

## Section 7

### How to Program The ALPHA Keypad

#### How to start ALPHA programming

You can program ALPHA keypads from the keypad, or remotely using COMMANDER II or MONITOR II. Remote programming is covered in the COMMANDER II/MONITOR II Remote Programming Manual.

The ALPHA keypad must be wired to a SYSTEM 238. Apply power to the panel. You can only program while the panel is disarmed. Press [Installer Combination] [SHIFT] [0] [1] [ENTER]. The ALPHA will display **SERVICE MESSAGE**. Press the [BYPASS] key to scroll through all the messages. If you scroll past the desired message, press and release the [BYPASS] key until you scroll to it again. You can also scroll in reverse by pressing the [SHIFT] key followed by the [BYPASS] key.

#### **Scrolling order:**

- Service Message
- Dealer Message
- Soft Zone Identifiers (A, B, and C)
- Hardwired Loop Identifiers (1 - 8)
- Keypad Address

**If you do not press any key within five minutes, the ALPHA keypad will automatically exit the programming mode.**

#### How to program letters and numbers

ALPHA keypads can be customized to display different messages for the loops and special functions. On the second side of the Programming Template, you'll find an ALPHA Programming Template. Place the ALPHA Programming Template over the keys. The template will make it easy to program 8 hardwired loop identifiers, 3 soft zone identifiers, a dealer message, service message, and keypad address. Up to 16 characters can be programmed on the bottom line of the display.

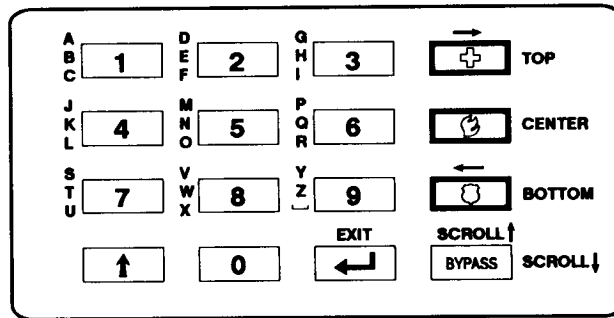
#### **Programming letters**

Looking at the ALPHA keypad, you can see that it's impossible to write letters using the keypad. The ALPHA Programming Template allows you to use combinations of keys to make the desired letters. Keys 1 - 9 are used with the soft zone keys (EMERGENCY, FIRE, and POLICE) to make letters. The letters and soft zone keys are color-coded.

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ALPHA Programming Template



Look at key [1]. If you press and release the [EMERGENCY] key (color-coded red), followed by the [1] key, you'll program the letter A. If you press the [FIRE] key (color-coded black), and then the [1] key, you'll program the letter B. If you press the [POLICE] key (color-coded green), followed by the [1] key, you'll program the letter C. Easy, isn't it?

#### Programming numbers

If you want to program a number, simply press the number key without first pressing a soft zone key.

#### Special function keys

There are six additional special function keys.

- Pressing the [POLICE] key, followed by the [9] key, erases what is stored at that cursor position.
- Pressing [SHIFT], then [EMERGENCY], moves the cursor one space to the right.
- Pressing [SHIFT], followed by the [POLICE] key, moves the cursor one space to the left.
- Pressing the [BYPASS] key makes the display scroll down to the next message.
- Pressing [SHIFT], then [BYPASS], makes the display scroll back one message.
- Pressing [ENTER] tells the keypad that you've completed entering information for that message. The message will be saved in the keypad's EEPROM memory.



If you press [SHIFT] [ENTER] while entering data, the data for that message will be lost. This is because you exited programming **before** downloading the message by pressing the [ENTER] key. If you don't press a key within five minutes, the keypad will automatically exit the programming mode, and new or edited data will be lost. New or edited data will also be lost if you press SCROLL UP or SCROLL DOWN before pressing the [ENTER] key.

Pressing [SHIFT] [ENTER] will make the keypad exit the programming mode.

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### Dealer message

The Dealer Message displays when the system is disarmed, all loops are normal, and there are no trouble conditions. The message appears on the second line of the display.



You might want to program in your company name. Every time the system is disarmed, your company name will be displayed on the keypad. Come to think of it, the ALPHA keypad is the only security equipment that allows the customer to pay you for the privilege of advertising your name! Of course, instead of your company name, you could always program in your customer's name.

### Service message

The Service Message appears on the second line of the display when the SYSTEM 238 detects a service condition: low battery, AC fail, bell fuse fail, failure to communicate, interface error, or watchdog reset.



The Service Message feature can generate a lot of service revenue. When a system problem occurs, the keypad reminds the customer to call, and keeps reminding him until the problem is resolved. The keypad can even display your phone number.

### Soft zone and hardwired loop identifiers

The SYSTEM 238 has 8 hardwired loops and 3 soft zones. You can program a 16-character description into each of them. The customer understands GARAGE FIRE a lot easier than ALARM ZONE 1. The programmed identifier appears on the second line of the display.

### ALPHA keypad addresses

Unlike LED keypads, ALPHA keypads have individual addresses. You can use up to four ALPHA keypads in one system. Of course, **you must not exceed maximum auxiliary/keypad power.**

You can have different messages for each keypad in the system. For example, Zone 2 might display JERRY'S BEDROOM on the keypad in Jerry's bedroom, while displaying DRACULA'S BEDROOM on the keypad in his sister's bedroom.

**Each ALPHA keypad must be programmed with its own address.** Valid numbers are 0 - 7. You cannot duplicate addresses within a system. If you add or change keypads after the SYSTEM 238 is powered up, you must restart the panel. When you restart the panel, it determines which keypads are in the system. Restart the panel by momentarily interrupting both AC and DC power, or press [SHIFT] [6] [8] [ENTER] at a different keypad.



If the keypads display the proper system information, but the panel does not see key strokes from the keypad, either the keypad address is wrong, or the keypad was added without restarting the panel.

### How to exit ALPHA keypad programming

To exit programming, press [SHIFT] [ENTER].

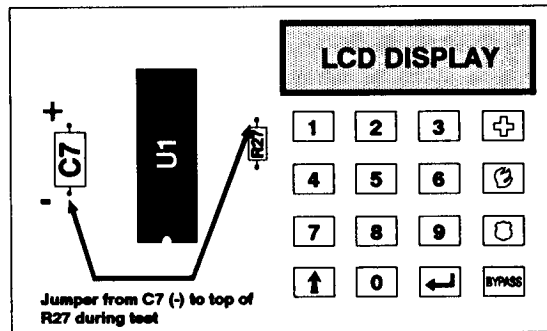
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### How to Test The ALPHA Keypad

Test points are labeled on the ALPHA keypad's circuit board.

The ALPHA keypad has built-in Self Test functions. While these functions are normally used only for production testing, if necessary, you can use them to field test the keypad.

To test the ALPHA keypad, wire it to a 12 VDC power supply. The alarm system wiring and power from the SYSTEM 238 can be used. Connect the green and white keypad wires together. If connected to a SYSTEM 238, disconnect the green and white wires from the panel before connecting them together.



The Self Test starts when you short test pad PP5 to the power supply negative, and press [SHIFT] [6] [7] [ENTER]. The easiest way to short the test pad is to short the negative of capacitor C7 to the top lead of resistor R27.




Once the test starts, pressing different keys initiates different test functions. During the Self Test, the top line of the display will read **238 ALPHA TESTER**. Leave the shorting wire on throughout the testing.

### Test functions

Key Entry	Test
[1]	LCD viewing angle adjustment. The bottom line of the display will read <b>TEST VIEW ANGLE</b> . Adjust potentiometer R23 to change the viewing angle of the display. R23 can be adjusted from the component side of the PCB, or through a hole in the back side, using a small slotted screwdriver.
[2]	The display will read <b>TEST 5 VOLT PWR</b> . You can measure the 5 volt regulated output at test points PP7 (+5 V) and PP2 (Ground).
[3]	The display will read <b>TEST FREQUENCY</b> . This is used by the factory to measure the CPU and crystal frequencies at test point PP6.
[4]	The display will read <b>ARMED LED TEST</b> . The red alarm LED toggles on or off each time you press the key.
[5]	The display will read <b>AC LED TEST</b> . The green AC power LED toggles on or off each time you press the key.

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Key Entry	Test
[6]	The display will read <b>PIEZO SOUND TEST</b> . The keypad toggles on or off each time you press the key.
[7]	The display will read <b>BACKLIGHT TEST</b> . The LCD and keypad backlight toggle on or off each time you press the key.
[8]	The ALPHA keypad will perform a loop test involving the keypad clock (white) and data (green) flying leads. The keypad will transmit test information out and back to itself. If the information is not received, the display will read <b>LOOP TEST FAIL</b> . If the information is received correctly, the display will read <b>LOOP TEST PASS</b> .
	The green and white keypad wires must be connected together. If you disconnect the green and white wires from the panel at the panel side of the wiring, not the keypad side, when you do the loop-back test, you will also be checking the keypad wiring.
[9]	The ALPHA keypad generates special timing pulses called clock signals. If the ALPHA receives the special clock signals as a loop-back, it displays <b>CLOCK TEST PASS</b> . If it doesn't, it displays <b>CLOCK TEST FAIL</b> .
	The green and white keypad wires must be connected together for this test.
[SHIFT]	The default EEPROM program data will be loaded into the ALPHA's EEPROM from the microprocessor. During loading, the display will read <b>PROGRAMMING</b> . The information in the EEPROM will then be compared to the information in the microprocessor. The display will read <b>VERIFYING</b> . If the information matches, the display will read <b>EEPROM TEST PASS</b> . If the information doesn't match, the display will read <b>EEPROM TEST FAIL</b> .
	This test writes over the keypad address and any messages already written into the keypad. <b>Do not run this test if you do not want to change the keypad address or messages.</b> After the test is over, the keypad will have the factory default programming. Both the keypad address and messages will have to be reprogrammed.
[0]	The display will read <b>KEY "0"</b> .
[ENTER]	The display will read <b>KEY "ENTER"</b> .
[EMERGENCY]	The display will read <b>KEY "EMERGENCY"</b> .
[FIRE]	The display will read <b>KEY "FIRE"</b> .



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Key Entry	Test
[POLICE]	The display will read KEY "POLICE".
[BYPASS]	The ALPHA keypad will verify that every key has been pressed and every test performed. If so, the display will read TEST COMPLETE. If not, the display will read TEST INCOMPLETE.



If the keypad is tested while installed in a system, you will most likely see the TEST INCOMPLETE message displayed. Since you do not want to write over the ALPHA programming, you probably didn't test the [SHIFT] function. The [BYPASS] test is used only to verify that all tests have been performed. It is not necessary to perform all tests. Test as few or many functions as you like.

### How to exit the ALPHA keypad test

First, remove the test shorting wire on the keypad. Next, remove power from the SYSTEM 238 and keypad. Then, reconnect the green and white wires from the control to the keypad, and re-apply control and keypad power. The ALPHA Keypad Test is now complete.



If you performed the [SHIFT] test, you will need to reprogram the keypad messages and address. Once this is done, you'll have to restart the panel so that it can find the keypad. You can restart the panel in three ways: use remote programming; remove and restore the panel's AC and DC power; or enter [Installer Combination] [SHIFT] [6] [8] [ENTER] from any keypad in the system, except the one you just reprogrammed.