the standby battery by interrupting AC power for two minutes and monitoring the battery under load.

Standby Battery Time with One LED Keypad

AUX POWER DRAIN*	STANDBY TIME
50 mA	32 hours
150 mA	24 hours
250 mA	16 hours
500 mA	10 hours

* Total power for all keypads, auxiliary and Loop 8

If you replace the battery after a SYSTEM TROUBLE - LOW BATTERY message is displayed, you must test the battery under load conditions. Press [*] [6] [4] [#] to start the Dynamic Battery Test.

Voltage Variations

Output voltages at terminals SW/AUX, AUX, and KEY+ may vary between 9.0 and 14.4 VDC (worst case), depending on the load, battery condition, and AC line voltage.

WARNING: When powering the panel with only battery, replace the battery when a SYSTEM TROUBLE - LOW BATTERY message is displayed, or the system will work abnormally.

KEYPAD SETUP

Alpha Keypad Information

The Alpha keypad uses a top viewing display. This means the display reads most clearly when viewed at an angle above the display, rather than straight on or directly below. Mounting the keypad at the light switch level and adjusting the viewing angle gives the best viewing results.

Adjusting the LCD Display

To adjust the viewing angle, remove the keypad from the back mounting plate. Towards the bottom center of the circuit board is a small hole. Insert a small screwdriver into the hole and adjust **R22,** while holding the keypad at its mounting height. Adjust the potentiometer as necessary for optimum viewing.

Addressing Keypads

Each Alpha keypad installed in the system must have an address. **Addresses must not be repeated**. When replacing a keypad, make sure the new keypad has the same address as the previous one.

The first time you power up the system, unaddressed Alpha keypads will display **KEYPAD ADDRESS?**. Press any number from 0 through 3 at each keypad. The exact number you press is not important as long as each keypad has a different address number. The keypad will not accept values outside of the specified range. Should you accidently use the same address for more than one keypad, the system will fail to properly respond to the keypad input. Refer to page 30 for assistance in correcting this problem.

Once all keypads have been addressed, reset the panel by temporarily removing both AC and DC power.

FACTORY SETTINGS

DEFAULT PROGRAM SETUP
The default programming of the SYSTEM 238C PLUS II will allow you to operate it as a local panel without any additional programming. The actual default programming values are shown on the Programming Worksheet.

> **NOTE: If you connect power before wiring the loops, install a 2.2K EOL resistor across each loop.**

Codes
Installer Code: 0 1 2 3 4 5
User #1 (Master) Code: 1 2 3 4
Users #2 -15: disabled
Default installer Code: yes
Guest Code: no
Code required: no
Arming type: goof-proof
Opening/Closing Report: no
Duress Report: disabled

Reporting
Account #1 #2 #3 and #4: no
Dialing type: DTMF(10 times per second)
RPS allowed: yes

Zones
Zone 1 = Entry/Exit delay - EOL circuit
Zone 2 = doors or windows - EOL circuit
Zone 3 = doors or windows - EOL circuit
Zone 4 = doors or windows - EOL circuit
Zone 5 = doors or windows - EOL circuit
Zone 6 = doors or windows - EOL circuit
Zone 7 = doors or windows - EOL circuit
Zone 8 = fire or smoke - supervised EOL circuit
Emergency soft zone: chirp audible, no report
Fire soft zone: pulsed audible, no report
Police soft zone: steady audible, no report

Testing
Test report interval: 7 days and disabled

Timing
Entry time: 30 seconds and prewarn
Exit time: 60 seconds and prewarn
Bell time: 5 minutes

Unit Control
Local system: yes
Dynamic battery test: off

PROGRAMMING OPTIONS

The following is an alphabetical listing of all SYSTEM 238C PLUS II programming options, including Command Locations and Digit Positions. Digit Positions are inside parentheses ( ).

Option	Location
Account #1	0C (1-6)
Account #2	10 (1-6)
Account #3	38 (1-6)
Account #4	3C(1-6)
Alarm Code by Loop	17 - 1E (1-2)
Alarm Loop Bypass by Loop	30 - 37 (2)
Alarm Receiver Select by Loop	1F - 26 (1)
Audible Time	2D (5)
Audible Type by Loop	1F - 26(5)
Bell Reverse Operation	2E (3)
Bypass Enable by Loop	30 - 37 (3)
Bypass Receiver Select	2A (1)
Bypass Reporting Code	17 - 1E (5 - 6)
Cancel Receiver Select	2A (6)
Cancel Report Code	2A (5)
Closing Report Code	2C (3)
Closing Report Receiver	2C (4)
Code Command	09 (2)
Daily Battery Test Enable	2F (2)
Delay Before Dial by Loop	30 - 37 (4)
Delay Before Dial Time	0B (1)
Dial Attempts	0B (6)
Dial Type	0B (2)
Disable Loop LEDs	2E (5)
Door Chime Enable by Loop	30 - 37 (1)
Duress Report Code	2D (1)
Duress Report Receiver	2D (2)
Emergency Bell Type	27 (4)
Emergency Report Code	27 (1 - 2)
Emergency Receiver Select	27 (3)
Entry Delay Time	2D (3)
Entry Pre-alarm Enable	2E (1)
Exit Delay Time	2D (4)
Exit Pre-alarm Enable	2E (2)
Faulted Arming Type	09 (4)
Fire Bell Type	28 (4)
Fire Report Code	28 (1 - 2)
Fire Receiver Select	28 (3)
Four Minute Power Up Delay Enable	2F (3)
Group Bypass Enable	30 - 37 (3)
Guest Code	08 (2 - 6)
Guest Code Time	09 (1)
Installer Code	00 (1 - 6)
Keypad RPS Enable	0B (3)
Local System Only	2F (1)
Loop Arming Type	1F - 26 (4)
Loop Audible Type	1F - 26 (5)
Loop Circuit Type	1F - 26 (6)
Loop Receiver Select	1F - 26 (1)
Loop Response Time	1F - 26 (2)
Loop Restore Type	1F - 26 (3)
Master Code (User #1)	01 (2 - 6)
Opening Report Code	2C (1)
Opening Report Receiver	2C (2)
Police Bell Type	29 (4)
Police Report Code	29 (1 - 2)
Police Receiver Select	29 (3)
Phone Ring Type	0B (5)
Receiver #1 Message Format	0A (2)

Option	Location
Receiver #1 Phone Number	0D - 0F (1 - 6)
Receiver #1 Receiver Format	0A (1)
Receiver #2 Message Format	0A (4)
Receiver #2 Phone Number	11 - 13 (1 - 6)
Receiver #2 Receiver Format	0A (3)
Receiver #3 Message Format	40 (2)
Receiver #3 Phone Number	39 - 3B (1 - 6)
Receiver #3 Receiver Format	40 (1)
Receiver #4 Message Format	40 (4)
Receiver #4 Phone Number	3D - 3F (1 - 6)
Receiver #4 Receiver Format	40 (3)
Restoral Reporting Code by Loop	17 - 1E (3 - 4)
Restore Receiver Select	2A (2)
Ring Back Enable	2E(4)
RPS Enable	0B (4)
RPS Phone Number	14 - 16 (1 - 6)
Set Exterior Relay(1# & 2#)	45(1-4)
Set Exterior Relay(3# & 4#)	4E(1-4)
Set Exterior Relay Trigger Time	46(1-4)
Set Report Storage	4F(1-4)
Set Test Report Countdown Timer	A0 (1)
Soft Zone Operation Enable	2F (4)
Test Report Code	2B (1 - 2)
Test Report Interval	2B (4)
Test Report Receiver Select	2B (3)
Unit Status Code	2A (3)
Unit Status Receiver	2A (4)
User Arming Type	01 - 08 (1) & 47 - 4D (1)
User Codes	01 - 08 (2 - 6) & 47 - 4D (2 - 6)

PROGRAMMING THE PANEL

All panel wiring should be completed prior to applying power. **You can only access the programming mode when the control panel is disarmed.**

You can program the SYSTEM 238C PLUS II with the keypad (LED or Alpha), or remotely using the COMMANDER II software. Remote programming information can be found in the COMMANDER II/ MONITOR II Operating Manual. This installation manual acontains a brief description of each programming option, starting on page 10.

WARNING: Program data should be in the specified range. Entering invalid value may result in the panel's malfuntion.

Starting Programming the Panel

Enter the [Installer Code] [*] [0] [#]. The default Installer Code is **0 1 2 3 4 5**. The programming mode is indicated on the LED keypad by the Program LED being lit or the Alpha keypad displaying **CMD DATA** across the top row of the LCD display.

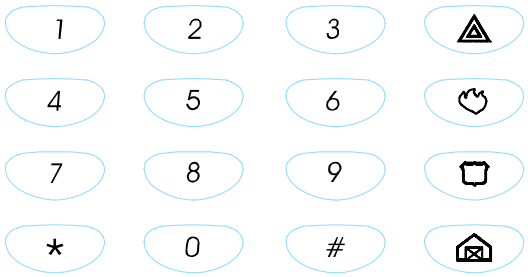
Programming with the LED Keypad

Programming with an LED keypad is a one-step process. Simply enter the two-digit address (Command Location), followed by the desired programming values (program data). Finally, press the [#] key to store the data. The LED keypad does not display any programmed values. If you are not sure that the correct programming values have been entered, program the Command Location again.

NOTE: To program Command Location A0 with an LED keypad, remember to enter the Command Location, followed by the program data, then press the [#] key.

WARNING: If you enter a Command Location and then press the [#] key without entering any program data, the keypad will beep 5 times, indicating an error. To solve this problem, simply re-enter the Command Location and Data, then press the [#] key.

238C Plus II LED Panel



Programming with the Alpha Keypad

Programming with an Alpha keypad is a two-step process. First, enter the two-digit address (Command Location) to be programmed and press the [#] key. The Alpha keypad displays the Command Location and the data previously stored. Enter the new data you wish to store and press the [#] key to write the data. You can also scroll through the Command Locations in numerical order by alternately pressing and releasing the [#] key.

NOTE: Command Location A0 must be addressed directly. When programming this Command Location with an Alpha keypad, the previously stored data is not displayed. To program this location, enter the Command Location followed by the [#] key. Then enter the data to be stored and again press the [#] key.

Entering Hexadecimal Numbers

Data is programmed into the panel using the hexadecimal number system, which consists of the digits 0 - 9 and the letters A - F. The digits 0 - 9 are entered directly from the keypad. The chart below shows how to enter the hexadecimal digits A through F.

PROGRAMMING CONVERSIONS	
Hexadecimal Value	**Key Strokes**
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

The same procedure is used with both the LED and the Alpha keypads.

Exiting Programming the panel

When you have finished programming, press [*] [#] to exit programming mode. ***The panel will also exit the programming mode if you do not press any key within a five minute period.***

PROGRAMMING the ALPHA KEYPAD

Ensure the Alpha keypad is wired to the SYSTEM 238C PLUS II and power is applied to the control panel. **You can only access the programming mode when the control panel is disarmed.**

> **NOTE: Programming the Keypad is not the same as Keypad Programming. (Keypad Programming is used to program the control panel.)**

The Alpha Keypad

You can program the Alpha keypads for special messages, zone labels, the keypad address and so on. **Zone Labels** are displayed during the walk-test or when the [#] key is pressed during alarm memory or faults. The programmable **Service Message** is displayed during AC failure, fuse failure, communication failure, or low battery. The **Dealer Message** is displayed when the system is disarmed. The keypad address is initially displayed only during system start up (see page 4, Keypad Addressing).

These messages can be programmed directly from the Alpha keypad or remotely using the Commander II/Monitor II software package. For detailed information about remote programming, refer to the Commander II/Monitor II Operating Manual.

Programming the Keypad

The Alpha keypad programming template (shown on the right) is used to allow the installer to program custom messages and zone descriptions into the Alpha keypads.

To enter the keypad programming mode, enter the [Installer's Code] [*] [0] [1] [#]. Information may be entered into the keypad in the form of letters (upper and lower case), numbers (0 - 9), and 22 special symbols. All characters are displayed in the order listed above, i.e. upper and lower case letters, numbers, and special symbols. The [Space] character precedes the letter A.

For ALPHA II keypad, use the [2] key to scroll through the characters until you reach the desired character when entering a Message or Label. If you scroll past the desired character, the [8] key may be used to scroll backwards. When the desired character is displayed, press the [6] key to move the cursor to the next character position. The [4] key moves the cursor to the left. When all characters have been entered, press the [#] key to write the message and move to the next message position. Use the [0] key to move backward through the messages.

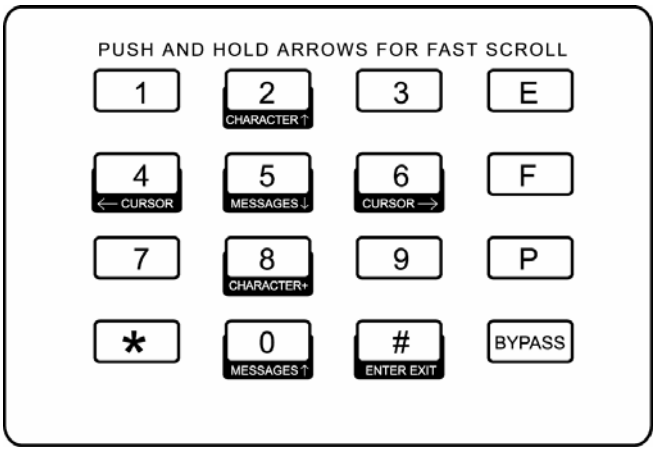
The message order is:

- SERVICE MESSAGE
- DEALER MESSAGE
- SOFT ZONE IDENTIFIERS (C)
- HARDWIRED LOOP IDENTIFIERS
- KEYPAD ADDRESS

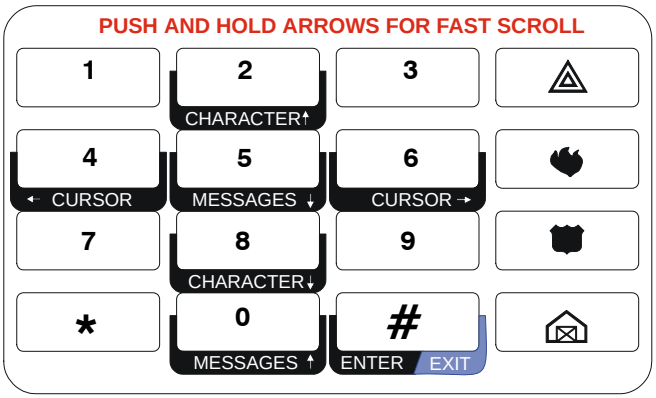
Changing Command Location

To change the command location, enter[0][new command location][#] in programming keypad mode.

ALPHA II Programming Template



ALPHA PLUS Programming Template



Exiting Programming the Keypad

When you have finished programming, press [*] [#] to exit programming mode. ***The keypad will also exit the programming mode if you do not press any key within a five minute period.***

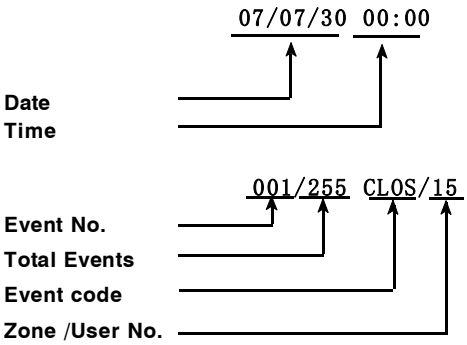
REPORT RECALL

Report Recall displays the events stored in the history buffer. Up to 255 events can be stored in 238C PLUS II system and they will not be lost in case of power off. New event will replace the first event stored if the buffer is full. To display these events, enter [Installer Code][*][2][#] via Alpha Plus II keypad.

Many of these events are discribed in abbreviated form. Table 1 compares the abbreviated event codes and their meanings.

Event Code	Event
ALAM	ALARM
REST	ALARM RESTORE
DURS	DURESS
MDIC	MEDICAL
FIRE	FIRE
POLC	POLICE
LOWB	LOW BATTERY
ACLS	AC LOSS
FLCM	FAIL COMMUNICATION
BRST	BATTERY RESTORE
BLFS	BELL FUSE FAILURE
BFRT	BELL FUSE RESTORE
ARST	AC RESTORE
CPRG	COMPLETE PROGRAM
BYPASS	BYPASS
SRST	BYPASS RESTORE
TEST	COMMUNICATION TEST
TBLE	TROUBLE
TRST	TROUBLE RESTORE
OPEN	OPEN
CLOS	CLOSE
CNCL	CANCEL

Follwing figure is an example of event displayed on ALPHA PLUS II keypad. It indicate that User 15# closed the system on 00:00, July 30th, 2007.



REAL-TIME CLOCK

238C PLUS II system provides real-time clock which can be used as a reference for local device. Time at which event occurred can be obtained through real-time clock.

NOTE: Real-time clock of 238C PLUS II system is for reference only as it may not be precise. It is suggested that real-time clock be corrected regularly. Real-time clock is viewed and corrected through ALPHA keypad. It is set to zero when system is reset. Refer to page 31 for detailed information.

NEW FEATURES

1. Auxiliary Code
With auxiliary code, you can change other user's password except the master's. Resetting the system is unavailable neither with auxiliary code. And when auxiliary code and master code are identical, only master code is effective.

2. Real-time Clock
When you use Alpha Plus keypad and system is normally disarmed, the real-time will be displayed at the right bottom of LCD. The value of the clock can be set by the installer and adjusted by users in programming mode (see CL42 & CL43).

3. New CPU
238C PLUS II use new generation CPU which is faster and more reliable than the old ones.

4. Extendable
You can extend panel funtions, like network performance.

5. Four Relay Outputs
238C PLUS II system has multiple relay ouputs which can drive as many as four relays.

6. Add New Zone Type
Compared with 238C PLUS, 238C PLUS II has two more zone type: 24-hour Fire Zone and 24-hour Police Zone. It can also send different Contact ID.

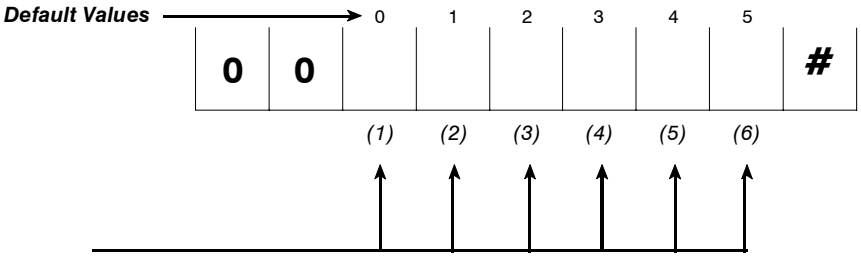
7. Minimum Design
238C PLUS II is more minimum than 238C PLUS in that it has smaller PCB, ampler space which is convenient for wiring and extending models.

8. Report Recall
As many as 255 events can be stored in 238C PLUS II control panel and recalled through Alpha Plus II keypad.

9. Fresh Circuit Design
Adoption of new switch power and independent reliable charging design results in less power consumption and more beautiful appearance.

10.Compatibility
While being given new functions, 238C PLUS II has all the functions of 238 PLUS does.

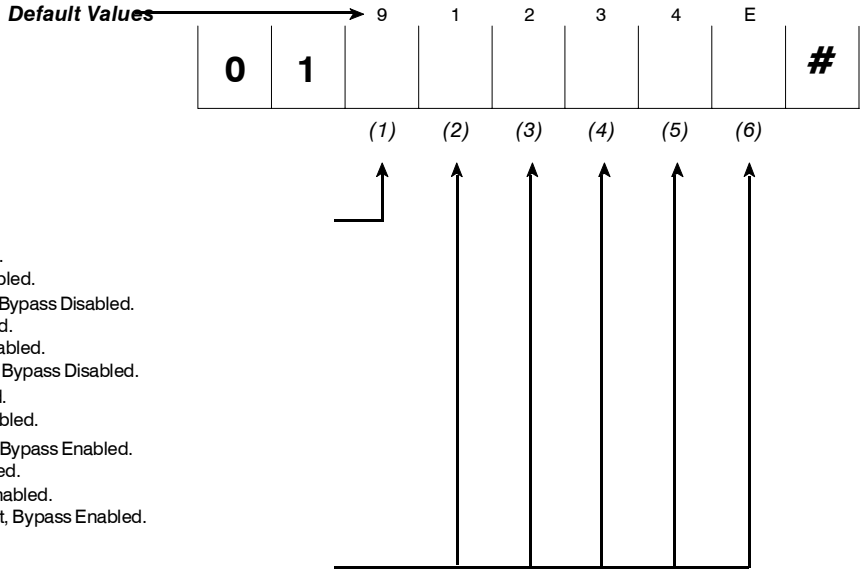
Command Location 00: Installer Code



Digit Positions (1) - (6): Installer Code
Code must have 6 digits.
Valid entries are 0 - 9.

Command Location 01 - 08 & 47 - 4D: User Code and Arming Type

01 = User #1 (Master)
02 = User #2(Auxiliary)
03 = User #3
04 = User #4
05 = User #5
06 = User #6
07 = User #7
08 = User #8(Guest)
47 = User #9
48 = User #10
49 = User #11
4A = User #12
4B = User #13
4C = User #14
4D = User #15



Digit Position (1) : Arming Type

1 = Arm Only, No Closing Report, Bypass Disabled.
2 = Disarm Only, No Opening Report, Bypass Disabled.
3 = Arm and Disarm, No Closing/Opening Report, Bypass Disabled.
4 = Arm Only with Closing Report, Bypass Disabled.
5 = Disarm Only with Opening Report, Bypass Disabled.
6 = Arm and Disarm with Closing/Opening Report, Bypass Disabled.
7 = Arm Only, No Closing Report, Bypass Enabled.
8 = Disarm Only, No Opening Report, Bypass Enabled.
9 = Arm and Disarm, No Closing/Opening Report, Bypass Enabled.
*0 = Arm Only with Closing Report, Bypass Enabled.
*1 = Disarm Only with Opening Report, Bypass Enabled.
*2 = Arm and Disarm with Closing/Opening Report, Bypass Enabled.

Digit Position (2): User Code
Length of user Code varies from two to five. Valid entris are 0 ~ 9.

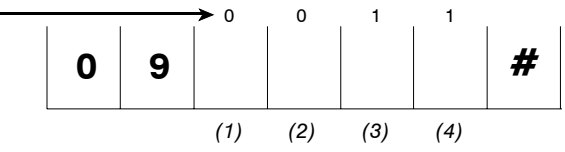
NOTE:

1. Default values are different for each user. Refer to the Programming Sheet at the end of this manual.

2. Some program locations allow variable-length data and require an End-of-Number(EON) character. Program "*4"("E") after the last digit. Fill remaining unused positions with "0". The EON is not required if the last digit is in Position (6).

CL 09 - 0A & 40

Command Location 09: Arming/Code Options



Digit Position (1): Guest Time

0 = Guest Time Disabled	5 = 5 days	0 = 10 days
1 = 1 day	6 = 6 days	1 = 11 days
2 = 2 days	7 = 7 days	2 = 12 days
3 = 3 days	8 = 8 days	3 = 13 days
4 = 4 days	9 = 9 days	4 = 14 days
		5 = 15 days

Digit Position (2): Code Command

0= No Code

1= Yes, requires code for Bypass, Group Bypass, Instant Arm, Keypad activates RPS, and Test(central station and bell).

Digit Position (3): Reset to Default Installer Code

0= No, current code remain effective after power off for the sake of security.

1= Yes, reset to default installer code after power off.

Digit Position (4): Arming Type

1= Force Arm Disabled. Armed when all zones are in normal state or faulted zones are bypassed.

2= Force Arm. Bypass faulted zones automatically when Exit Delay expired.

3= Chirp Alert. Faulted Zones chirp bell during Exit Dealy.

Command Location 0A & 40 : Communications Formats

Digit Position (1): Receiver #1 & #3 Receiver Format

1 = Fast "A", 2300 Hz	3 = SumCheck, 1400 Hz	5 = CFSK III
2 = Slow "B", 1400 Hz	4 = SumCheck, 2300 Hz	6 = DTMF, 1400 Hz

Digit Position (2): Receiver #1 & #3 Message Format

1 = 3/1 Single	3= 4/2 (2-digit reporting code)	5 = CFSK III	7 = 4+2 with checksum(DTMF)
2 = 3/1 extended	4= 4/1	6 = 4/9 Ademco DTMF	8 = Contact ID

Digit Position (3): Receiver #2 & #4 Receiver Format

1 = Fast "A", 2300 Hz	3 = Checksum, 1400 Hz	5 = CFSK III
2 = Slow "B", 1400 Hz	4 = Checksum, 2300 Hz	6 = DTMF, 1400 Hz

Digit Position (4): Receiver #2 & #4 Message Format

1 = 3/1 Single	3= 4/2 (2-digit reporting code)	5 = CFSK III	7 = 4+2 with checksum(DTMF)
2 = 3/1 extended	4= 4/1	6 = 4/9 Ademco DTMF	8 = Contact ID

Valid code of Receiver Format and Message Format are listed below.

Message Format	Receiver Format(s)
3/1 Extended	All formats, **except** CFSK III, DTMF and 1400 Hz
4/2 (2-digit reporting)	Fast "A", 2300 Hz and Slow "B", 1400 Hz
CFSK III	CFSK III
Checksum (DTMF)	DTMF, 1400 Hz
CFSK III + time stamp	CFSK III
Contact ID	DTMF, 1400 Hz +2300 Hz

Command Location 0B: Communications Control

Digit Position (1): Delay before Dial Time

0 = 0 secs	4 = 40 secs	8 = 80 secs	*2 = 120 secs
1 =10secs	5 =50secs	9 =90secs	*3 = 130secs
2 = 20secs	6 = 60secs	*0 = 100secs	*4 = 140secs
3 = 30secs	7 = 70secs	*1 = 110secs	*5 = 150secs

Digit Position (2): Dial Type

1= DTMF(10 times Per Sec)
2= DTMF(5 times Per Sec)
3= Pulse(10 times Per Sec)

Digit Position (3): Enable Keypad Activated RPS

0 = No
1 = Yes: allows remote programming to start from on-site keypad command

Digit Position (4): RPS Enable

0 = No
1 = Yes: allows remote programming to start from off-premise location

Digit Position (5): Phone Ring Type

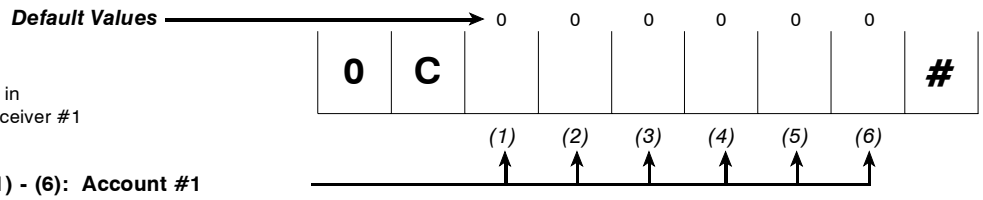
0 = Single ring: uniformly timed rings with long pauses between rings
1 = Double ring: rings twice quickly followed by a long pause then rings twice again

Digit Position (6): Dialing Attempts

1 = 1 try	5 = 5 tries	9 =9 tries	*3 = 13 tries
2 = 2 tries	6 = 6 tries	*0 =10 tries	*4 = 14 tries
3 = 3 tries	7 = 7 tries	*1 = 11 tries	*5 = 15 tries
4 = 4 tries	8 = 8 tries	*2 = 12 tries	

NOTE: If communication fails, the digit position (2) will be as follow:
If it's even(2,4,6,etc.), system will redail after a certain time(set by CL41(1&2));
the number of attempts is set by CL41(3);
If it's odd(1,3,5,etc.), system will just redail once,even if it's unsuccessful;
the set of CL41 is disable;It can be used in standalone version.

Command Location 0C: Account #1



Account #1 is used in conjunction with Receiver #1

Digit Positions (1) - (6): Account #1

Valid entries are 0 - F.
The Account Number is right justified. The last digit must be in Position (6).
The SYSTEM 238C PLUS II will read the account number using:
- Digit Positions (4) - (6) in 3-digit accounts
- Digit Positions (3) - (6) in 4-digit accounts
- Digit Positions (1) - (6) in 6-digit accounts

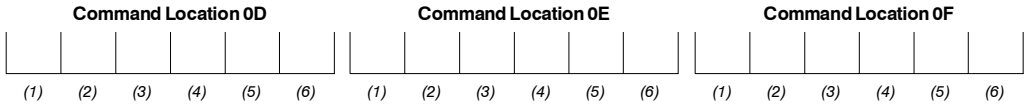
Fill all unused Digit Positions with "0".

PROGRAMMING CONVERSIONS

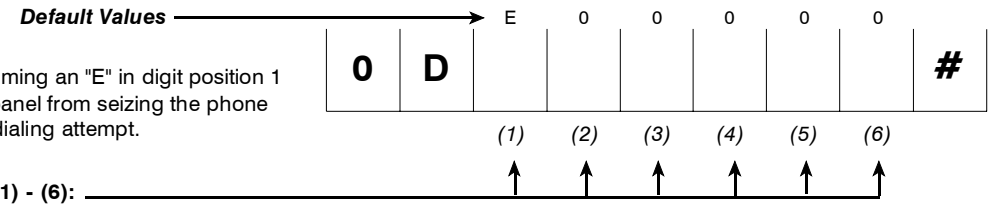
Hexadecimal Value	Key Strokes
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

Command Locations 0D - 0F: Receiver #1 Phone Number

Order in which the numbers will be dialed



Command Location 0D: Receiver #1 Phone Number (digits 1 - 6)

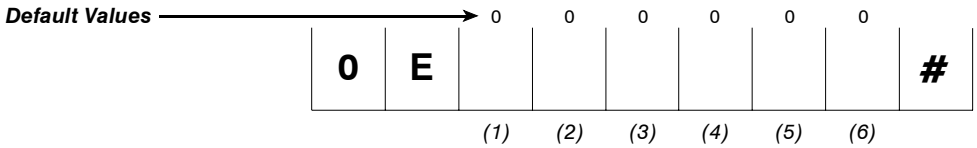


NOTE: Programming an "E" in digit position 1 will prevent the panel from seizing the phone line and cancel dialing attempt.

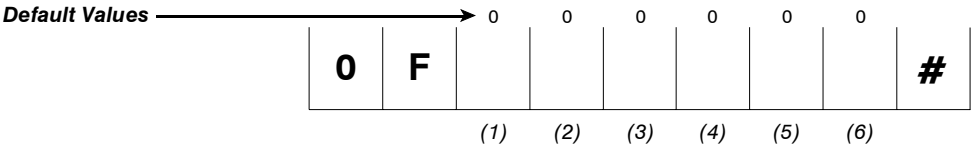
0 - 9 = dialing digits
✻0 = dial tone detect
✻2 = * (DTMF dialing only, not used in pulse dialing)
✻3 = # (DTMF dialing only, not used in pulse dialing)
✻4 = end of number
✻5 = 5 second delay

Digit (1) is dialed first.
You must place a ✻4 (EON) after the last digit to be dialed. Fill in remaining positions with "0". The zeroes will not be dialed.

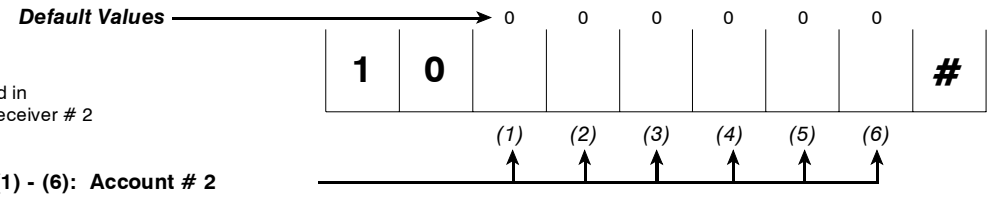
Command Location 0E: Receiver #1 Phone Number (digits 7 - 12)



Command Location 0F: Receiver #1 Phone Number (digits 13 - 18)



Command Location 10: Account #2



Account # 2 is used in conjunction with Receiver # 2

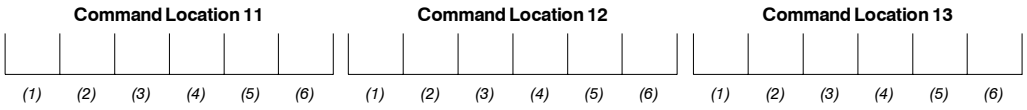
Valid entries are 0 - F.
The Account Number is right justified. The last digit must be in Position (6).
The SYSTEM 238C PLUS II will read the account number using:
Digit Positions (4) - (6) in 3-digit accounts
Digit Positions (3) - (6) in 4-digit accounts
Digit Positions (1) - (6) in 6-digit accounts

Fill all unused Digit Positions with "0".

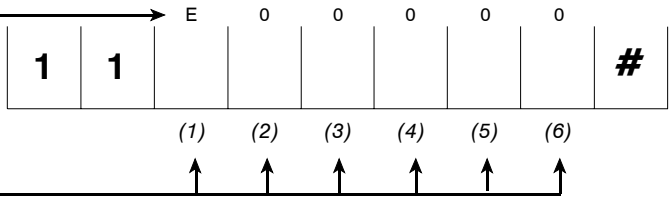
PROGRAMMING CONVERSIONS	
Hexadecimal Value	**Key Strokes**
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

Command Locations 11 - 13: Receiver #2 Phone Number

Order in which the numbers will be dialed



Command Location 11: Receiver #2 Phone Number (digits 1 - 6)

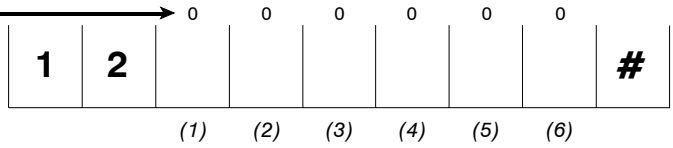


NOTE: Programming an "E" in digit position 1 will prevent the panel from seizing the phone line and cancel dialing attempt.

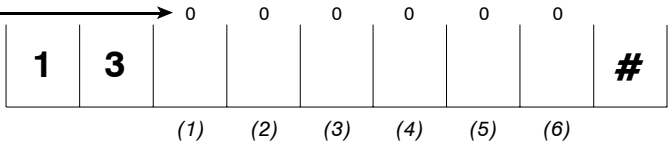
0 - 9 = dialing digits
✻0 = dial tone detect
✻2 = * (DTMF dialing only, not used in pulse dialing)
✻3 = # (DTMF dialing only, not used in pulse dialing)
✻4 = end of number
✻5 = 5 second delay

Digit (1) is dialed first.
You must place a ✻4 (EON) after the last digit to be dialed. Fill in remaining positions with "0". The zeroes will not be dialed.

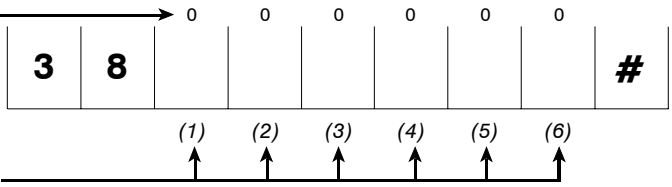
Command Location 12: Receiver #2 Phone Number (digits 7 - 12)



Command Location 13: Receiver #3 Phone Number (digits 13 - 18)



Command Location 38: Account #3



Account # 3 is used in conjunction with Receiver # 3

Valid entries are 0 - F.
The Account Number is right justified. The last digit must be in Position (6).
The SYSTEM 238C PLUS II will read the account number using:
- Digit Positions (4) - (6) in 3-digit accounts
- Digit Positions (3) - (6) in 4-digit accounts
- Digit Positions (1) - (6) in 6-digit accounts

Fill all unused Digit Positions with "0".

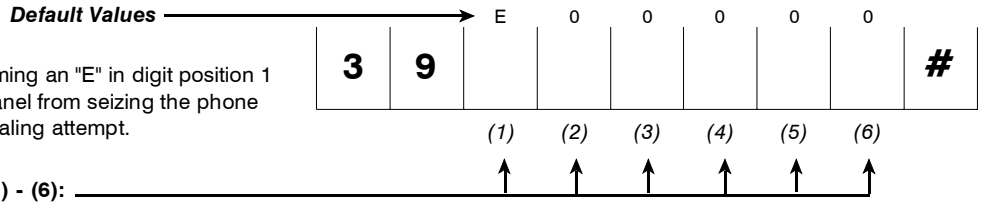
PROGRAMMING CONVERSIONS

Hexadecimal Value	Key Strokes
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

Command Locations 39 - 3B: Receiver #3 Phone Number

Order in which the numbers will be dialed

Command Location 39: Receiver #3 Phone Number (digits 1 - 6)

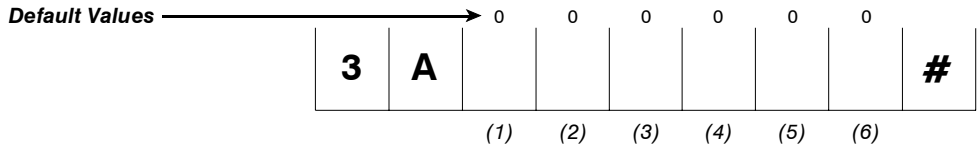


NOTE: Programming an "E" in digit position 1 will prevent the panel from seizing the phone line and cancel dialing attempt.

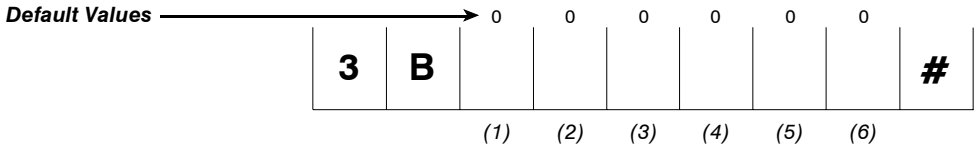
0 - 9 = dialing digits
✻0 = dial tone detect
✻2 = * (DTMF dialing only, not used in pulse dialing)
✻3 = # (DTMF dialing only, not used in pulse dialing)
✻4 = end of number
✻5 = 5 second delay

Digit (1) is dialed first.
You must place a ✻4 (EON) after the last digit to be dialed. Fill in remaining positions with "0". The zeroes will not be dialed.

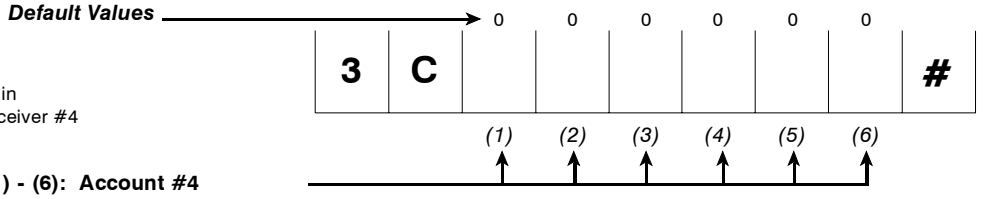
Command Location 3A: Receiver #3 Phone Number (digits 7 - 12)



Command Location 3B: Receiver #3 Phone Number (digits 13 - 18)



Command Location 3C: Account #4



Account #4 is used in conjunction with Receiver #4

Valid entries are 0 - F.
The Account Number is right justified. The last digit must be in Position (6).
The SYSTEM 238C PLUS II will read the account number using:
- Digit Positions (4) - (6) in 3-digit accounts
- Digit Positions (3) - (6) in 4-digit accounts
- Digit Positions (1) - (6) in 6-digit accounts

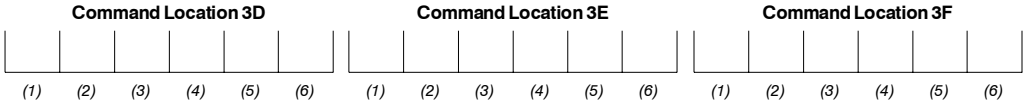
Fill all unused Digit Positions with "0".

PROGRAMMING CONVERSIONS

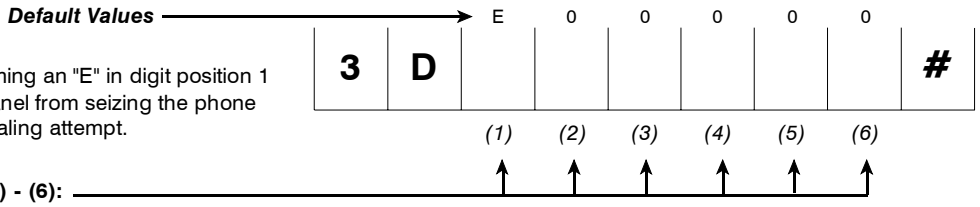
Hexadecimal Value	Key Strokes
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

Command Locations 3D - 3F: Receiver #4 Phone Number

Order in which the numbers will be dialed



Command Location 3D: Receiver #4 Phone Number (digits 1 - 6)

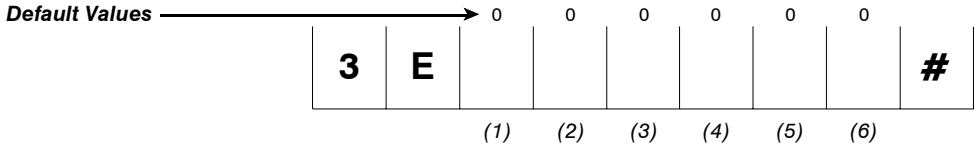


NOTE: Programming an "E" in digit position 1 will prevent the panel from seizing the phone line and cancel dialing attempt.

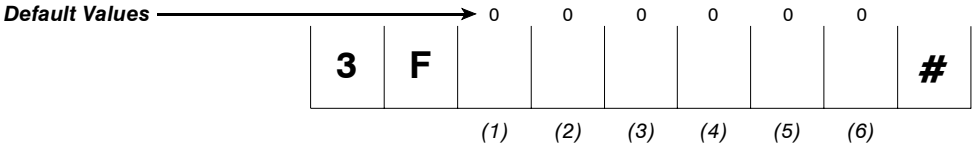
0 - 9 = dialing digits
✻0 = dial tone detect
✻2 = * (DTMF dialing only, not used in pulse dialing)
✻3 = # (DTMF dialing only, not used in pulse dialing)
✻4 = end of number
✻5 = 5 second delay

Digit (1) is dialed first.
You must place a ✻4 (EON) after the last digit to be dialed. Fill in remaining positions with "0". The zeroes will not be dialed.

Command Location 3E: Receiver #4 Phone Number (digits 7 - 12)



Command Location 3F: Receiver #4 Phone Number (digits 13 - 18)

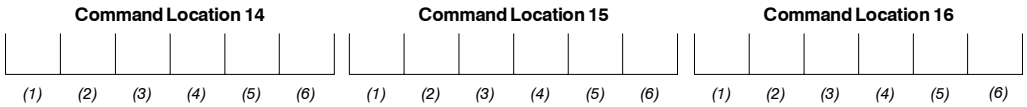


PROGRAMMING CONVERSIONS	
Hexadecimal Value	**Key Strokes**
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

CL 14 - 16

Command Locations 14 - 16: RPS Phone Number

Order in which the numbers will be dialed



Command Location 14: RPS Phone Number (digits 1 - 6)

Default Values → E 0 0 0 0 0

1	4						#
		(1)	(2)	(3)	(4)	(5)	(6)

NOTE: Programming an "E" in digit position 1 will prevent the panel from seizing the phone line and cancel dialing attempt.

Digit Positions (1) - (6):

0 - 9 = dialing digits
✻ 0 = dial tone detect
✻ 2 = * (DTMF dialing only, not used in pulse dialing)
✻ 3 = # (DTMF dialing only, not used in pulse dialing)
✻ 4 = end of number
✻ 5 = 5 second delay

Digit (1) is dialed first.
You must place a ✻4 (EON) after the last digit to be dialed. Fill in remaining positions with "0".

Command Location 15: RPS Phone Number (digits 7 - 12)

Default Values → 0 0 0 0 0 0

1	5						#
		(1)	(2)	(3)	(4)	(5)	(6)

Command Location 16: RPS Phone Number (digits 13 - 18)

Default Values → 0 0 0 0 0 0

1	6						#
		(1)	(2)	(3)	(4)	(5)	(6)

NOTE: In order to utilize the Remote Programming feature, CL 0B, Digit Positions (3) and (4) must also be programmed with "1".

PROGRAMMING CONVERSIONS	
Hexadecimal Value	**Key Strokes**
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

CL 17 - 1E & 1F - 26

Command Locations 17 - 1E: Loop Reporting Codes

Default Values → 1 0 E 1 0 0

17 = Loop 1 1B = Loop 5
18 = Loop 2 1C = Loop 6
19 = Loop 3 1D = Loop 7
1A = Loop 4 1E = Loop 8

1	7							#
		(1)	(2)	(3)	(4)	(5)	(6)	

Digit Positions (1) & (2): Alarm Reporting Code

Digit Positions (3) & (4): Restore Reporting Code

Digit Positions (5) & (6): Bypass Reporting Code

Only Position (1) is sent for 3/1 and 4/1 formats.
Positions (1) and (2) are sent for 3/1 Extended , 4/2, and CFSK III formats.
Program 00 to disable Event Reporting for a loop.
If using 3/1 or 4/1 format, fill unused positions with "0".

Command Locations 1F - 26: Loop Control

Default Values → 1 2 1 3 2 3

1F = Loop 1 23 = Loop 5
20 = Loop 2 24 = Loop 6
21 = Loop 3 25 = Loop 7
22 = Loop 4 26 = Loop 8

1	F							#
		(1)	(2)	(3)	(4)	(5)	(6)	

Digit Position (1): Alarm Receiver Select

0 = Receiver 1 with Receiver 2/3/4 as back-up
1 = Receiver 1 only
2 = Receiver 2 only
3 = Receiver 1,2,3,4 (All Reporting)
4 = Receiver 3 only
5 = Receiver 4 only

Digit Position (2): Loop Response Time

0 = 5 milliseconds
1 = 250 milliseconds
2 = 500 milliseconds
3 = 750 milliseconds
4 = 50 milliseconds

Digit Position (3): Loop Restore Type

0 = No Restoral Report sent
1 = Restoral sent when loop normal
2 = Restoral sent when loop normal and bell silences
3 = Restoral sent when loop normal and system disarmed

Digit Position (4): Loop Arming Type

1 = Interior: delayed during E/E delays
2 = Instant
3 = Delay
4 = Long Delay: delay two times as long(less than 300")
5 = Day/Instant: buzzer on day fault
*1= 24 Hours Police Arm, always armed
6 = Day/Delay: buzzer on day fault
7 = Day/Instant with bell
8 = Day/Delay with bell
9 = 24 Hours: always armed
*0 = Key Arm/Disarm
*2 = 24 Hours Fire Arm, always armed

NOTE:
1. If Loop Arming Type is *0, the infomation in Opening/Closing Report is #15 user. Permission of Opening/ Closing is set by CL4D(1).
2. Twenty-four Hours Fire Loop (*2 arming type)is not allowed to be bypassed. In Day/Delay status, there will be beeps or bell if the loop is faulted, but no alarm report.
3. There is no Exit/Entry Delay for Interior loop. But the Interior loop will be treated as a delay loop when it is triggerred.

Digit Position (5): Loop Bell Type

1 = Pulsing
2 = Steady
3 = Chirp
4 = Silent with no LED
5 = Silent with LED

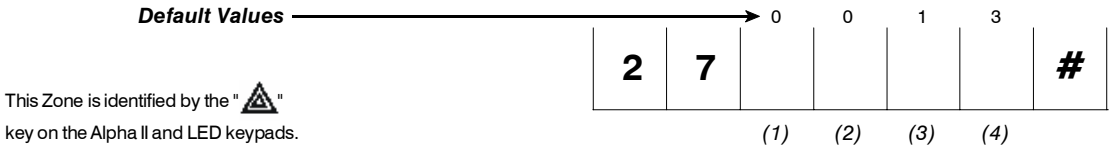
Digit Position (6): Loop CircuitType

1 = Normally Open Circuit
2 = Normally Closed Circuit
3 = End Of Line (EOL)
4 = Supervised, bell latched
5 = Supervised, bell not latched

NOTE: A Loop programmed as type 4 or 5 will report any open as a Trouble condition, regardless of panel armed status.

CL 27 - 29

Command Location 27: Soft Zone A (EMERGENCY)



This Zone is identified by the " " key on the Alpha II and LED keypads.

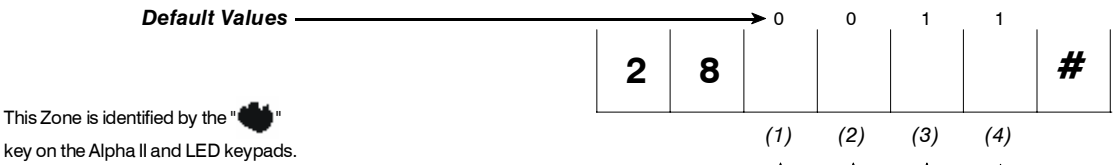
Digit Positions (1) and (2): Emergency Zone Code Report
Program 00 to disable alarm reporting for Emergency zone.

Digit Position (3): Emergency Zone Receiver Select
0 = Receiver 1 with Receiver 2/3/4 as back-up
1 = Receiver 1 only
2 = Receiver 2 only
3 = Receiver 1,2,3,4 (All Reporting)
4 = Receiver 3 only
5 = Receiver 4 only

Digit Position (4): Emergency Zone Loop Bell Type
1 = Pulsing 2 = Steady 3 = Chirp 4 = Silent

NOTE: Command Location 2F Digit Position (4) must be programmed to "1" to enable Soft Zones.

Command Location 28: Soft Zone B (Fire)



This Zone is identified by the " " key on the Alpha II and LED keypads.

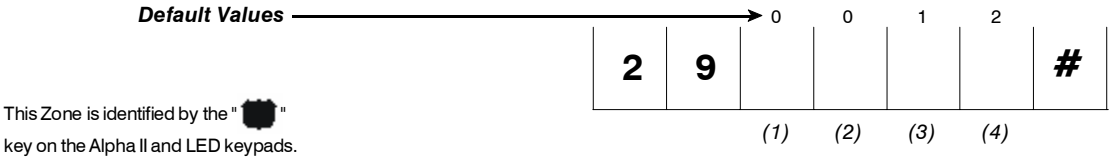
Digit Positions (1) and (2): Fire Zone Report Code

Digit Position (3): Fire Zone Receiver Select

Digit Position (4): Fire Zone Loop Bell Type

Refer to CL 27 for information about programming this zone.

Command Location 29: Soft Zone C (Police)



This Zone is identified by the " " key on the Alpha II and LED keypads.

Digit Positions (1) and (2): Police Report Code

Digit Position (3): Police Zone Receiver Select

Digit Position (4): Police Loop Bell Type

Refer to CL 27 for information about programming this zone.

PROGRAMMING CONVERSIONS	
Hexadecimal Value	**Key Strokes**
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

Command Location 2A: Event Reporting

Default Values → 1 1 A 1 D 1

2	A							#
		(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	

Digit Position (1): Byapss Receiver Select

0 = Receiver 1 with Receiver 2/3/4 as back-up
1 = Receiver 1 only
2 = Receiver 2 only
3 = Receiver 1,2,3,4 (All Reporting)
4 = Receiver 3 only
5 = Receiver 4 only

See also CL 17 - 1E Digit Positons (5 & 6)

Digit Position (2): Restore Receiver Select

See Digit Position (1) for programming options.

Digit Position (3): Unit Status Report Code

Valid entries are 0 - F.
The panel will add a fixed extension digit when reporting in 3/1 Extended, 4/2, and CFSK formats.
Fixed codes are listed below.
Program a 0 to disable Unit Status Reporting.

Digit Position (4): Unit Status Receiver Select

See Digit Position (1) for programming options.

Digit Position (5): Cancel Report Code

Valid entries are 0 - F.
The panel will add the User ID # as the second digit when reporting in 3/1 Extended, 4/2, and CFSK formats.
Program a 0 to disable Cancel Reports.

Digit Position (6): Cancel Report Receiver Select

See Digit Position (1) for programming options.

UNIT STATUS FIXED EXTENSION CODES

1 = Low battery
2 = AC fail
3 = Bell fuse fail
4 = Loop trouble
5 = Failed to communicate
6 = Battery restore
7 = AC restore
8 = Bell fuse restore
A = Loop trouble restore
B= Watchdog reset
C= Completed programming

PROGRAMMING CONVERSIONS

Hexadecimal Value	Key Strokes
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

Command Location 2B: Test Report

Default Values → 0 0 1 6

2	B					#
		(1)	*(2)*	*(3)*	*(4)*	

Digit Positions (1) and (2): Test Report Code

Valid entries are 0 - F.
Program 00 to disable Test Reports.

Digit Positions (3): Test Report Receiver Select

0 = Receiver 1 with Receiver 2/3/4 as back-up
1 = Receiver 1 only
2 = Receiver 2 only
3 = Receiver 1,2,3,4 (All Reporting)
4 = Receiver 3 only
5 = Receiver 4 only

Digit Positions (4): Test Report Interval

1 = 1 hour
2 = 2 hours
3 = 4 hours
4 = 12 hours
5 = 24 hours
6 = 7 days
7 = 14 days
8 = 21 days
9 = 30 days
✻0 = 1 hour if armed
✻1 = 2 hours if armed
✻2 = 4 hours if armed
✻3 = 12 hours if armed
✻4 = 24 hours if armed

NOTE: CL A0 must be programmed to correctly set time of test.

Command Location 2C: Opening and Closing Report Codes

Default Values → B 1 C 1

2	C					#
		(1)	*(2)*	*(3)*	*(4)*	

Digit Position (1): Opening Report Code

Valid entries are 0 - F.
The User ID # is transmitted after the opening code . Program 0 to disable Opening Reports.

Digit Position (2): Opening Report Receiver Select

0 = Receiver 1 with Receiver 2/3/4 as back-up
1 = Receiver 1 only
2 = Receiver 2 only
3 = Receiver 1,2,3,4 (All Reporting)
4 = Receiver 3 only
5 = Receiver 4 only

Digit Position (3): Closing Report Code

Valid entries are 0 - F.
The User ID # is transmitted after the opening code. Program 0 to disable Closing Reports.

Digit Position (4): Closing Report Receiver Select

0 = Receiver 1 with Receiver 2/3/4 as back-up
1 = Receiver 1 only
2 = Receiver 2 only
3 = Receiver 1,2,3,4 (All Reporting)
4 = Receiver 3 only
5 = Receiver 4 only

Command Location 2D: Duress Report and Delays

Default Values → 0 1 3 6 2

2	D					#
		(1)	*(2)*	*(3)*	*(4)*	*(5)*

Digit Position (1): Duress Report Code

Valid entries are 0 - F.
The User Code will be reported as the second digit .
Program 0 to disable Duress Reports.

Digit Position (2): Duress Receiver Select

0 = Receiver 1 with Receiver 2/3/4 as back-up
1 = Receiver 1 only
2 = Receiver 2 only
3 = Receiver 1,2,3,4 (All Reporting)
4 = Receiver 3 only
5 = Receiver 4 only

Digit Position (3): Entry Delay Time

1 = 10 secs
2 = 20 secs
3 = 30 secs
4 = 40 secs
5 = 50 secs
6 = 60 secs
7 = 70 secs
8 = 80 secs
9 = 90 secs
✻0 = 100 secs
✻1 = 110 secs
✻2 = 120 secs
✻3 = 130 secs
✻4 = 140 secs
✻5 = 300 secs

NOTE: To program delay times greater than 300 secs, see CL 1F - 26 Digit Position (4)

Digit Position (4): Exit Delay Time

1 = 10 secs
2 = 20 secs
3 = 30 secs
4 = 40 secs
5 = 50 secs
6 = 60 secs
7 = 70 secs
8 = 80 secs
9 = 90 secs
✻0 = 100 secs
✻1 = 110 secs
✻2 = 120 secs
✻3 = 130 secs
✻4 = 140 secs
✻5 = 300 secs

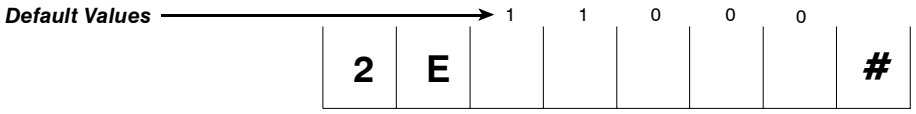
Digit Position (5): Audible Time

1 = 2 min
2 = 5 min
3 = 10 min
4 = 15 min
5 = 30 min

PROGRAMMING CONVERSIONS

Hexadecimal Value	Key Strokes
A	✻0
B	✻1
C	✻2
D	✻3
E	✻4
F	✻5

Command Location 2E: Audible/Visual Switches



Digit Position (1): Entry Pre-alarm Enable

0 = No
1 = Yes: sounds keypad buzzers during entry delay

Digit Position (2): Exit Pre-alarm Enable

0 = No
1 = Yes: sounds keypad buzzers during exit delay

Digit Position (3): Bell Reverse Operation

0 = No
1 = Yes: supplies bell voltage in non-alarm state; Bell requires external power supply

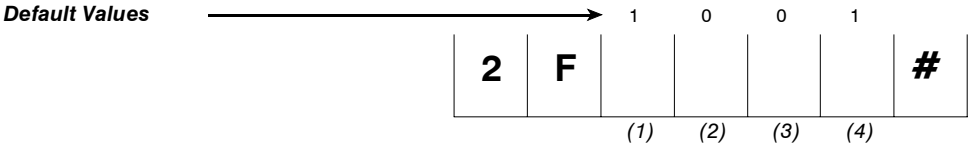
Digit Position (4): Ring Back

0 = No
1 = Yes: As local or disarmed users, auto detect ring after arm (or exit delay);
as armed users, send open report after arm: ring for two second.

Digit Position (5): Disable Loop LEDs

0 = No
1 = Yes: turns off keypad zone LEDs after 5 minutes

Command Location 2F: Unit Control



Digit Position (1): Local System Only

0 = No
1 = Yes: disables all communications except RPS

Digit Position (2): Enable Daily Dynamic Battery Test

0 = No
1 = Yes: tests battery under load every 24 hours

Digit Position (3): Enable Four Minute Power-Up Delay

0 = No
1 = Yes: suppress alarms on power-up for 4 minutes (except soft zones)

Digit Position (4): Enable Soft Zone Operation

0 = No

1 = Yes: allows use of Emergency( ), Fire( ), and Police ( )keys

CL 30 - 37 & 41 - 42

Command Locations 30 - 37: Loop Switches

****Default Values** → 0 0 0 0

3	0					#
		(1)	(2)	(3)	(4)	

30 = Loop 1 34 = Loop 5
31 = Loop 2 35 = Loop 6
32 = Loop 3 36 = Loop 7
33 = Loop 4 37 = Loop 8

*****Default Values are different for each loop. Refer to the SYSTEM 238C PLUS II Programming Worksheet at the end of this manual for other default values.***

Digit Position (1): Enable Door Chime
0 = No
1 = Yes: keypads beep 2 seconds when faulted (disarmed condition)

Digit Position (2): Allow Bypassing of This Loop
0 = No: makes it a priority zone (Bypass Disabled)
1 = Yes: authorized users can bypass or force arm

NOTE: 1. This setting has no effect on group bypassing funtion.
2. Twenty-four Hours Fire zone programmed in CL1F digit (4) should not be bypassed.

Digit Position (3): Allow Group Bypassing for This Loop
0 = No
1 = Yes: include as part of group for Home Arming or Instant/Home Arming

NOTE: Twenty-four Hour Zones programmed in CL1F digit (4) should not be bypassed.

Digit Position (4): Delay Before Dial
0 = No
1 = Yes: this loop will delay dialing on alarm for time programmed in 0B (1)

Command Location 41: Redial After Communication Failure

Default Values → 0 4 2

4	1				#
		(1)	(2)	(3)	

Digit Positions (1) & (2): Time between Redial Attempts
01 = 1 hour 02 = 3 hours 07 = 7 hours 99 = 99 hours

Digit Position (3) & (4): Redial Attempts
0 = No Attempt 1 = 1 attmpt 2 = 2 attempts 3 = 3 attempts

NOTE: Time between Redial Attempts counts begins when last attempt ends. Number of dial attempt is set by 0B(6)). If 0B(6) is odd, the option is not working.

Command Location 42: Set Real-time Clock (Year, Month, Day)

Default Values → 0 5 0 8 1 5

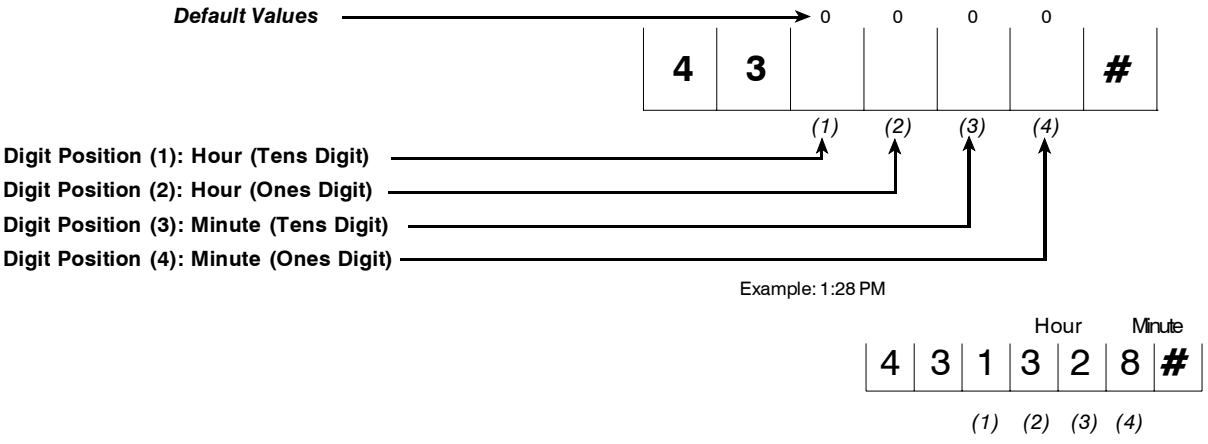
4	2							#
		(1)	(2)	(3)	(4)	(5)	(6)	

Digit Position (1): Year (Tens Digit)
Digit Position (2): Year (Ones Digit)
Digit Position (3): Month (Tens Digit)
Digit Position (4): Month (Ones Digit)
Digit Position (5): Day (Tens Digit)
Digit Position (6): Day (Ones Digit)

Example: April 12,1998

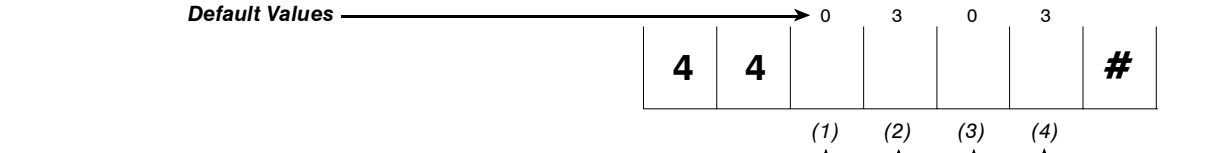
		Year		Month		Day		
4	2	9	8	0	4	1	2	#
		(1)	(2)	(3)	(4)	(5)	(6)	

Command Locations 43: Set Real-time Clock (Hour, Minute)



Example: 1:28 PM

Command Location 44: Detect AC Power and Telephone Line



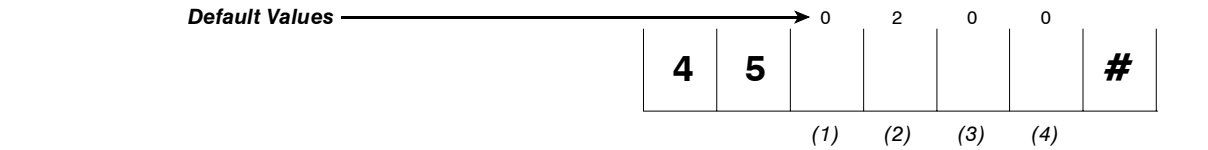
Digit Positions (1) and (2): Detect AC Power

01 = 5 minutes
02 = 10 minutes
03 = 15 minutes

Digit Positions (3) and (4): Detect Telephone Line

00 = no detect
01 = 1 minutes
02 = 2 minutes
03 = 4 minutes

Command Location 45: Set Exterior Relay(1# and 2#)



Digit Positions (1) and (2): 1# Exterior Relay

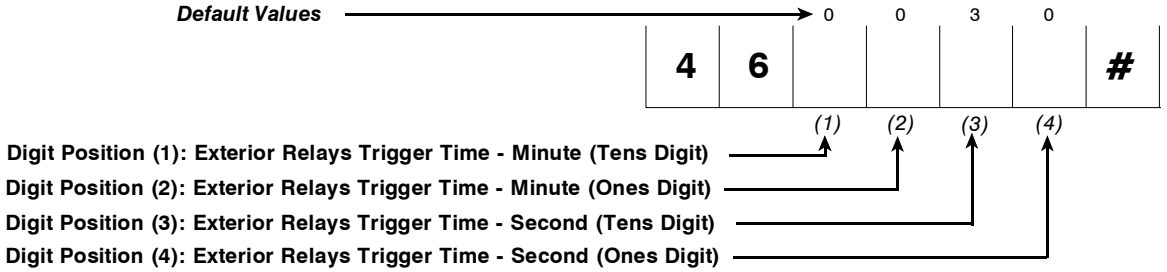
00 = None	06 = Clear Alarm Memery	0C =2# Zone Alarm
01 = Entry Delay	07 = AC Power Fail	0D =3# Zone Alarm
02 = Exit Delay	08 = Low Battery	0E= 4# Zone Alarm
03 = Arm	09 = Telephone Line Off	0F =5# Zone Alarm
04 = Disarm	0A = Communication Fail	10 =6# Zone Alarm
05 = Alarm	0B =1# Zone Alarm	11 =7# Zone Alarm
		12 =8# Zone Alarm

Digit Positions (3) and (4): 2# Exterior Relay

00 = None	06 = Clear Alarm Memery	0C =2# Zone Alarm
01 = Entry Delay	07 = AC Power Fail	0D =3# Zone Alarm
02 = Exit Delay	08 = Low Battery	0E= 4# Zone Alarm
03 = Arm	09 = Telephone Line Off	0F =5# Zone Alarm
04 = Disarm	0A = Communication Fail	10 =6# Zone Alarm
05 = Alarm	0B =1# Zone Alarm	11 =7# Zone Alarm
		12 =8# Zone Alarm

CL 46 & 4E - 4F

Command Locations 46: Set Exterior Relays Trigger Time



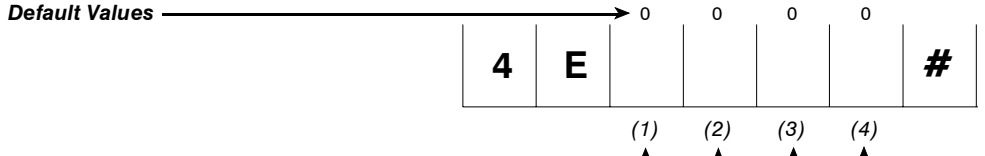
Digit Position (1): Exterior Relays Trigger Time - Minute (Tens Digit)

Digit Position (2): Exterior Relays Trigger Time - Minute (Ones Digit)

Digit Position (3): Exterior Relays Trigger Time - Second (Tens Digit)

Digit Position (4): Exterior Relays Trigger Time - Second (Ones Digit)

Command Location 4E: Set Exterior Relay(3# and 4#)



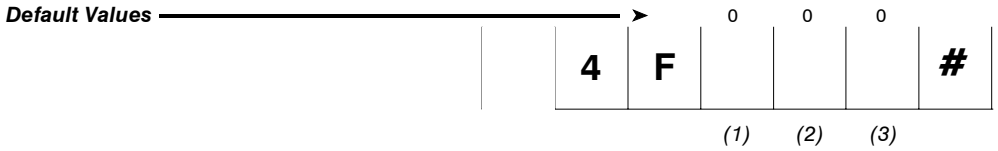
Digit Positions (1) and (2): 3# Exterior Relay

00 = None	06 = Clear Alarm Memery	0C =2# Zone Alarm
01 = Entry Delay	07 = AC Power Fail	0D =3# Zone Alarm
02 = Exit Delay	08 = Low Battery	0E= 4# Zone Alarm
03 = Arm	09 = Telephone Line Off	0F =5# Zone Alarm
04 = Disarm	0A = Communication Fail	10 =6# Zone Alarm
05 = Alarm	0B =1# Zone Alarm	11 =7# Zone Alarm
		12 =8# Zone Alarm

Digit Positions (3) and (4): 4# Exterior Relay

00 = None	06 = Clear Alarm Memery	0C =2# Zone Alarm
01 = Entry Delay	07 = AC Power Fail	0D =3# Zone Alarm
02 = Exit Delay	08 = Low Battery	0E= 4# Zone Alarm
03 = Arm	09 = Telephone Line Off	0F =5# Zone Alarm
04 = Disarm	0A = Communication Fail	10 =6# Zone Alarm
05 = Alarm	0B =1# Zone Alarm	11 =7# Zone Alarm
		12 =8# Zone Alarm

Command Location 4F: Set Report Storage



Digit Positions (1): Arm/Disarm Event
(Event Type: Arm, Disarm, Cancel report)

0 = Disable

1 = Enable

Digit Positions (2): Status Event
(Event Type: Bypass, Bypass Restore , Test Report , Status Report which includes fault , fault restore , low battery , AC power fail, AC power restore, communication fail and program ended.)

0 = Disable

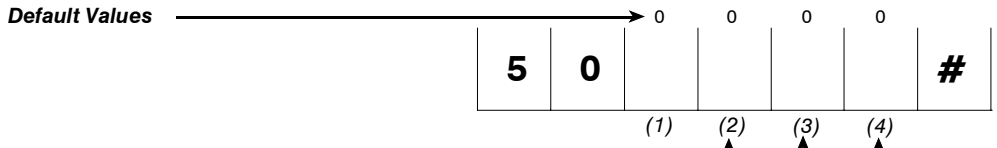
1 = Enable

Digit Positions (3): Alarm Event
(Event Type: Zone Alarm, Zone Restore, duress, First Aid Alarm, Fire and Police)

0 = Disable

1 = Enable

Command Locations 50: Set Real-time Clock Adjustment



Digit Position (1): Adjust Type
0 = No adjustment
1 = Increase time
2 = Decrese time

Digit Position (2): Adjust error time (Minute)

Digit Position (3): Adjust error time (Second, Tens Digit)

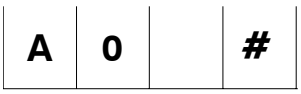
Digit Position (4): Adjust error time (Second, First Digit)

NOTE: The command sets how to adjust real-time daily. Refer to FAQs for more information.

Command Location A0: Set Test Report Countdown Timer

This command sets the time when the first Test Report is transmitted to the central station. The panel will use this transmission time each time it's powered up or the CPU is reset (unless Command Location A0 is reprogrammed).

Previously stored data is not displayed during programming.



Digit Position (1): Set Countdown Timer

0 = 1/4 hour	5 = 4 hours	✻ 0 = 14 hours
1 = 1/2 hour	6 = 6 hours	✻ 1 = 16 hours
2 = 1 hour	7 = 8 hours	✻ 2 = 18 hours
3 = 2 hours	8 = 10 hours	✻ 3 = 20 hours
4 = 3 hours	9 = 12 hours	✻ 4 = 22 hours
		✻ 5 = 24 hours

NOTE: Refer to CL 2B (4) for setting the time interval between Reports.

Example: The time is 15: 00 o'clock (3:00 pm). You want the first Test Report to be transmited 10 hours later. Program the value "8" in Memory Location A0.

TESTING

Once the installation is complete, connect AC and DC power. Complete programming, if required. **Test all panel operations**.

TO THE INSTALLER

Regular maintenance and inspection (at least monthly) by the installer and frequent testing by the user are vital to the continuous and satisfactory operation of any alarm system. The installer should assume the responsibility for developing and offering a regular maintenance program to the user, as well as acquainting the user with the proper operation and limitations of the alarm system and its component parts. **Recommendations must include a specific program of regular testing (at least weekly) to insure that the system is operating properly at all times**.

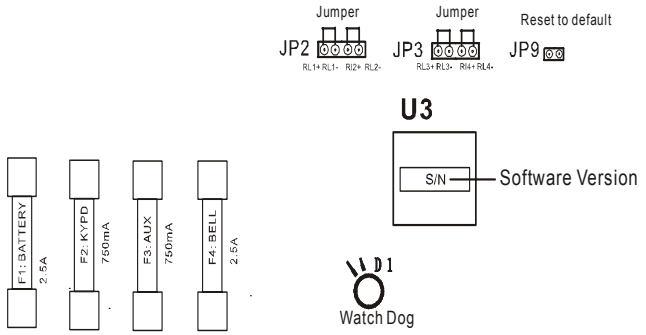
IMPORTANT NOTICE

Identifying version:

Check the watchdog LED near the U3 (as the picture followed) to identify the software version. If the version is 400-00128 Rev. A or later, the software is fit to the latest rules.

Identifying communication failure by sounds:

When system has communication failure, keypad will sound for 2 seconds once every minute, until report sending is successful.

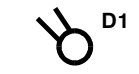


TELEPHONE LINE PROBLEMS

In the event of telephone line problems, disconnect the SYSTEM 238C PLUS II by removing the modular connector plug from the Telco interface jack. **Do not disconnect the connection inside the SYSTEM 238C PLUS II cabinet.** Doing so will prevent the premise phones from operating. If your phone works correctly after the control panel has been disconnected from the phone line, the control panel has a problem and should be returned for repair.

If the phone does not work after you have disconnected the control panel from the phone line, notify the telephone company and request prompt repair. **The user may not, under any circumstance (in or out of warranty), attempt any service or repairs on the SYSTEM 238C PLUS II**. The control panel must be returned to Honeywell authorized service agency for repairs.

WATCHDOG INDICATOR



The SYSTEM 238C PLUS II is protected by an advanced circuit, called a Watch Dog circuit, that constantly monitors the microprocessor. As long as the panel has power and is operating normally, the Watchdog LED (DS1) on the circuit board will flash. If the Watchdog circuit detects a failure, it will attempt to reset the panel.

If the panel does not operate properly, and the Watchdog LED no longer flashes, call your local Honeywell Representative.

Keypad Operation Command Summary

The majority of the keypad commands apply equally to the LED and Alpha II keypads. Some keypad commands, however, apply to the LCD keypad only.

The following Keypad Commands apply to both the LED and Alpha II keypads:

Function	Comments	Keystroke Sequence
Arm/Disarm	Delays active	[Code] [#]
Bypass Zone (n)	[n] is zone # 1 - 8; Code may be required	[Code] [BYPASS] [n][#]
Chime On/Off		[*] [5] [#]
Change Code by Master Code		[Master Code] [*] [0][#][User No.][#] [New Code] [#] [New Code] [#]
Change Code by Auxiliary Code	Can not change Master Code	[Auxiliary Code] [*] [0][#][User No.][#] [New Code] [#] [New Code] [#]
Clear Alarm Memory		[*] [1] [#]
Exit Programming		[*] [#]
Group Bypass and Arm	Arms system and all zones programmed for group bypass, CL 24, Digit Position (3), are bypassed simultaneously; Code may be required. **(Also called Home Arming)**	[Code] [*] [4] [#]
Instant Arm	Arms system and delayed zones are converted to Instant (Exit Delay active, No Entry Delay); Code may be required	[Code] [*] [7] [#]
Group Bypass and Instant Arm	Same as Group Bypass (above) except system is Instant Armed (Exit Delay operates normally, upon expiration of Exit Delay, all delayed zones are converted to Instant - No Entry Delay. Code may be required. **(Also called Instant/Home Arming)**	[Code] [*] [4] [7] [#] or [Code] [*] [7] [4] [#]
Keypad Activated RPS	If enabled, CL 0B(3); Code may be required and error tone	[Code] [*] [0] [2] [#]
Fire Alarm	Keypad activated	[F] (Hold for 3 seconds)
Medical Alarm	Keypad activated	[E] (Hold for 3 seconds)
Police/Panic Alarm	Keypad activated	[P] (Hold for 3 seconds)
Reset Aux Power	Reset devices connected toTerminals AUX	[*] [6] [2] [#]
Reset Panel	Panel should be in disarmed state	[Master Code] [*] [6] [8] [#]
Test - Battery	Test under load	[*] [6] [4] [#]
Test - Bells	Code may be required	[Code] [*] [6] [3] [#]
Test - Central Station	Code may be required	[Code] [*] [6] [1] [#]
Test - Local Walk Test	Code may be required	[Code] [*] [6] [0] [#]

The following Keypad Commands apply to the Alpha II keypad only:

Function	Comments	Keystroke Sequence
Error Tones Toggle On/Off		[*] [5] [4] [#]
Audible Feedback Toggle		[*] [5] [1] [#]
Backlight Toggle On/Off		[*] [8] [#]
Display Keypad Model & Revision Number		[*] [9] [#]
Chime Toggle		[*] [5] [3] [#]
Pre-warn Toggle On/Off		[*] [5] [2] [#]
Report Recall		[Installer Code] [*] [2] [#]

The following Keypad Commands are Installer Only Commands:

Function	Comments	Keystroke Sequence
Alpha Keypad Programming		[Installer Code] [*] [0] [1] [#]
Report Recall	Display event in the buffer(Only for Alpha II keypad)	[Installer Code] [*] [2] [#]
Kill/Revive Panel	Panel should be in disarmed state	[Installer Code] [*] [6] [9] [#]
Panel Programming	Start Programming the Panel	[Installer Code] [*] [0] [#]

Frequently Asked Questions

The following is a summary of the questions most frequently asked of our Technical Support Department.

Question: *How do I program the panel with the LED keypad?*
Answer: To program with the LED keypad, enter the Command Location to be programmed, the Data to be programmed and the press the [#] key. (See also page 6.)

For Example: To program User #2 with the ability to Arm only, No Reports and No Bypassing; and a PIN of 2543, enter the following keystrokes:

CL	Arm Type	PIN (w/EON)	Write Data
[0][2]	[1]	[2][5][4][3][*][4]	[#]

NOTE: The first digit of the User Code must be the same as the User Number.

Question: *How do I access Alpha Keypad Programming to enter Zone Labels?*
Answer: To begin Alpha Keypad Programming (you cannot program the LED keypad), enter [Installer Code] [*] [0] [1] [#]. Then scroll to the desired message location. (See also page 7.)

Question: *How do I interpret a Trouble on the LED keypad? How do I clear a Trouble on the LED keypad?*
Answer: A number of conditions may cause the Trouble LED to light. See the chart below for additional information.

Trouble LED	Power LED	Zone LED's	Cause
Flash Slow	On	Off	Watchdog
On	On	Flash Slow	Zone Trouble
On	Off	Off	AC Failure
On	Flash Slow	Off	Low Battery
Flash Fast	On	Off	System Trouble (Communication Fail.)

Question: *How do I enter hexadecimal numbers when using keypad programming?*
Answer: Hexadecimal values are entered through the use of the [*] key and one of the digits [0] - [5]. The hexadecimal conversion chart is also found at various locations throughout the programming section of the manual.

Question: *What is an "Interface error 1" and how do I correct the error?*
Answer: This error is caused by a problem with the Data line (Green wire) between the panel and the keypad. Check the connection to ensure that the wire is not pinched or loose. Also try disconnecting all keypads from the panel (one at a time), resetting the panel after each keypad is removed. Remember, to reset the panel press: [Master Code] [*] [6] [8] [#].

Question: *How do I reset Alarm Memory?*
Answer: To Clear Alarm Memory, press [*] [1] [#].

Question: *How do I address an Alpha Keypad for the first time?*
Answer: If you have an Alpha keypad that has never been addressed, when power is initially applied, the display will read **KEYPAD ADDRESS?**. To enter the address, simply press a number between 0 and 7. Remove panel power for 3 seconds and then re-apply power to reset the system. For additional information about Keypad addressing, see page 4.

NOTE: If operating at or near the limit of AUX Power and Keypad Power, you may need to remove power for up to 30 seconds in order for the system to reset properly.

Question: *How do I interpret the Unit Status Reports? Can the codes be changed?*
Answer: The Reporting Codes for the Unit Status Report is a two-digit code. The first digit is programmed into CL 2A Digit Position (3) and may be any value from 0 - F. The second digit is fixed by the firmware and cannot be changed. Please note that programming a 0 into 2A (3) will disable the report and no Unit Status information will be sent. Additional information about Unit Status Reporting Codes can be found on page 20 in the programing section.

Question: *How do I enter Receiver and RPS Phone Numbers? Why do I have to enter the E at the end of the number?*
Answer: The System 238C PLUS is designed to handle phone numbers up to 18 digits long, but the firmware can only handle 6 digits per Command Location. This means that 3 Command Locations are required to store a phone number. With variations in number length and special characters which may need to be included, the software needs some method of determining the end of the number. The E (entered by pressing [*][4]) tells the software that it has reached the end of the phone number and to ignore any additional digits.

For Example: To program the panel for Receiver #1 with a phone number of 555-1212 and disable the call waiting feature using *70, enter the following sequence:

Command Location 0D						Command Location 0E						Command Location 0F					
C	7	0	5	5	5	1	2	1	2	E	0	0	0	0	0	0	0
(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)

NOTE: Entering [*] [2] in CL 0D (1) will display the value "C" and entering [*] [4] in CL 0E (5) will display the value "E".

Question: *How can I correct the problem of two Alpha keypads with the same address?*
Answer: When two keypads have been given the same address, a conflict occurs on the data bus since two keypads are trying to communicate at the same time. The only way to correct the problem is to disconnect both keypads and then re-address one of them, making sure that the address is not used by any other keypad. To re-address the keypad, enter Alpha Keypad Programming ([Installer Code] [*] [0] [1] [#]) and scroll backward one step ([*] [BYPASS]). Then enter the new address. Don't forget to reset the panel ([Master Code] [*] [6] [8]]#]) after changing the address, so the panel knows how to properly address the keypad. For additional information about keypad addressing, see page 5.

Question: *Why can't my panel communicate with the Central Station?*
Answer: There are several reasons for the panel not communicating. The first place to look is CL 2F (1). This is the Unit Control, if Digit Position (1) is programmed with a 1, all communication except RPS is disabled. If 2F (1) is programmed with a 0, check to ensure that all of the following parameters are properly set:

Account Number 1 is programmed into CL 0C
Receiver #1 Phone Number is correctly programmed into CL 0D - 0F
Receiver Format and Message Format agree CL 0A
Communication Control (CL 0B) is correctly programmed
The RJ-31X jack is correctly wired (terminals 4 & 5 are not switched with 1 & 8)

Question: *How do I disarm my panel if I accidently locked myself out by programming my user code as Arm Only?*
Answer: The only way to correct this problem is to access the panel through Remote Programming (RPS) or Direct Connect (also RPS) and disarm the panel. Then use the remote programming to re-program the panel. For additional information about RPS, see the Commander II/Monitor II Operating Manual.

Question: *Why doesn't my keypad respond? The Power LED is lit, but nothing happens.*
Answer: The panel may be in the KILL mode. On the LED keypad, only the Power LED will be lit. On the Alpha II keypad, the Power LED will be lit and the Service Message, if programmed, will be displayed. To restore the panel, press [Installer Code] [*] [6] [9] [#].

Question: *How to work standalone?*
Answer: Control pannel can work without networking. You can set user's cell phone as the alarm receiver. Set CL0B(6) to 1 in order to disable redailing, and set all report codes except alarm to zero.

Question: *How does system detect telephone line?*
Answer: Set the type of trigger is telephone offline (set CL45(1),(2) to 09). The time of detecting telephone line is set by CL44(3),(4)(if it is 03, it will detect telephone line status every 4 minutes). If telephone offline detected, trigger 1 will be driven

Question: *What's the relationship between Dial Attempts and Report Type?*
Answer: If the Dial Attempts is 8 tries, each kinds of report will be sent as follows:
Single receiver ——— If only one receiver is enabled, it can be dialed no more than 8 times. Onec the receiver is connected, it won't be dialed again.
Dual Report (Four Receivers) ——— If four receivers are enabled, each of them should be dialed and the dial attempts are no more than 8. The system will stop dialing the receivers which has been connected to.
Backup Report ——— Each receiver will be dialed twice.(If receiver 1 has been dialed twice and still can't be connected, dial reciever 2 twice. Receiver 3 and 4 are operated in the same way.)
Therefore, if Dial Attempts of Backup Report is 2, only receiver 1 can be dialed twice. If receiver 1 can't be connected in the 2 tries, other receivers won't be dialed either.

Proposal: If two receivers are enabled to receive Backup Report, Dial Attempts should be more than 4. If four receivers are enabled, Dail Attempts should be more than 8.

Question: *How to work standalone?*
Answer: Control pannel can work without networking. You can set user's cell phone as the alarm receiver. Set CL09(1) to 1 in order to disable redailing, and set all report codes except alarm to zero.

Question: *How to adjust real-time clock?*
Answer: Install the control panel, then set real-time clock. Record that time. Note that the real-time clock will reset to 00: 00 when control panel is powered on. Therefore you have to set the real-time clock each time the panel is powered on. It is necessary to adjust the real-time clock at times. To reduce time error, it is suggested to adjust the clock two weeks after you set it. Following the operations below to adjust real-time clock.

Read the control panel time and the referrence clock time. Then divide the absolute difference between the two times with the days the control panel has run since last power up. The result of this step is denoted as Adjust_Time. Program Command Location 46(CL46) with Adjust_Time and set the real-time clock to the right value. Then the real-time clock is adjusted.

Each time you adjust the real-time clock, add the new Adjust_Time to the previous one saved in CL46 to form new Adjust_Time. Use that new Adjust_Time to program CL46.

For example, you set the real-time clock at 9:00 :00am 7/20/2007 and adjust it at 9:00:00 am 8/6/2007. The time of the reference clock is 9:11:40, 8/6/2007. The absolute difference between the two times is 700 seconds and the control panel has run 17 days. 700 divided by 17 is 41.1. Therefore, the control panel is 41.1s slower than the reference clock each day. Adjust the real-time clock by performing following steps.

1. Enter the [Installer Code][*][0][#] on the keypad to enter programming mode.
2. Program CL46 as follows.

CL46:

1	0	4	1

Refer to CL46 for detailed information.

3. Set real-time clock to the right value(the time of the reference clock) in CL43. Here, 09:13 is the right time. Program CL43 as follows.

CL43:

0	9	1	3

4. As the adjustment is finished, press[*][#] to exit programming mode
5. Next time you adjust the real-time clock, add the newly obtained Adjust_time to 40s which is recorded in CL46 to form effective Adjust_time. Use the effective Adjust_time to adjust real-time clock. For example, if the real-time clock runs 1 second faster than the reference clock next time, program CL46 as follows and then perform step 3 & step 4.

CL46:

1	0	4	0

Question: *What do I need to pay attention to when setting Code.*
Answer: Each Operator Code shall be different from others, or only one operator is effective.
For example, if Codes of Operator 1 and Operator 2 are both set as 1234, Operator 1 is effective while Operator 2 is not. And One Operator Code shall be different from the duress code of other Operators.
For example, if Code of Operator 6 is 6666 and Operator 8 6667, opearor 8 will arm/disarm and duress report of operator 6 will not be sent if "6667#" is entered.

Question: *Why is there only police alarm, but no fire alarm or emergency alarm for Alpha keypad soft zone?*
Answer: There is a W1 jumper at the rear panel of the Alpha keypad, shorting it will result in the Alpha keypad's soft zone triggerring only for police alarm. If not shorted, the Alpha keypad will send corresponding alarm report according to the input. See CL27, CL28 &CL29 for detailed information.

Question: *How to recall events stored in the buffer?*
Answer: To recall event stored in the buffer, you must use Alpha Plus II keypad. Enter [Installer Code][*][2][#], then the LCD keypad will display the first event. See page 9 for detailed information. Press [#] to scroll through the events backwards one by one. Press [BYPASS] to scroll through the events forwards one by one. Press [] to scroll through the events backwards every ten events. Press [] to scroll through the events foenrwards every ten events.

Recommendations for Reducing False Alarms

The recommendations contained in this section are designed to assist you in reducing false alarms. The first column contains the Command Locations and Digit Positions in parentheses ( ). The second column is the recommended program option followed by a brief explanation.

Program Option	CL	Program Function	Comments
Code Options	09 (2)	Code is required	This feature is enabled to prevent unauthorized users from activating certain keypad functions. When activated, this command will require a valid User Code to perform such functions as Bypassing a Zone, Group Bypassing, Keypad Activated RPS, Central Station and Bell Testing, and Instant Arming. See Page 11 for Command Summary.
Loop Control	1F - 26 (2)	Loop Response Time	This option determines the response time of the loop itself. It acts as a buffer on the loop to minimize the possibility of fast acting sensors, such as swingers on window foil, producing false alarms.
Loop Control	1F - 26 (3)	Loop Restore Type	This option is used in conjunction with **CL 17-1E** Digit Positions (3 & 4) and **CL 2A** (2). The panel can be programmed to send a Restoral Report only when the loop is normal and the system is disarmed. With this arrangement, any loop which is triggered multiple times while armed will only send one alarm report until the system is disarmed. This prevents the system from tieing up the central station receivers and the phone line with continuous alarm and restoral reports.
Loop Control	1F - 26 (4)	Loop Arming Type	There may be occasion where it is desirable to program all doors and interior points as delayed. Or you may need to program interior zones to be delayed only during the Entry/Exit Delay Time. This Command Location allows a variety of Arming Types to help minimize false alarms.
Event Report	2A (5 & 6)	Cancel Report Code/Cancel Report Receiver Select	This feature should always be enabled on reporting systems, especially if the system does not send Opening and Closing Reports. A Cancel Report is sent to the monitoring station in the event that an Authorized User clears the alarm while the bell is still active. The Cancel Report Code (CL 2A (5)) is actually a two-digit code with the first digit being programmed by the installer and the second digit being the User ID # when the report is sent. CL 2A (6) determines which receiver gets the Cancel Report.
Delay Before Dial	30 - 37(4)		This option programs the loops to have a delay after they are triggered to allow the User to disarm in the event of an accidental triggering of the zone. During the period, the panel will not dial the Center Station to report alarms. The amount of time is determined by the value programmed into CL 0B (1). The time delay may be between 10 and 150 seconds.

THE LIMITATIONS OF YOUR ALARM SYSTEM

While the SYSTEM 238C PLUS II is an advanced design security system, it does not offer guaranteed protection against burglary, fire, or other losses. Any alarm system, whether commercial or residential, is subject to compromise or failure-to-warn for a variety of reasons. These include:

- Intruders may gain access through unprotected openings or have the technical sophistication to bypass an alarm sensor or disconnect an alarm warning device.
- Intrusion detectors, smoke detectors, and many sensing devices will not operate without power. Devices powered by AC will not work if their AC power supply is off for any reason and their back-up batteries are missing, dead, or improperly installed.
- Alarm warning devices such as sirens, bells, and horns may not alert people or wake up sleepers if they are located on the other side of closed or partly closed doors. If warning devices are on a different level of the residence from the bedrooms, they are less likely to waken or alert people inside the bedrooms.
- Telephone lines needed to transmit alarm signals from a premise to a central monitoring station may be out of service or temporarily out of service. Telephone lines are subject to compromise by sophisticated methods of attack.
- Smoke detectors used in conjunction with the alarm system may not sense fires that start where smoke cannot reach the detectors, such as chimneys, walls, or roofs, or on the other side of closed doors. Smoke detectors also may not sense a fire on another level of the residence or building. A second floor detector, for example, may not sense a first floor or basement fire. Finally, smoke detectors have sensing limitations. No smoke detector can sense every kind of fire every time. In general, detectors may not always warn you about fires caused by carelessness and safety hazards, like smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches, arson, etc.
- The most common cause of an alarm system not functioning properly when an intrusion or fire occurs is inadequate maintenace. **Your** alarm system should be tested weekly to make sure all sensors are **operating properly**. **The SYSTEM 238C PLUS II panel and keypads should also be tested**.
- Installing an alarm system may make you eligible for lower insurance rates, but an alarm system is not a substitute for insurance. Homeowners, property owners, and renters should continue to insure their lives and property.

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SYSTEM 238C PLUS II Programming Worksheet

Client: _____ **SYSTEM 238C PLUS II Phone Number:** _____

Address: _____

Installer: _____ **Date:** _____ **Control Location:** _____

VOLTS
AC volts (term 1 and 2): _____

AUX POWER VOLTS
(term 5 and 6): _____

BATTERY VOLTS
Under load - AC off: _____

CONTROL LOCATION:

_____

BREAKER # AND LOCATION:

_____

CURRENT
Keypads (term 6 and 8): _____

SWITCHED AUX (term 5 and 6): + _____

UNSWITCHED AUX (term 6 and 7): + _____

LOOP 8 POWERED DEVICES (term 21 and 22): + _____

TOTAL (500 mA allowed): = _____

ALPHA KEYPADS

Address	Location
0	
1	
2	
3	
4	
5	
6	
7	

0 0 [0 1 2 3 4 5] # **Installer Code**

0 1 [9 1 2 3 4 E] # **User #1 - Master** Name: _____

0 2 [9 0 E 0 0 0] # **User #2(Auxiliary)** Name: _____

0 3 [9 0 E 0 0 0] # **User #3** Name: _____

0 4 [9 0 E 0 0 0] # **User #4** Name: _____

0 5 [9 0 E 0 0 0] # **User #5** Name: _____

0 6 [9 0 E 0 0 0] # **User #6** Name: _____

0 7 [9 0 E 0 0 0] # **User #7** Name: _____

0 8 [9 0 E 0 0 0] # **User #8 -Guest** Name: _____

4 7 [9 0 E 0 0 0] # **User #9** Name: _____

4 8 [9 0 E 0 0 0] # **User #10** Name: _____

4 9 [9 0 E 0 0 0] # **User #11** Name: _____

4 A [9 0 E 0 0 0] # **User #12** Name: _____

4 B [9 0 E 0 0 0] # **User #13** Name: _____

4 C [9 0 E 0 0 0] # **User #14** Name: _____

4 D [4 0 E 0 0 0] # **User #15** Name: _____

0 9 [0 0 1 1] # **Arm/Code Option**

0 A [1 2 1 2] # **Communications Formats**

0 B [0 1 1 1 0 8] # **Communications Control**

0 C [0 0 0 0 0 0] # **Account #1**

Phone #2 (1st 6 digits)
0 D [E 0 0 0 0 0] #

(Middle 6 digits)
0 E [0 0 0 0 0 0] #

(Last 6 digits)
0 F [0 0 0 0 0 0] #

1 0 0 0 0 0 0 0 #	**Account #2**	
Phone #2 (1st 6 digits) 1 1 E 0 0 0 0 0 0 #	(Middle 6 digits) 1 2 0 0 0 0 0 0 #	(Last 6 digits) 1 3 0 0 0 0 0 0 #
RPS Phone (1st 6 digits) 1 4 E 0 0 0 0 0 0 #	(Middle 6 digits) 1 5 0 0 0 0 0 0 #	(Last 6 digits) 1 6 0 0 0 0 0 0 #

1 7 1 0 E 1 0 0 # **Loop 1 Codes**	1 8 2 0 E 2 0 0 # **Loop 2 Codes**
1 9 3 0 E 3 0 0 # **Loop 3 Codes**	1 A 4 0 E 4 0 0 # **Loop 4 Codes**
1 B 5 0 E 5 0 0 # **Loop 5 Codes**	1 C 6 0 E 6 0 0 # **Loop 6 Codes**
1 D 7 0 E 7 0 0 # **Loop 7 Codes**	1 E 8 0 E 8 0 0 # **Loop 8 Codes**

		Description	Volts	Ohms
1 F 1 2 1 3 2 3 #	**Loop 1 Control**			
2 0 1 2 1 2 2 3 #	**Loop 2 Control**			
2 1 1 2 1 2 2 3 #	**Loop 3 Control**			
2 2 1 2 1 2 2 3 #	**Loop 4 Control**			
2 3 1 2 1 1 2 3 #	**Loop 5 Control**			
2 4 1 2 1 1 2 3 #	**Loop 6 Control**			
2 5 1 2 1 9 3 3 #	**Loop 7 Control**			
2 6 1 2 1 9 1 5 #	**Loop 8 Control**			

2 7 0 0 1 3 # **Emergency Zone**	2 8 0 0 1 1 # **Fire Zone**	2 9 0 0 1 2 # **Police Zone**

2 A 1 1 A 1 D 1 # **Event Reports**	2 B 0 0 1 6 # **Test Report**
2 C B 1 C 1 # **Opening/Closing Reports**	2 D 0 0 3 6 2 # **Duress/ Delays**
2 E 1 1 0 0 0 # **Audible/Visual Switches**	2 F 1 0 0 1 # **Unit Control**

3 0 [0 0 0 0] # **Loop 1 Switches**

3 1 [0 1 0 0] # **Loop 2 Switches**

3 2 [0 1 0 0] # **Loop 3 Switches**

3 3 [0 1 0 0] # **Loop 4 Switches**

3 4 [0 1 0 0] # **Loop 5 Switches**

3 5 [0 1 0 0] # **Loop 6 Switches**

3 6 [0 0 0 0] # **Loop 7 Switches**

3 7 [0 0 0 0] # **Loop 8 Switches**

3 8 [0 0 0 0 0 0] # **Account #3**

Phone #3 (1st 6 digits)

3 9 [E 0 0 0 0 0] #

(Middle 6 digits)

3 A [0 0 0 0 0 0] #

(Last 6 digits)

3 B [0 0 0 0 0 0] #

3 C [0 0 0 0 0 0] # **Account #4**

Phone #4 (1st 6 digits)

3 D [E 0 0 0 0 0] #

(Middle 6 digits)

3 E [0 0 0 0 0 0] #

(Last 6 digits)

3 F [0 0 0 0 0 0] #

4 0 [1 2 1 2] # **Communications Formats**

4 1 [0 4 2] # **Communications Redail**

4 2 [0 5 0 8 1 5] # **Set Year, Month, Day**

4 3 [0 0 0 0] # **Set Hour, Minute**

4 4 [0 3 0 3] # **Detect AC Power and Telephone Line**

4 5 [0 0 0 0] # **Set Exterior Relay (1# & 2#)**

4 6 [0 0 3 0] # **Set Exterior Relays Trigger Time**

4 E [0 0 0 0] # **Set Exterior Relay (3# & 4#)**

4 F [0 0 0] # **Set Report Storage**

5 0 [0 0 0 0] # **Set Real-time Clock Adjustment**

A 0 [ ] # **Set Test Report Countdown Timer**

238C PLUS II Event Code	
Event Code	**Event**
ALAM	ALARM
REST	ALARM RESTORE
DURS	DURESS
MDIC	MEDICAL
FIRE	FIRE
POLC	POLICE
LOWB	LOW BATTERY
ACLS	AC LOSS
FLCM	FAIL COMMUNICATION
BRST	BATTERY RESTORE
BLFS	BELL FUSE FAILURE
BFRT	BELL FUSE RESTORE
ARST	AC RESTORE
CPRG	COMPLETE PROGRAM
BYPASS	BYPASS
SRST	BYPASS RESTORE
TEST	COMMUNICATION TEST
TBLE	TROUBLE
TRST	TROUBLE RESTORE
OPEN	OPEN
CLOS	CLOSE
CNCL	CANCEL