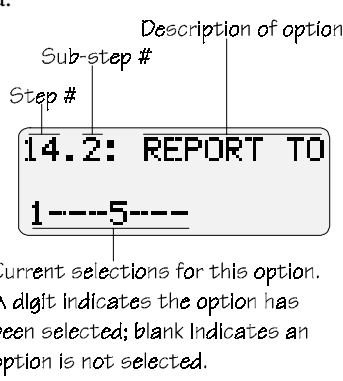# Section 7
Programming: Step-by-Step Complete Reference

The Model 5230 Remote Annunciator is for programming the 5207 panel. You must be in Step Programming Mode (also known as mode 27) to program the panel. See the following sections for details.

7.1   Using Step Programming

Enter Step Programming mode	Press ⒉ ⒎ ENTER , followed by the code that has been programmed as code 0 (the factory programmed value for code 0 is 123456). If you have entered mode 27 correctly, the display will show `1 PWR UP CLR` (Step 1, Power-up Clear). Press ENTER to make selections for this step. Press ENTER again to move to the next step. *Note: If you receive a trouble beep and the message `TRY AGAIN` appears, either you are not using the correct code 0, or the EEPROM could be malfunctioning. If the problem is the EEPROM, you must obtain a new default EEPROM from Silent Knight.*
Exit Step Programming	Press STEP STEP CLEAR CLEAR . You will return to normal operation.
Moving through the Steps and Sub-Steps	**To move sequentially through the options:** Press ENTER until you reach the step (option) you want to program. **To go directly to step:** If you know the step you want to go to, you can save time by moving directly to the step. Press STEP STEP . Enter the desired step number, then press ENTER . The new step will be displayed. **To go to directly a sub-step:** Some steps contain sub-steps (see the diagram on the next page for an example). To go to a particular sub-step, first go to the step. Then, press STEP followed by the substep number and press ENTER . For example, to go to step 14.2, you would press the following sequence of keys: STEP STEP ⒈ ⒋ ENTER STEP ⒉ *chart continued on next page*

Selecting Options	**Scrolling**
	For most options, you enter numbers in the same way as if you were using a calculator. The digits appear on the right side of the display and scroll to the left as you continue to enter data.
	
	Description of option
	Sub-step #
	Step #
	
	`14.2: REPORT TO`
	`1----5----`
	
	Current selections for this option. A digit indicates the option has been selected; blank indicates an option is not selected.

	Toggling
	In some steps, pressing a key will cause the corresponding digit to appear and disappear on the display. When a digit appears, it indicates that the option is selected. A dash indicates that the option is not selected. In the following example, options 1, 5, and 7 are selected:
	
	`9: DIAL OPTS`
	`--1---5-7`

	Entering numbers greater than 9 Use the SHIFT key as shown below to enter numbers 10-15. Hexadecimal digits (in parentheses) appear on the screen to represent these numbers. SHIFT 1 = 10 (A) SHIFT 2 = 11 (B) SHIFT 3 = 12 (C) SHIFT 4 = 13 (D) SHIFT 5 = 14 (E) SHIFT 6 = 15 (F)

Programming Examples

The following examples demonstrate how to use Step Programming. The selections you make in each installation will vary depending on each customer's needs. The way you move through Mode 27 may also vary from how it is described here.

Example 1: Programming Location Description Names	*One-Word Display*
Suppose you want to program the Model 5230 Annunciator to display meaningful location names for Zones 3 and 5. The words you wish to display are GARAGE for Zone 3 and EAST OFFICE for Zone 5. These words are part of the 5230 library of names and can be selected using Step Programming. See Table 2-2 for a complete list of words contained in the library.	1. From the 1 PWR UP CLR display, press [2] [6] [ENTER] to go to Step 26.1. 2. Press [ENTER] until you reach Zone 3. The first line of the LCD will read [26.3]. 3. Press [1] as many times as necessary until the word GARAGE is displayed on the LCD. Press [ENTER] to select. *Two-Word Display* To program Zone 5 to display EAST OFFICE, you will have an additional step since you are programming two words instead of one. 1. If necessary, enter Step Programming mode from the Date/Time display by pressing [2] [7] [ENTER], then enter your access code. 2. From the 1 PWR UP CLR display, press [2] [6] [ENTER] to go to Step 26.1. (If you are already in Step 26, just press [STEP], then the number of the zone you want to change and press [ENTER].) 3. Press [ENTER] until you reach Zone 5. The first line of the LCD will read [26.5]. 4. Press [1] as many times as necessary until the word EAST is displayed on the LCD. 5. To add the second word, press [2] until you reach OFFICE. Press [2] [7] [ENTER] to select.
Example 2: Adding a New Access Code	1. If necessary, enter Step Programming mode from the Date/Time display by pressing [2] [7] [ENTER], then enter your access code. 2. From the 1 PWR UP CLR display, press [2] [2] [ENTER]. 3. Press [STEP]. 4. Press the number of the code you want to add or change. Press [ENTER]. 5. Enter the new access code number. Press [ENTER].

7.2   Step Programming Options

This section is organized in step order and provides complete instructions for each step.

Step 1. Power Up Clear

Display	Description
┌─────────────────┐ │ 1 PWR UP CLR │ │ 00 │ └─────────────────┘	The two digits of this step are used to program two options, BELL TEST AT RESTORE (digit 1) and DEFAULT MODE (power up) REPORTING (digit 2). **Digit 1:** 0 = No bell test at restore. 8 = Bell test will occur at restore. **Digit 2:** 0 = A report will not be sent if the system enters power up mode. 1 = An "open" report will be sent if the system enters power up mode. **Example 1:** If you select "80" for this step, a bell test will occur at restore (digit 1) and no report will occur if the system enters power up mode (digit 2). **Example 2:** If you select "01" for this step, a bell test will not occur at restore (digit 1) and the system will report "Open" if it enters power up mode (digit 2).

Step 2. Device Enables

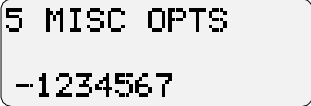| Display	Description
┌─────────────────┐ │ 2 DEV ENABLES │ │ 0──────7 │ └─────────────────┘	Step 2 allows you to enable the dialer, printer, and 24-volt smoke power. **0 = Dialer**. The dialer must be enabled. Do not change the factory programming. **1 = Printer**. Enable the printer if your installation includes a 5260 printer interface. (The 5260 is not UL listed for use with the 5207.) **7 = 24-V System**. Enables 24V power. Do NOT disable. **2 - 6 = Unused**. These digits are reserved by the manufacturer for future use. Leave these blank at all times.

Step 3. More System Options

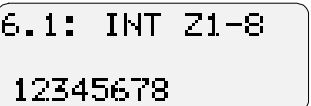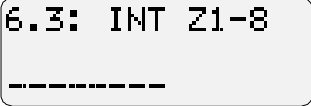| Display	Description
```3: OPTIONS``` ```--------6-```	Step 3 allows you to select seven system options shown below. To select an option, press its number. **0 = Cadenced pulsing of bells.** If you select this option, bells will pulse in the pattern shown below (for customizing patterns, refer to Steps 27 and 28): 　　3.5 seconds on, .5 seconds off 　　3.5 seconds on, .5 seconds off 　　3.5 seconds on, 4.5 seconds off **1 = Code required at the panel.** If you select this option, users will have to enter a code to perform tasks on the built-in touchpad. **2 = Trouble alert tone used for pre-alarm sound.** If you choose this option the built-in trouble alert will sound when a trouble condition occurs. **3 = Pulsing fire bells**. Select this option if you want fire alarm bells to pulse one second on, one second off. (If you want fire bells to have cadenced pulsing instead of one second on, one second off pulsing, choose both this option AND cadenced pulsing.) **4 = Trouble alert tone will sound during smoke delays.** If you choose this option, the built-in trouble alert sounder will sound when a trouble condition occurs. **5 = Report fast restores.** This option causes restores that occur as soon as the alarm situation is corrected instead of waiting for the shutdown time. **6 = Must be enabled**. Do NOT de-select**. **7 = Time displays in military format.** If you select this option, the system time will display in the 24-hour military format instead of the 12-hour with AM/PM format.

Step 4. Display Rate

Display	Description
```4 DISPLAY``` ```20```	The two digits of this step are used to program two options that have to do with the Model 5230 Remote Annunciator. **Digit 1 = The rate that the 5230 LCD displays text, that is, how long a display stays on the LCD.** The choices are: 　　0 = 0.5 sec 　　1 = 1 sec 　　2 = 1.5 sec 　　3 = 3 sec **Digit 2 = Maximum number of supervised annunciators.** Enter 0-7. "0" means no annunciators will be supervised. **Example:** Entering "14" for this step indicates that all annunciators will display text for 1 second (Digit 1) and your installation has 4 (1-4) annunciators (Digit 2).

Step 5. Miscellaneous Options

Display	Description
![5 MISC OPTS / -1234567]	Step 5 is for programming several system options, including bell supervision. **0 = Walk tests will be reported.** Select this option if you want walk tests reported to the central station. **1 = A feature that makes the system clock more accurate**. Do NOT de-select. **2 = Ground fault detection enabled.** This is required. Do NOT de-select. **3 = Sequential bell test.** Enabling this option means that when a dialer test or power-up occurs, the four bells will ring sequentially (first bell 1, then bell 2 and so on), instead of all four at the same time. **4 = Bell 1 is supervised.** This option must be enabled if bell 1 is used. **5 = Bell 2 is supervised.** This option must be enabled if bell 2 is used. **6 = Bell 3 is supervised.** This option must be enabled if bell 3 is used. **7 = Bell 4 is supervised.** This option must be enabled if bell 4 is used.

Step 6. Internal Zone Options

Display	Description
	Step 6 is for programming various options for zones 1-8. To select an option for a zone, go to the appropriate substep and enter the zone number. (Options for expansion zones 9-16 are programmed in Step 7.) **Example:** Suppose you want zones 2 and 3 to be pre-alarm delayed. Pre-alarm delays are programmed at Step 6.8. Press "23" at Step 6.8.
![6.1: INT Z1-8 / 12345678]	**24 Hour alarm**—Zones will be active 24 hours. Must be selected for all zones. Do NOT change the factory programming for this step**.**
![6.2: INT Z1-8 / 12345678]	**Trouble Supervised**—Select zones that will be supervised for trouble (typically this is all zones).
![6.3: INT Z1-8 / --------]	Option not used. Do NOT select anything**.**

Display	Description

```6.4: INT Z1-8```
 	
```12345678```
	Normally Open zones—Zones will be Normally Open. Must be selected for all zones. Do NOT change the factory programming for this step (NFPA requires that all fire zones be programmed as N.O. supervised).

Steps 6.5 and 6.6 are for programming zone response time. For more information see "Programming Zone Response Time", especially if you have never programmed loop response times with the 5207.	

```6.5: INT Z1-8```
 	
```12345678```
	Use this step to select the 3-to-4 second or 30-to-40 second response times for zones 1-8. Select the zone numbers of the zones that should have either of these speeds. For the 30-to-40 second speed, you will have to enter the zone numbers again in Step 6.6. Note that the default for all zones is 3 to 4 seconds. You will need to de-select any zones that should not have the 3-to-4 or 30-to-40 response times by pressing the zone number so that it is not displayed on the LCD. See Table 6-1.

```6.6: INT Z1-8```
 	
```--------```
	Use this step to select the 15-to-20 second or 30-to-40 second response times for zones 1 to 8. Select the numbers of the zones that should have either of these speeds. For the 30-40 second speed, you should also have entered the zone numbers in Step 6.5. Be sure to de-select any zones that should not be displayed in this step. See Table 6-1.

Programming Zone Response Time (Steps 6.5 & 6.6)

There are four possible response times. To program the response times, select the zone number that should have that response time in Steps 6.5 and 6.6, as follows:

Table 6-1 Steps 6.5 and 6.6 Programming

Desired Speed for Zone	Step 6.5	Step 6.6	Explanation
0.094 - 0.25 seconds	Do not select zone number.	Do not select zone number.	Leave the zone number blank in both steps for any zones that should have this response time.
*Note: This very fast response time can increase the possibility of false alarms, since transients and other interference can set off alarm conditions in such a short time span. **Silent Knight recommends that you do not use this response time unless you have to** (because, for example, the installation you are protecting requires this quick a response time even if false alarms could result).*			
3 to 5 seconds	Select zone number.	Do not select zone number.	*In Step 6.5 only*, select the zone number of zones 1-8 that should have this response time.
15 to 20 seconds	Do not select zone number.	Select zone number.	*In Step 6.6 only*, select the zone number of zones 1-8 that should have this response time.
30 to 40 seconds	Select zone number.	Select zone number.	*In both Steps 6.5 and 6.6*, select the zone number of zones 1-8 that should have this response time.

Example:

To program an 8-zone installation where you want loop response speeds to be as follows:

>   Zone 1: 0.094 - 0.125 sec.
>
>   Zones 2-5: 3-4 sec.
>
>   Zones 6-7: 15-20 sec.
>
>   Zone 8: 30-40 sec.

 Do This:

In Step 6.5, select zones 2, 3, 4, 5, and 8. Make sure that zone 1 is not selected. Your LCD would appear as shown below:
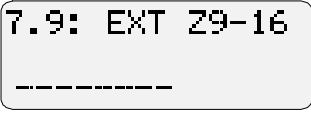
```
6.5: INT Z1-8
-2345--8
```

In Step 6.6, select zones 6, 7, and 8. Make sure that zone 1 is not selected. Your LCD would appear as shown below:

```
6.6: INT Z1-8
-----678
```

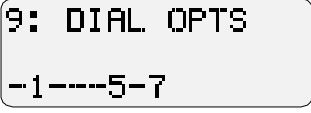| Display	Description
```6.7: INT Z1-8``` ```--------```	Not used. Do not select any zones for this option.
```6.8: INT Z1-8``` ```--------```	**Pre-alarm delay.** Use this step to select a pre-alarm delay for zones 1 to 8. When this delay is selected for a zone, it means that the panel will not immediately go into alarm. Alarm responses and reporting will be delayed for the programmed duration (duration programmed in Step 20.3). Any outputs programmed for pre-alarm (in Step 23.1) will activate. At the end of the pre-alarm time, if the alarm has not been reset, the panel will go into alarm.
```6.9: INT Z1-8``` ```--------```	**Smoke verification delay**. For use with smoke detectors only (not for manual pull stations). Use this step to select any zones that will be controlled by a smoke detector delay. This means that the smoke detector will delay for a specified amount of time before responding to an alarm condition. (The duration of the delay is programmed in Step 20.4.)
```6.10: INT Z1-8``` ```12345678```	**Can be disabled.** For zones 1-8, enter the number of zones that can be disabled.

Step 7. External Zone Options

Display	Description
`7.1: EXT Z9-16` `90123456`	**24 Hour alarm**—Zones will be active 24 hours. Must be selected for all zones. Do NOT change the factory programming for this step.
`7.2: EXT Z9-16` `90123456`	**Trouble supervised**—For zones 9 to 16, enter the number of zones that will be trouble supervised.
`7.3: EXT Z9-16` `---------`	Not used. Do NOT select any zones for this option.
`7.4: EXT Z9-16` `90123456`	This step sets all expansion zones as Normally Open. Do not change the factory programming for this step.
`7.5: EXT Z9-16` `90123456`	Use this step to select the 3-to-4 second or 30-to-40 second loop response time for zones 9 to 16. If you need more information about how to program loop response time, see the explanation at Steps 6.5 and 6.6.
`7.6: EXT Z9-16` `---------`	Use this step to select the 15-to-20 second or 30-to-40 second loop response time for zones 9 to 16. If you need more information about how to program loop response time, see the explanation at Steps 6.5 and 6.6.
`7.7: EXT Z9-16` `---------`	Not used. Do not select any zones for this option.
`7.8: EXT Z9-16` `---------`	**Pre-alarm delay.** Use this step to select a pre-alarm delay for zones 1 to 8. When this delay is selected for a zone, it means that the panel will not immediately go into alarm. Alarm responses and reporting will be delayed for the programmed duration (duration programmed in Step 20.3). Any outputs programmed for pre-alarm (in Step 23.1) will activate. At the end of the pre-alarm time, if the alarm has not been reset, the panel will go into alarm.

Display	Description
`7.9: EXT Z9-16` `--------`	**Smoke verification delay**. Use for smoke detectors only (not for manual pull switches) to select zones that will be controlled by a smoke detector delay. This means that the smoke detector will delay for a specified amount of time before responding to an alarm condition. (The duration of the delay is programmed in Step 20.4.)
`7.10: EXT Z9-16` `90123456`	**Can be disabled.** For zones 9-16, enter the number of zones that can be shunted.
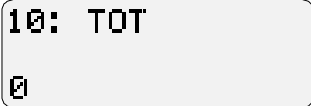
Step 8. Number of Zones

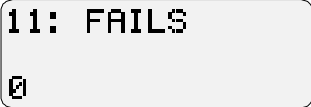| Display	Description
`8: LAST ZONE` `8`	**Enter the total number of zones.** Do not enter more zones then the installation has. Doing so will trigger an alarm. *Note: The last internal zone must be 8 unless the 5210 is used. Entering a larger number will trigger an alarm condition and you could experience difficulty returning to programming mode. If this occurs, press the following keys rapidly, repeating the sequence several times if necessary:* `ALARM RESET` `ENTER` (code) `2` `7` `ENTER` (code) `ENTER`

Step 9. Dialer Options

Display	Description
`9: DIAL. OPTS` `-1---5-7`	**0 = Retry if fail.** If you want the 5207 to try again to send a report 15 minutes after all previous attempts have failed, select 0. **1 = Enable phone line 2.** Choose if using a second phone line with the system. **2 = Not used**. Do NOT select**.** **3 = Ground start.** Must be selected for installations using a ground start telephone network. Ground start cannot be supervised by the line monitors as there is no DC voltage normally present. This option should not be used in UL installations. **4 = Enable phone line monitor.** **5 = Answer ring detect.** Select if you want to the panel to answer after the specified number of rings for an up/download from a computer. The number of rings is programmed in step 13. **6 = Not used**. Do NOT select**.** **7 = Enable up/downloading.** Select this option if you will be using up/downloading with the system.

Step 10. Total Number of Attempts

Display	Description
``10: TOT

0``` | **Total number of attempts to dial.** Select a number from 5 to 15. For a local-only system, select "0" for this step and for Step 11. |
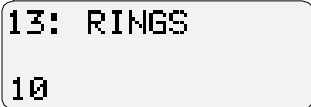
Step 11. Number of Events Before Dialer Failed

Display	Description
``11: FAILS

0``` | **Number of dialing attempts before the system locally annunciates a dialer failed condition.** For a local-only system (no report to central station), select "0" for this step and for Step 10. |

Step 12. Low AC Hours

Display	Description
``12: LOW AC

6``` | Number of hours (6-12) that AC is low before system reports AC TROUBLE. UL requires a range of 6-12 hours. |

Step 13. Number of Rings

Display	Description
``13: RINGS

10``` | **Number of rings before panel answers for up/downloading.** Enter a number from 1 to 15, or enter 0 if not used. If you are using this option, you must also select options "5" and "7" in step 9. |

Step 14. Report to Telephone Numbers

Display	Description

14.1: REPORT TO 1---5---	**The phone number to which alarms should be reported.** Select 1-4 for phone numbers 1-4.
	    1 = Report alarms to phone number 1
	    2 = Report alarms to phone number 2
	    3 = Report alarms to phone number 3
	    4 = Report alarms to phone number 4
	
	The phone number to which troubles should be reported. Select 5-8 for phone numbers 1-4.
	    5 = Report troubles to phone number 1
	    6 = Report troubles to phone number 2
	    7 = Report troubles to phone number 3
	    8 = Report troubles to phone number 4
	
	Example:
	Selecting "15" for this step indicates that both alarms and troubles will be reported to telephone number 1.

14.2: REPORT TO 1---5---	**The phone number to which disabled zones should be reported.** Select 1-4 for phone numbers 1-4. **The phone number to which restores should be reported.** Select 5-8 for phone numbers 1-4. (This step is programmed the same as 14.1. See the explanation for Step 14.1 if you need more information.)
14.3: REPORT TO 1-------	**The phone number to which open resets should be reported.** Select 1-4 for phone numbers 1-4. **Not used.** Do NOT select digits 5-8.
14.4: REPORT TO ----5---	**Not used.** Do NOT select digits 1-4. **The phone number to which tests should be reported.** Select 5-8 for phone numbers 1-4.

14.5: REPORT TO 1-------	**The number to which reports MUST be sent.** Select 1-4 for phone numbers 1-4. This means that if the dialer is not able to report to this number, a failed message will automatically be generated.
	
	Select 5-8 according to the following:
	    5 = Line 1 is Touch-Tone.
	    6 = Line 2 is Touch-Tone.
	    7 = Use Touch-Tone only.
	    8 = Enable 16-zone reporting.

Step 15. Computer Phone Number

Display	Description
15: COMP PHONE **Example:** outside line "1" preceding long distance # 9A1D8885551212 pause 2nd dial tone	Enter the phone number the system will dial to up- or download system data. **Entering Phone Numbers** Phone numbers are 16 digits maximum. Besides numbers, you can enter characters representing a pause, * (star or asterisk key), # (number sign or pound key), and a second dial tone (see example). **To Enter:** **Press:** **LCD Displays:** Pause — SHIFT 1 — A * — SHIFT 2 — B # — SHIFT 3 — C 2nd dial tone — SHIFT 4 — D

Step 16. Central Station Phone Numbers

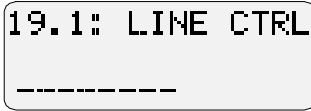| Display	Description
16.1: PHONE# **5551234567890**	The 5207 can report to four different central station telephone numbers. Two are required. Enter the numbers in Steps 16.1 - 16.4. See Step 15 if you need to know how to select digits and special characters for phone numbers. Steps 16.2 through 16.4 are programmed in the same way. Step 16.2 is for phone #2, 16.3 is for phone #3, 16.4 is for phone #4. (Default is blank for Steps 16.2-16.4.)

Step 17. Central Station Account Numbers

Display	Description
17.1: ACCOUNT# **005207**	Enter central station account #1. If the account number is less than six digits, you must enter leading zeros. Steps 17.2 through 17.4 are programmed in the same way. Step 17.2 is for account #2, 17.3 is for account #3, 17.4 is for account #4. (Default is blank for Steps 17.2-17.4.)

Step 18. Dialer Format and Number of Attempts

Display	Description

18.1: FORMAT
 	
\$10
	Digit 1 = Enter the number of attempts for account number 1. This number is how many times the dialer will attempt to report to this account number before switching to the next number. (If only one account number is used, this number must be the same as Step 10.)
	
	Digit 2 = Enter the reporting format to be used for account number 1. (Formats described in Section 8.)
	    Options:
	    0 = SIA8
	    1 = FSK1
	    2 = Not used (do NOT select)
	    3 = BFSK14
	    4 = BFSK23
	    5 = SIA20
	    6 = SK 4+2
	
	Steps 18.2 - 18.4 are programmed in the same way. Step 18.2 is for account #2, 18.3 is for account #3, 18.4 is for account #4.

Step 19. Telephone Line to Use for Accounts

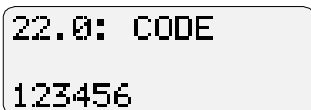| Display	Description
19.1: LINE CTRL _____	Program options for account number 1. 1 = **Use line 1 only.** 2 = **Use line 2 only.** 3 = **9000 Direct line (no dial tone); do not use.** 0 and 4-9 are not used. Do NOT Select. If two lines are programmed, the panel automatically switches from line 1 to line 2. Use this step only if you have two different types of phone lines; for example, line 1 is loop start and line 2 is a PBX that requires a "9" or other number before to dial out. Steps 19.2 - 19.4 are programmed in the same way. Step 19.2 is for account #2, 19.3 is for account #3, 19.4 is for account #4.

Step 20. Duration of Delays

Display	Description
| ```
20.1: DELAY
90
``` | **Bell Shutdown Time (1-255)**<br>Divide by 10 and enter the number indicating the time that you want audio alarms to be active.<br>**Example:**<br>Suppose you want audio alarms to be active for 900 seconds (or 15 minutes). Enter 900 divided by 10 or "90".<br><br>Common shutdown times:<br> 5 minutes = 300 seconds. **Enter "30."**<br>10 minutes = 600 seconds. **Enter "60."**<br>15 minutes = 900 seconds. **Enter "90."**<br>20 minutes = 1200 seconds. **Enter "120."**<br>25 minutes = 1500 seconds. **Enter "150."**<br>30 minutes = 1800 seconds. **Enter "180."** |
| ```
20.2: DELAY
30
``` | Step 20.2 is not used.<br>Do NOT change the factory-programmed setting of "30". |
| ```
20.3: DELAY
30
``` | Use this step to program the duration (1-255 sec.) of the pre-alarm delay. |
| ```
20.4: DELAY
30
``` | Use this step to set the duration (1-255 sec.) of the smoke verification delay. |
| ```
20.5: DELAY
2
``` | Use this step to program the number of seconds (2-7 sec.) it will take smoke detectors to reset. Refer to the manufacturer's specification sheet for the times approved for your smoke detectors. |
| ```
20.6: DELAY
24
``` | Step 20.6 is not used.<br>Do NOT change the factory-programmed selection of "24." |

Step 21. Test Time

Display	Description
21: TEST TIME 000000	Enter time that automatic daily test should occur using 24-hour military time. Enter 6 digits with leading zeros. **Examples:** To program the daily test to occur at: 2:30 AM, enter 000230. 11:45 PM, enter 002345. Midnight, enter 000000.

Step 22. Secret Codes

Display	Description
22.0: CODE 123456	Step 22 is for programming the 4- to 6-digit codes that give access to the system. **Code 0**, programmed in Step 22.0, is the installer's code. This is the only code that can activate all system features. This code must be unique from all others. See IMPORTANT below. **Code 1**, programmed in Step 22.1, is the main user's code. This code can access all system features except programming. **Codes 2-9** are user codes. These codes enable users to bypass zones and reset alarms, but they cannot perform a walk test or change programming options. The 5207 can have up 100 user codes, but the 5230 annunciator can program only 10 codes (codes 0-9). If you need more than 10 codes, use the 5541 downloading software. **To change a code**, type in the new number when you are at the step for the code you want to change, then press ENTER . **IMPORTANT:** When programming codes, make sure that the first four digits of Code 0 are different from the first four digits of all other codes. If other codes have the same digits, all users could be locked out of programming mode.
22.1: CODE 1111	**Example:** Suppose you want to change Code 1 from "1111" to "5982." At Step 22.1, press 5 9 8 2 ENTER .

Step 23. Group Relays and Bells

IMPORTANT:

You can program relays and bells in **either** the Group section (Step 23) or the By Zone section (Step 24), but **not** both.

Relays and bells are programmed for the type of condition that causes them to activate, not by zone. An exception is relays and bells that activate for alarms, which can be programmed by zone. Use Step 24 to program alarm relays and bells by zone.

Display	Description
| ```
23.1: GRP RLY

_____
```<br><br>This step selects bells and relays by type of condition. Step 24 is for selecting bells and relays by zone. | Step 23 is used to select the relays and/or bells that you want to activate for particular conditions.  This means that relays and/or bells programmed would activate when the specified conditions occurred in a zone.<br><br>**Digits 1-4 select relays.  Digits 5-8 select bells.**<br>Step 23.1 selects relays/bells to activate for Pre-alarm conditions.<br>Step 23.2 selects relays/bells to activate for Tamper alarm conditions.<br>Step 23.3 selects relays/bells to activate for Special (Auxiliary) conditions.<br>Step 23.4 selects relays/bells to activate for Fire conditions.<br>Step 23.5 selects relays/bells to activate for Trouble conditions.<br>Step 23.6 selects relays/bells to activate for No Silence conditions.<br><br>**Example**:  Use the steps below to program your system for the following:<br><br><u>Pre-alarm condition</u>:  Activate Relays 3 and 4 and Bell 1.<br><br><u>Fire</u>:  Activate Bells 1, 2, 3, and 4.<br><br><u>Trouble condition</u>:  Activate Relays 1 and 2 and Bells 1 and 2.<br><br>1. Pre-alarm condition relays/bells are programmed in Step 23.1.<br>   a. Press ③ to select Relay 3<br>   b. Press ④ to select Relay 4<br>   c. Press ⑤ to select Bell 1<br>*Your LCD would appear as shown below:*<br><br>```
23.1: GRP RLY

--345---
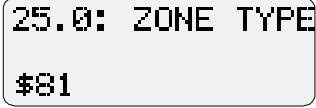```

example continued on next page |
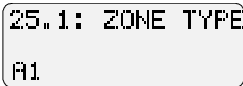
Display	Description

Step 23 continued	2. Fire condition relays/bells are programmed in Step 23.4.
	
	    a. Press [5] to select Bell 1
	
	    b. Press [6] to select Bell 2
	
	    c. Press [7] to select Bell 3
	
	    d. Press [8] to select Bell 4
	
	Your LCD would appear as shown below:
	
	`23.4: GRP RLY`
	
	`----5678`
	
	3. Trouble condition relays/bells are programmed in Step 23.5.
	
	    a. Press [1] to select Relay 1
	
	    b. Press [2] to select Relay 2
	
	    c. Press [5] to select Bell 1
	
	    d. Press [6] to select Bell 2
	
	Your LCD would appear as shown below:
	
	`23.5: GRP RLY`
	
	`12--56--`

`23.1: GRP RLY`
 	
`--------`
	Pre-Alarm Relays and Bells
	1-4 = Relays that will activate during a pre-alarm condition.
	5-8 = Bells that will activate during a pre-alarm condition.
	
	Note: Relays or bells selected as Pre-alarm will not activate during a test.

`23.2: GRP RLY`
 	
`--------`
	Tamper Alarm Relays and Bells
	1-4 = Relays that will activate during a tamper alarm condition.
	5-8 = Bells that will activate during a tamper alarm condition.

`23.3: GRP RLY`
 	
`--------`
	Special (Auxiliary) Alarm Relays and Bells
	1-4 = Relays that will activate during a special alarm condition.
	5-8 = Bells that will activate during a special alarm condition.
	
	Note: If Sprinkler zone types are used, do not connect audible devices to Special Alarm relays.

`23.4: GRP RLY`
 	
`----5678`
	Fire Alarm Relays and Bells
	1-4 = Relays that will activate during a fire alarm condition.
	5-8 = Bells that will activate during a fire alarm condition.

Display	Description

```23.5: GRP RLY```
 	
```1--------```
	Trouble Relays and Bells
	
	1-4 = Relays that activate during a trouble condition.
	
	5-8 = Bells that activate during a trouble condition.
	
	Note: Relays or bells selected as Trouble will not activate during a test.

```23.6: GRP RLY```
 	
```--------```
	No Silence Relays and Bells
	
	This option is intended for use with applications such as strobes.
	
	1-4 = Relays that will remain active when the 5207 is silenced. (Alarm relays always remain active until reset.)
	You can use this step to program a trouble relay to remain active after the panel is silenced. Select the relay that should remain active in this step.
	
	5-8 = Outputs that will remain active when the 5207 is silenced.
	You can use this step to make sure that strobes on the system continue to activate when bells and horns are silenced. To do this, make sure strobes are on separate outputs from horns and bells, then select the strobe outputs in this step.
	
	Note: If you are using the 5220 Direct Connect Module for supervision, see Section 4.7 for information on programming relays and bells.

Step 24. Alarm Relays and Bells (by Zone)

Display	Description

```24.0: ZONE RLY```
 	
```--------```
 	
This step selects bells and relays to activate by zone. Step 23 is for selecting bells and relays by type of condition.
	Use this step to select the relays and/or bells that will activate during an alarm condition in each zone. Step 24.0 selects bells and relays to activate during a fire drill ("Zone 0"). Step 24.1 selects bells and relays to activate for an alarm in Zone 1, Step 24.2 selects bells and relays for Zone 2, and so on.
	
	1-4 = Relays that will activate during an alarm in the zone.
	5-8 = Bells that will activate during an alarm in the zone.
	
	Note: If using the Model 5220 Direct Connect Module for supervision, select Relay 3 for Zone 3. See Section 4.7 for more information.

Step 25. Zone Types

Display	Description

25.0: ZONE TYPE
 	
$81
	In Steps 25.1 through 25.16, you will program two numbers.
	
	Digit 1 programs the audible signals for the zone.
	Digit 2 programs the zone type.
	
	Move through the steps to make sure that all zones in your installation have been programmed the way you want them to be. For any zones that require changes, follow the steps for changing zone types as described in the examples above. You can record zone options in the Quick Reference chart in Section 6.
	
	Audible Signal (Step 25, Digit 1)
	    0 = Bells can shut down
	    2 = Cross alarm delay (alarm report delayed until a second alarm occurs on another zone)
	    4 = No *manual* bell silence (waterflow zones)
	    8 = No *automatic* bell shutdown (fire zones)
	    A = Cross alarm and no shutdown. (Press SHIFT 1 for letter "A".)
	
	Zone Types (Step 25, Digit 2)
	    0 = Fire Drill
	    1 = Fire (includes waterflow switches, smoke detectors, heat, etc.)
	    3 = Panic
	    5 = Tamper
	    6 = Sprinkler (supervisory zones)
	    7 = Undefined Auxiliary
	    8 = Water (Auxiliary for high or low water)
	    9 = Heat
	    A = Cold (Press SHIFT 1 for letter "A".)
	    B = Local (not reported) (Press SHIFT 2 for letter "B".)
	    C = Not used. Do NOT select**.**
	
	Example 1:
	Suppose you want Zone 1 to be a fire type zone with no automatic bell shutdown. At Step 25.1, make sure the digits "81," the factory-programmed selections, are displayed. Press 8 1 if necessary.
	
	Example 2:
	Suppose you want Zone 2 to be a fire type zone with cross-alarm delayed and no bell shutdown. Press SHIFT 1 to select "A" for digit 1 (cross alarm and no shutdown). Press 1 for Digit 2 to select fire type. Your LCD would appear as shown below.
	
	25.1: ZONE TYPE
	A1

Step 26. Zone Location Descriptions

Display	Description
```26.1: WORDS``` ```1```	**The following instructions explain how to select zone descriptions for the 5230 display.** For Steps 26.1-26.16, the factory-programmed default is "WORDS" ("WORDS" appears on the LCD). You can choose one- or two-word descriptions for each zone from the 5207 word list (library) shown below. Note: You cannot customize the library using the 5230 annunciator. If you want to use words other than those contained in the library, you must use the 5541 downloading software. The step numbers correlate to zone numbers. For example, Step 26.1 is where you program a zone description for Zone 1, Step 26.2 is for Zone 2, and so on. Read the examples below to learn how to select zone descriptions. **Example 1: Programming a One-Word Description** Suppose you want to program Zone 3 to display "GARAGE." At Step 26.3, press until the word "GARAGE" displays on the LCD. Press ENTER to select. **Example 2: Programming a Two-Word Description** Suppose you want to program Zone 5 to display "EAST OFFICE". Because "EAST OFFICE " is a two-word display, an additional step is required. At Step 26.5, press 1 until you reach the word "EAST." Press 2 until you read the word "OFFICE." Press ENTER to select.

Table 6-1 Zone Description Words

First Word		Second Word	
FRONT	HEAT	FLOOR	2ND FLR
BACK	FIRE	HALL	3RD FLR
NORTH	VALVE	ROOM	4TH FLR
SOUTH	WATERFLOW	OFFICE	WINDOW
EAST	SPRINKLER	DOOR	BATH
WEST	PULL STATION	VALVE	SAFE
LOBBY	1ST	SMOKE	GLASS
BASEMENT	2ND	HEAT	LEVEL
GARAGE	3RD	WATERFLOW	TEMP
WAREHOUSE	4TH	SPRINKLER	RM
MEZZANINE	WHSE	1ST FLR	DR
SMOKE			

Steps 27 and 28. Temporal Patterns

Display	Description
``
27: TPL LENGTH
32
`` This step programs the length of the pattern.	Steps 27 and 28 are used together to control the temporal (pulsing) pattern of the bell outputs. You can use these steps to create any temporal pattern you want, including the pattern required by NFPA 72. Step 27 determines the length (number of bits) of the pattern. This number can be 1 to 32, allowing for patterns that are up to 16 seconds (or 32 half-seconds) in duration. The default setting is 32. Note: If you are using this step to create a customized temporal pattern, both cadenced pulsing (option 0) and pulse fire bells (option 3) must be enabled in Step 3. **Example 1: Simple two-second pattern** Suppose you want to create the simple temporal pattern one second ON, one second OFF. In Step 27, you would enter "4" because the length of the pattern is four half-seconds (or two seconds). After programming this example, your LCD would appear as shown below. ```
27 TPL LENGTH
4
``` See Example 1 in Step 28.1 for setting the pattern. **Example 2: NFPA 72 required pattern** In an NFPA 72 installation, the temporal pattern must be ON OFF ON OFF ON OFF OFF OFF. Program Step 27 as shown below to achieve this pattern length. ```
27 TPL LENGTH
8
`` See Example 2 in Step 28.1 for setting the pattern.

Display	Description

28.1: TPL BITS
1234567-
 	
This step selects the actual pattern.
	Steps 28.1-28.4 determine the pattern. Select a digit for each half-second ON; de-select a digit (display shows a dash) for each half-second OFF. Each sub-step controls up to four seconds. **The pattern you create will repeat as long as the bell output is active.**
	
	The default setting is the 32-bit temporal pattern:
	    ON ON ON ON ON ON ON OFF
	    ON ON ON ON ON ON ON OFF
	    ON ON ON ON ON ON ON OFF
	    OFF OFF OFF OFF OFF OFF OFF OFF
	
	If using the 5541, Y indicates ON and a dash indicates OFF.
	
	Example 1: Simple two-second pattern
	To create the simple temporal pattern one second ON, one second OFF. In Step 28.1, you would select a digit for each half-second ON and de-select a digit for each half-second OFF as follows:
	
	28.1 TPL BITS
	12--56--
	
	2 half-seconds ON ⎯⎯⎯⎯ 2 half-seconds OFF
	
	See Example 1 in Step 27 for setting the length.
	Note: If using this step to create a customized temporal pattern, both cadenced pulsing (option 0) and pulse fire bells (option 3) must be enabled in Step 3.
	
	Example 2: NFPA 72 required pattern
	In an NFPA 72 installation, the temporal pattern must be ON OFF ON OFF ON OFF OFF OFF. Program Step 28.1 as shown below to achieve this pattern.
	
	28.1: TPL BITS
	1-3-5---