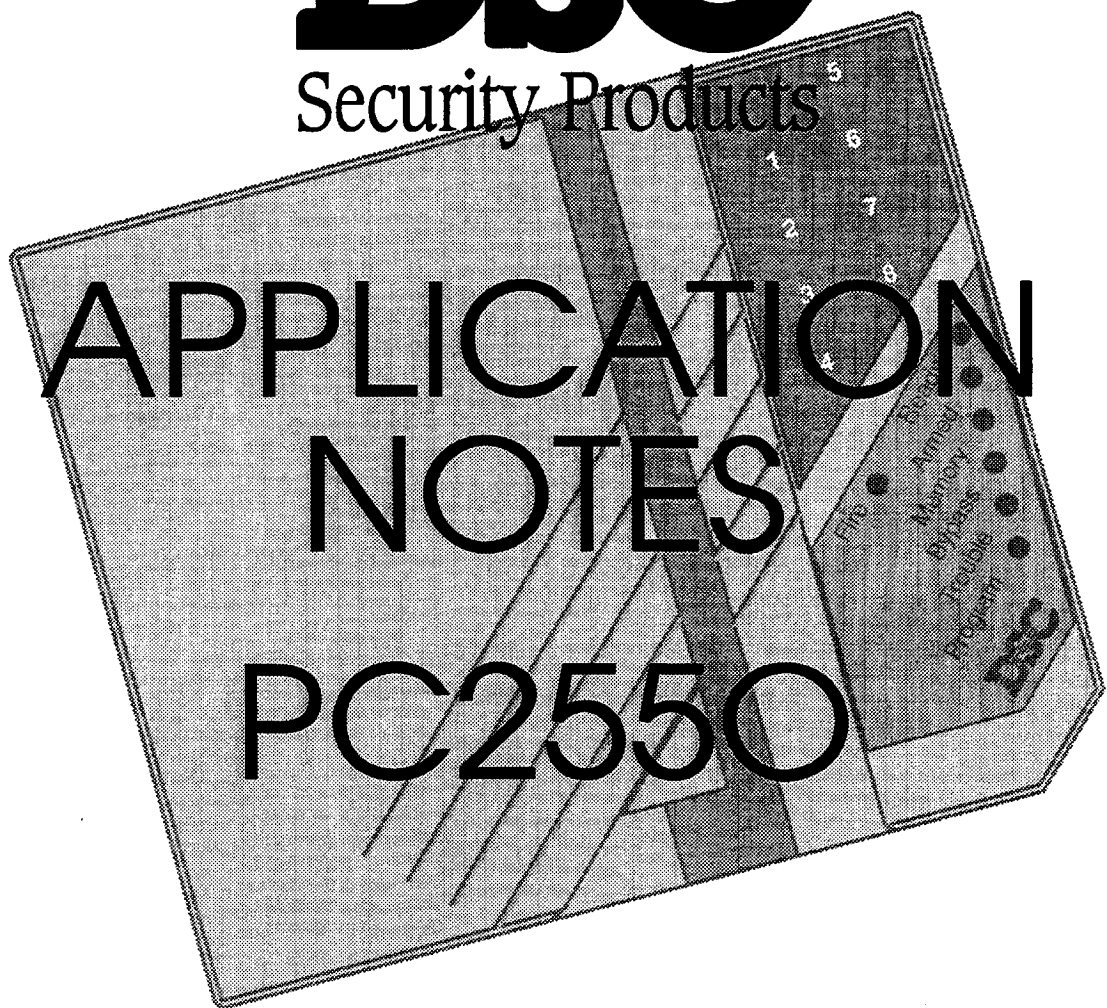
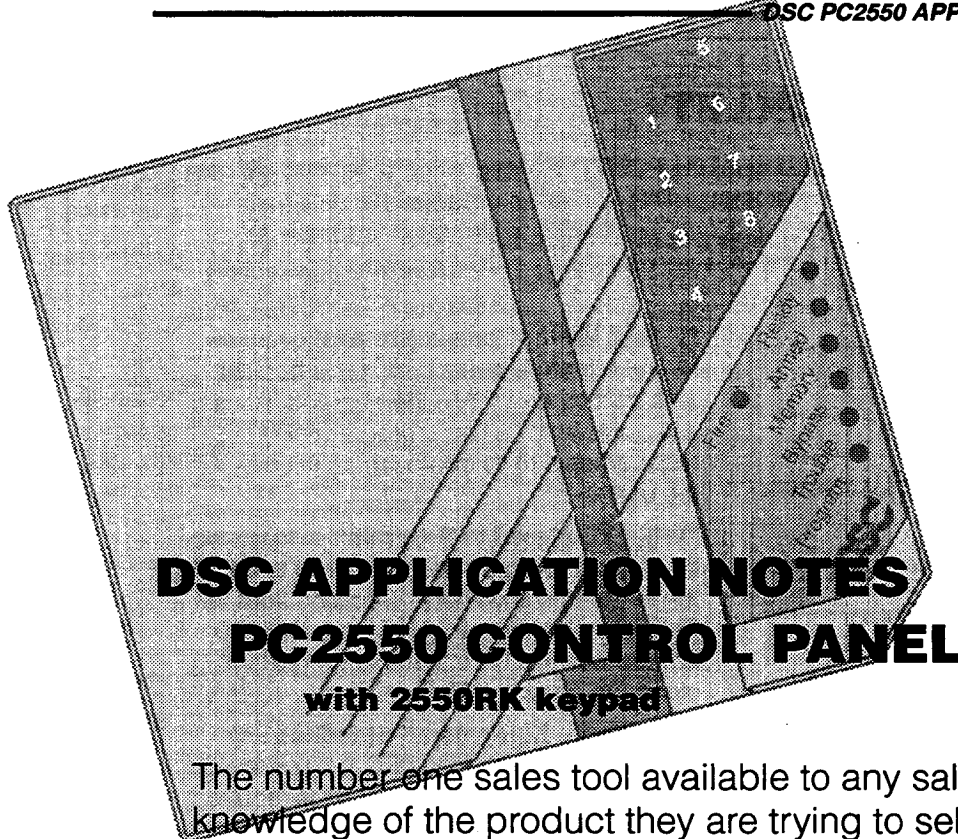




Security Products



APPLICATION NOTES PC2550



DSC APPLICATION NOTES
PC2550 CONTROL PANEL
with 2550RK keypad

The number one sales tool available to any sales force is knowledge of the product they are trying to sell. A full working knowledge of all the features of the product, as well as its applications and sales benefits, will enhance any presentation and allow you to satisfy the demands of your customer.

Many of the features described here are exclusive to DSC products and will give you an important advantage over your competition. Informing your customer about the benefits of a feature will help you to justify your price. It will also give your competitor fits as he will be unable to offer the same feature, or will require additional hardware (and additional costs) to accommodate the customer's needs.

These Application Notes are designed to help you understand the operation and programming of 22 different features available in the DSC PC2550 control panel. Although there is no limit to the usefulness of these features, some of the more common applications and benefits have also been included here.

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ALARM DISPLAY WHILE ARMED

HOW IT WORKS

When an alarm occurs, the panel will indicate which zone caused the alarm condition by illuminating a Zone light on the keypad.

WHAT YOU NEED TO PROGRAM

Section [15] Turn on Light [3] in this Section to enable the feature.

[15] 1st System Option Code

Default		Zone Light On	Zone Light Off	
OFF	<input type="checkbox"/>	Zone Light 1	Communication disabled	Communication enabled
OFF	<input type="checkbox"/>	Zone Light 2	Restorals on bell timeout	Restorals Follow Zone
OFF	<input checked="" type="checkbox"/>	Zone Light 3	Alarm display while armed	No alarm display while armed
OFF	<input type="checkbox"/>	Zone Light 4	DTMF dialing	Pulse dialing
OFF	<input type="checkbox"/>	Zone Light 5	N/C loops	EOL resistor loops
OFF	<input type="checkbox"/>	Zone Light 6	Keypad [P]anic audible	Keypad [P]anic silent
ON	<input type="checkbox"/>	Zone Light 7	Call 1st phone only	Backup to 2nd phone
ON	<input type="checkbox"/>	Zone Light 8	16th code = maid's code	16th code normal

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

Being awakened in the middle of the night by the alarm system can be a very confusing time for the customer. The immediate action usually taken by a customer will be to disarm the system. This is potentially dangerous if the customer disarms the system after a break-in has occurred, and the intruder is still on the premises. With the Alarm Display While Armed feature enabled, the customer can quickly determine that a break-in has occurred, and can also determine where the break-in occurred.

Although the Fire alarm output is pulsed, at three in the morning it may be very difficult to differentiate between the burglar and fire alarm output. Now, with a quick look at the keypad display, the customer can easily see that a Fire alarm has occurred, thus saving precious seconds during evacuation.

AMBUSH (DURESS) CODE

HOW IT WORKS

The panel can be programmed to send a duress code when it is disarmed with a special Access Code. This would be used when the customer is being forced by an intruder to disarm the system and pressing the [P] key on the keypad would not be advisable.

Although the panel does not have a reporting code specifically referred to as "ambush" or "duress", it can send Opening Codes programmed for each user. An unused Access Code can be programmed with any 4 digit code which may be defined as a Duress Code. Whenever that Access Code is used to disarm the system, the panel will send the Reporting Code programmed for that User, which would be interpreted as a duress alarm.

WHAT YOU NEED TO PROGRAM

An Access Code must be programmed with a 4 digit code that will only be used in a duress situation. In this example Access Code 15 is being used.

Section [10] Program your Duress Reporting Code for the above Access Code in this section. If Opening and Closing signals are not being used program [0][0] for all other Opening Codes.

[10] Opening (Disarming) Reporting Codes for Access Codes 9 to 16

.....	Access Code 9	.....	Access Code 14
.....	Access Code 10	➤ 2 0	Access Code 15
.....	Access Code 11	.....	Access Code 16
.....	Access Code 12	.....	Opening After Alarm Code
.....	Access Code 13		

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

Provide your prospect with peace of mind by describing this feature and its uses. While one would hope that the situation never arises, there may come a time when an intruder forces the customer to disarm the system in order to gain access to the premises or to silence an alarm. With the intruder watching, the customer certainly cannot use any of the emergency keypad keys. However, the customer can still call for help by entering a duress code when forced to disarm the panel. More than a convenience feature, the duress code can provide important security protection.

AUTOMATIC ARMING

HOW IT WORKS

The panel can be programmed to automatically arm itself at a specific time every day. If the panel is already armed it will not perform the function. When the auto-arming sequence begins, the keypad buzzer will beep for one minute prior to the actual arming. At your option the siren may also sound once every 10 seconds.

The panel can be programmed to abort the auto-arming process if a user presses a key or enters a valid Access Code before the one minute warning tone expires.

If not aborted, the panel will arm and begin the exit delay timer. At the end of the exit delay the panel is armed. If Opening and Closing reporting codes are programmed, the panel will send a Closing by User #1 code. Any zones that were open at this time will be temporarily bypassed until they are closed. Once secured, they are added back into the system. At your option, a Partial Closing code may be sent if the panel auto-armed with zones in violation.

WHAT YOU NEED TO PROGRAM

The internal 24 hour clock in the panel must be set. This is done by using the [*][6] User Function command.

- Press [*][6][Master Code] to enter User Functions
- Press [1] to select 24 hour clock
- Enter [H][H][M][M] to program the time; use 24-hour format
- Press [2] to select auto-arm time
- Enter [H][H][M][M] to program the auto-arm time; use 24-hour format
- Press [5] to enable/disable auto-arming function: 3 short beeps indicates the feature has been enabled; 1 long beep indicates the feature has been disabled
- Press [#] to return to the Ready mode

If you would like to send a Partial Closing code if the panel temporarily bypasses zones because they were violated, program the following:

Section [07] Program whatever code is needed to indicate a partial closing has occurred.

[07] Closing (Arming) Reporting Codes for Access Codes 1 to 8

.....	Access Code 1	.....	Access Code 6
.....	Access Code 2	.....	Access Code 7
.....	Access Code 3	.....	Access Code 8
.....	Access Code 4	➤ 9 9	Partial Closing Code
.....	Access Code 5		

Section [17] If you would like an Access Code to be required to abort the auto-arming sequence, turn on Light [4] in Section [17]. Otherwise leave the light off and any key press will abort the arming sequence.

[17] 3rd System Option Code

Default	Zone Light On	Zone Light Off
➤ OFF ON	Zone Light 1	No bell during auto arm
OFF	Zone Light 2	AC excluded from trouble
OFF	Zone Light 3	60 second shunt on power up
➤ OFF ON	Zone Light 4	Auto arm cancel req. access code
OFF	Zone Light 5	Home Away with delay
OFF	Zone Light 6	Force arm on aux. delay
OFF	Zone Light 7	TX limit to 24 hr. period
OFF	Zone Light 8	Show bypass status always
		Bell during auto arm
		AC included
		Zones active on power up
		No code required
		Home Away as interior
		Aux. delay normal
		TX limit to armed period
		Show bypass status/disarmed

Section [18] Turn on Light [5] to send a Partial Closing code when the panel automatically arms with zones violated.

[18] 4th System Option Code

Note: Quick exit shall not be enabled on UL listed systems.

Default		Zone Light On	Zone Light Off
OFF	Zone Light 1	Quick exit enabled	Quick exit disabled
OFF	Zone Light 2	Bell pulses always	Bell pulses on Fire only
OFF	Zone Light 3	Show bypassed zones/armed	Bypass display normal
OFF	Zone Light 4	2 min keypad timeout enabled	2 min keypad timeout disabled
➤ OFF	ON Zone Light 5	Partial close on auto arm	No partial close on auto arm
OFF	Zone Light 6	Keypad [P]anic silent buzzer	Keypad [P]anic audible buzzer
OFF	Zone Light 7	[F]ire key disabled	[F]ire key enabled
OFF	Zone Light 8	Bell shutdown active	Bell shutdown not active

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

This is a convenience feature that will have strong appeal in many sales situations. A common problem with alarm systems is that people forget to turn them on. This can be a minor annoyance or a serious oversight depending on circumstances. The simple solution is automatic arming.

An example is the store or business that wants to be sure that an employee has not left for the day without arming the system. This particular situation is frequently the only reason why some security systems are monitored. Automatic arming can be programmed to turn on at any time needed and is accurate to the second. It has the advantage over monitoring in that the system arms itself automatically, thus sparing the owner or manager great inconvenience when the monitoring station gets around to notifying him to go to the premises to set the alarm. Another important advantage is that the customer is spared the additional monthly charge for monitoring openings and closings.

Automatic arming has a place in residential protection as well. The couple who both go off to work every day are frequently bothered by the uncertainty of whether the alarm has been set by one or the other. Automatic arming set for, say, 8:00 am, puts their minds at ease, and can be the little difference that makes the buying decision go your way.

AUXILIARY DELAY

HOW IT WORKS

The Auxiliary Delay zone can have a delay of up to 255 seconds (4 minutes and 15 seconds) without affecting the delay times for the regular delay zone. This zone can also be force armed; that is, the panel can be armed with this zone violated. This will allow your customer the convenience of arming without having to close the zone first. If the zone is still open when the auxiliary exit delay expires, it will be temporarily bypassed until it is secured. When it becomes secure, the zone will be added back into the system.

WHAT YOU NEED TO PROGRAM

Section [14] Program the zone(s) as [0][7] for Auxiliary Delay.

[14] Zone Definitions for Zones 1 to 8

	Default		
	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="7"/>	Zone 1
➤	<input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="7"/>	Zone 2
➤	<input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="7"/>	Zone 3
	<input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value=""/>	Zone 4
	<input type="text" value="0"/> <input type="text" value="2"/>	<input type="text" value=""/>	Zone 5
	<input type="text" value="0"/> <input type="text" value="2"/>	<input type="text" value=""/>	Zone 6
	<input type="text" value="0"/> <input type="text" value="2"/>	<input type="text" value=""/>	Zone 7
	<input type="text" value="0"/> <input type="text" value="2"/>	<input type="text" value=""/>	Zone 8

Section [17] Turn on Light [6] for the ability to force arm the Auxiliary Delay zone(s).

[17] 3rd System Option Code

Default		Zone Light On	Zone Light Off
<input type="text" value="OFF"/>	Zone Light 1	No bell during auto arm	Bell during auto arm
<input type="text" value="OFF"/>	Zone Light 2	AC excluded from trouble	AC included
<input type="text" value="OFF"/>	Zone Light 3	60 second shunt on power up	Zones active on power up
<input type="text" value="OFF"/>	Zone Light 4	Auto arm cancel req. access code	No code required
<input type="text" value="OFF"/>	Zone Light 5	Home Away with delay	Home Away as interior
➤ <input type="text" value="OFF"/> <input type="text" value="ON"/>	Zone Light 6	Force arm on aux. delay	Aux. delay normal
<input type="text" value="OFF"/>	Zone Light 7	TX limit to 24 hr. period	TX limit to armed period
<input type="text" value="OFF"/>	Zone Light 8	Show bypass status always	Show bypass status/disarmed

Section [21] Program the entry/exit delays for the zone.

[21] Auxiliary Delay Loop Times

	Default	
➤	<input type="text" value="0"/> <input type="text" value="4"/> <input type="text" value="5"/>	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="0"/> Entry Time (in seconds)
➤	<input type="text" value="0"/> <input type="text" value="6"/> <input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="6"/> <input type="text" value="5"/> Exit Time (in seconds)

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

There are many applications for this feature. A customer accustomed to leaving their home from the garage in their car would have to change their way of doing things without this feature. With this feature, the customer can arm the system with the garage door open. The time provided by the Auxiliary Delay allows them to enter the garage, drive their car out, and then close the garage door. When the garage door closes, it becomes part of the system. This feature could also be used for a window that is frequently left open for ventilation. When the system is armed, the window will be bypassed after the Auxiliary Delay. When the window is closed, it is automatically incorporated into the alarm system.

It is very easy to suggest situations where this feature could be useful, and you offer it against the competitor who can't offer it or is unaware of its availability.

AUXILIARY INPUT ZONE

HOW IT WORKS

The Auxiliary Input (AUX IN) is a dedicated 24 Hour zone that may be programmed for silent or audible operation. The AUX IN zone can also be used for keyswitch arming.

Regardless of programming, the zone is activated by a momentary short to AUX + (13.8 volts). Communication is immediate whether the panel is armed or disarmed.

Both an Alarm and Restoral code may be sent for this zone, but once in alarm, the zone cannot be reactivated until the zone is restored. If you are using latching switches, they will have to be reset before the panel can generate another alarm.

When used for keyswitch arming and you wish to transmit openings and closings, the panel will send the Restoral Reporting code as the Opening code, and the Alarm Reporting code as the Closing code. The panel will not arm or disarm in keyswitch arming mode until the zone is both tripped and then restored.

WHAT YOU NEED TO PROGRAM

Section [11] Program the Reporting codes for both the alarm and restoral in this Section. Remember that if the zone is being used for key switch arming, these will be the Opening and Closing Reporting codes.

[11] Priority Alarms and Restorals Reporting Codes

- 2 A Fire Zone Alarm
- 2 A **Auxiliary Input Zone Alarm**
- Keypad [P]anic Alarm
- Keypad [F]ire Alarm
- Keypad [A]uxiliary Alarm
- 9 A Fire Zone Restoral
- 9 A **Auxiliary Input Zone Restoral**
- Keypad [P]anic Restoral
- Keypad [F]ire Restoral
- Keypad [A]uxiliary Restoral

Section [30] Enter the number for the desired operation of the AUX IN zone here.

[30] Programmable Input and Output Options

Default

- 2 2 **Auxiliary Input Zone**
(Normally open, momentary closure to AUX+)
- 2 2 Programmable Output
(50mA switch to ground)
NOTE: A relay must be used to obtain more current.

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

This feature enables you to satisfy the demands of customers who are familiar with keyswitch operation or for outdoor applications where weather would rule out using keypads.

The 24 hour zone is ideal for supervising various functions such as sump levels or heating and cooling systems without having to use a programmable zone.

DELAY BEFORE TRANSMISSION

HOW IT WORKS

The panel will delay communications of any burglary alarm signal from 0 to 99 seconds. If the alarm is shut off in this delay time, no communication will be sent to the central station. If the alarm is not shut off in this time, the alarm will be transmitted normally.

Note that Fire zones and 24 hour zones cannot be delayed.

WHAT YOU NEED TO PROGRAM

Section [22] Program the time to delay burglary transmissions, 0-99 seconds.

[22] Communication Variables

Default

0 2

Maximum Transmissions until Swinger Shutdown

➤ 0 0

3 0

Delay Before Transmission (Burglary Zones Only)

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

New customers will often create false alarms while becoming familiar with their alarm system. Several companies will not enable the communications to the central station for the first month of operation to allow the customer to get familiar with the system without worrying about false alarms. Enabling the Delay Before Transmission feature will allow you to enable communications as soon as the security system is installed, thus sparing your customer the risks involved in going for a month without system monitoring. Inform your customer that a delay period has been programmed so that false alarms due to system unfamiliarity may be silenced before they communicate.

Once the customer is familiar with the system, the Delay Before Transmission feature can be disabled on-site through Installer Programming or remotely via the DLS-1 Downloading software.

DOOR CHIME

HOW IT WORKS

The keypad will beep 5 times every time a delay or instant zone is tripped or restored. Note that a zone that is manually bypassed will not activate the door chime.

WHAT YOU NEED TO PROGRAM

The feature must be enabled using the [*][6] User Function command.

- Press [*][6][Master Code] to enter User Functions
- Press [6] to enable or disable the function
- Three short beeps indicate the Door Chime feature is enabled; one long beep indicates the Door Chime feature is disabled.

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

It may be required that a sounder activates to draw attention to the fact that a zone has been violated. In a commercial application, the keypad can be made to sound to indicate that the store's front door has been opened. In a residence, the door chime may be used to indicate audibly that the patio door leading to the pool has been opened.

A piezoelectric sounder can be located in areas that do not have a keypad, such as a stock room or a basement. Refer to PGM OUTPUT - REMOTE SOUNDER for the connection procedure.

FIRE ZONE

HOW IT WORKS

The panel has a dedicated Fire zone. The zone is a Class 'B' type loop; a Trouble signal is displayed at the keypad and transmitted when the loop goes open, and a Fire signal occurs when the loop is shorted. When normal, the loop's resistance measures 1000 ohms.

When the Fire zone goes into alarm it will activate the Bell output will pulse for one second on and then one second off. The panel will delay communications for 30 seconds. If a key is pressed before the 30 second delay has expired, the panel will shut off the Bell output and delay communications for 90 seconds. If the fire zone is still in alarm after the 90 seconds abort time, the alarm sequence will begin again. Delaying the fire transmission and silencing the bell output may be done indefinitely. The silencing feature is designed to prevent false fire alarms such as those caused by, for example, cooking smoke.

If the fire zone goes into alarm for 30 seconds without being silenced, it will latch the alarm and communicate to the central station. An Access Code will then be required to silence the alarm. If the fire zone returns to normal after the 90 second abort time, the alarm will be silenced and the panel will resume normal operation.

The smoke detector can be reset by pressing [*] followed by pressing and holding the [4] key. The detector must be powered from the SW AUX terminal for this feature to work. The SW AUX terminal provides 13.8 volts and switches to ground as long as the [4] key is depressed. The SW AUX supply is tied in with the Aux supply of the panel, so any current drawn from the SW AUX terminal must be subtracted from the total power available from the Aux supply.

WHAT YOU NEED TO PROGRAM

Section [11] Program your Fire Zone Alarm and Restoral codes in this section.

[11] Priority Alarms and Restorals Reporting Codes

➤	1 0	Fire Zone Alarm
		Auxiliary Input Zone Alarm
		Keypad [P]anic Alarm
		Keypad [F]ire Alarm
		Keypad [A]uxiliary Alarm
➤	9 9	Fire Zone Restoral
		Auxiliary Input Zone Restoral
		Keypad [P]anic Restoral
		Keypad [F]ire Restoral
		Keypad [A]uxiliary Restoral

Section [12] Program the Fire Trouble reporting code.

[12] Maintenance Alarm Reporting Codes

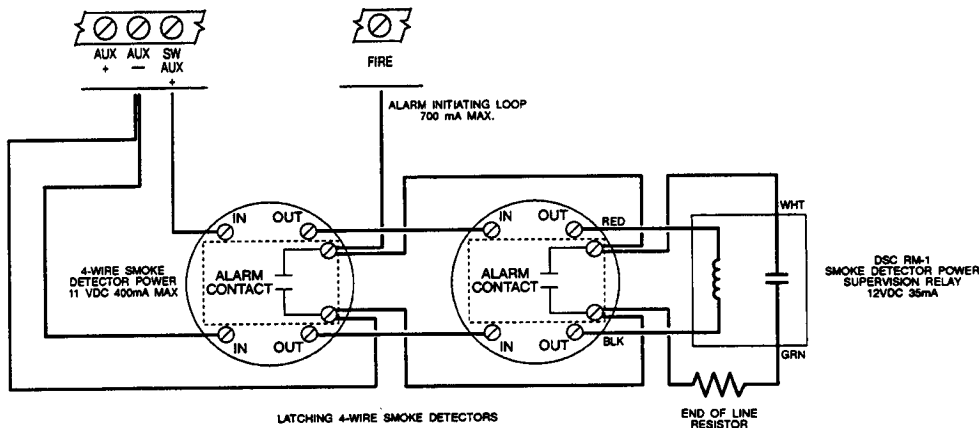
		Battery Trouble Alarm
		AC Failure Trouble Alarm
		Day Zone(s) Trouble Alarm
		Bell Circuit Trouble Alarm
➤	F 1	Fire Zone Trouble Alarm
		Auxiliary Power Supply Trouble Alarm
		Periodic Test Transmission

Section [13] Program the Fire Zone Trouble Restoral code in this section.

[13] Maintenance Alarm Restoral Codes

- _____ Battery Trouble Restoral
- _____ AC Failure Trouble Restoral
- _____ Day Zone(s) Trouble Restoral
- _____ Bell Circuit Trouble Restoral
- **F 9** **Fire Zone Trouble Restoral**
- _____ Auxiliary Power Supply Trouble Restoral

TYPICAL FIRE ALARM ZONE CONNECTIONS



ADDITIONAL EQUIPMENT REQUIRED:

4-wire smoke detector.

BENEFITS

Many potential users of supervised smoke detectors forego the safety benefits of this service out of fear of having the fire department respond to an alarm caused by burnt toast or similar carelessness. The keypad-activated transmission delay addresses this concern simply and effectively.

HOME/AWAY ZONES

HOW IT WORKS

Any zone defined as Home Away will automatically bypass if the panel is armed and no Delay zones are violated during the exit delay. If a Delay zone is violated, all Home Away zones will be armed after the exit delay has expired.

When armed, Home Away zones can be programmed to act as a Follower or Delay type. When the panel is armed and the Home Away zones were automatically bypassed, pressing [*][1] will reactivate the Home Away zones. This works for Home/Away zones only. If the panel is Instant Armed using [*][9][Access Code], the Home Away zones will be automatically bypassed even if a Delay zone is violated. They can still be added back into the system by pressing [*][1].

The panel also has a Quick Exit feature. When enabled, enter [*][0] when the panel is armed; the panel will allow one violation of any Delay zone without changing the status of the system. The panel will remain armed and the Home Away zones will remain bypassed. This feature is useful when you want to exit the premises but leave the Home Away zones bypassed.

WHAT YOU NEED TO PROGRAM

Section [14] Program the zones you want to be Home Away.

[14] Zone Definitions for Zones 1 to 8

Default			
	0 0		Zone 1
	0 1		Zone 2
	0 1		Zone 3
	0 1		Zone 4
	0 2		Zone 5
➤	0 2	0 3	Zone 6
➤	0 2	0 3	Zone 7
➤	0 2	0 3	Zone 8

Section [17] Turn Light [5] on if you want the Home Away zones to act like a Delay zone when they are armed, otherwise turn Light [5] off so they act like an Interior zone.

[17] 3rd System Option Code

Default		Zone Light On	Zone Light Off
OFF	Zone Light 1	No bell during auto arm	Bell during auto arm
OFF	Zone Light 2	AC excluded from trouble	AC Included
OFF	Zone Light 3	60 second shunt on power up	Zones active on power up
OFF	Zone Light 4	Auto arm cancel req. access code	No code required
➤ OFF ON	Zone Light 5	Home Away with delay	Home Away as interior
OFF	Zone Light 6	Force arm on aux. delay	Aux. delay normal
OFF	Zone Light 7	TX limit to 24 hr. period	TX limit to armed period
OFF	Zone Light 8	Show bypass status always	Show bypass status/disarmed

Section [18] Turn on Light [1] if you want to enable the Quick Exit feature.

[18] 4th System Option Code

Note: Quick exit shall not be enabled on UL listed systems.

Default		Zone Light On	Zone Light Off
➤ OFF ON	Zone Light 1	Quick exit enabled	Quick exit disabled
OFF	Zone Light 2	Bell pulses always	Bell pulses on Fire only
OFF	Zone Light 3	Show bypassed zones/armed	Bypass display normal
OFF	Zone Light 4	2 min keypad timeout enabled	2 min keypad timeout disabled
OFF	Zone Light 5	Partial close on auto arm	No partial close on auto arm
OFF	Zone Light 6	Keypad [P]anic silent buzzer	Keypad [P]anic audible buzzer
OFF	Zone Light 7	[F]ire key disabled	[F]ire key enabled
OFF	Zone Light 8	Bell shutdown active	Bell shutdown not active

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

Automatic Home/Away is a great convenience feature, particularly for residential alarm users. Circuits that provide interior protection, commonly using motion detectors, may be defined at the time of installation as "Home/Away" zones. This means that devices connected to such circuits will be operational only if a certain condition is met. This condition is provided by the delay zone which must be tripped during the exit delay period in order for the "Home/Away" zones to become active. This means that if the user arms the system without leaving the premises, the detectors connected to the "Home/Away" zone will not become active. This can also be described as Automatic by-passing.

While this feature will be welcomed by people who don't want to worry about having to bypass zones at the keypad, it will also be of interest as a convenience feature by those who wish to maintain security while they are occupying the premises, as well as when they are away. At bedtime, the bypassed zones may be easily reactivated by entering a simple keypad command.

The Quick Exit feature is designed to allow the user to exit the premises without having to disarm, manually bypass the interior zones, and then rearm the system.

A good example of this would be the person who leaves for work at 6:00 am while their spouse and children are still sleeping. They can enter [*][0] on the keypad and then leave the premises without affecting the status of the system. The interior zones will remain bypassed, while the delay zones protecting the entrance and exterior windows will remain active.

If these features are sold and properly presented, your prospect will expect to find them in your competitors' presentation as well. Your prospect may find the features there, but not likely; and if they do, they won't find the special features that DSC has included to make them easier and more convenient to use.

INSTALLER LOCKOUT

HOW IT WORKS

The panel can be locked out to prevent reprogramming by another installer from a competing firm - essentially, this feature prevents "hostile takeovers" of your installations. If Installer Lockout is enabled, the Installer Code will not be restored to the factory default setting if a "Reset to Factory Defaults" is performed. All other Sections will be restored to the default program.

After the code is locked out, it can only be changed in Installer Programming or with the DLS-1 Downloading software.

When the panel is powered up after having both AC and battery power disconnected, the line seizure relay will click 10 times to indicate the Installer Lockout feature is enabled. Otherwise, the relay will only click once.

WHAT YOU NEED TO PROGRAM

Section [24] Enter your new 4 digit Installer Code.

[24] Installer's Code

Default

2 5 5 0

Section [90] No data needs to be entered. Just enter the Section number to enable the feature.

Section [91] No data needs to be entered, just enter the Section number to disable the feature.

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

This feature will help prevent a hostile takeover of your installation as the panel cannot be programmed without the Installer Code. Even if the panel is restored to the factory default settings, your Installer Code will not be erased. While preventing "hostile takeovers", enabling the Installer Lockout will also thwart any criminal elements familiar with security systems from reprogramming your installation.

LOCAL ONLY ZONES

HOW IT WORKS

A Local Only zone is one that will only activate the siren or keypad buzzer as annunciation of a violated zone. An Access Code will be required to stop the siren or buzzer. Since the panel gives you the ability to program the Alarm Reporting code for each zone, a zone can be intentionally left blank to prevent reporting.

WHAT YOU NEED TO PROGRAM

Section [05] Program Alarm Reporting codes for all zones except for the Local Only zones. In this example, Zone 5 will be programmed as a 24 hour buzzer zone with no communications.

[05] Zones 1 to 8 Alarm Reporting Codes

.....	Zone 1 Alarm	➤	<u>0</u> <u>0</u>	Zone 5 Alarm
.....	Zone 2 Alarm		.....	Zone 6 Alarm
.....	Zone 3 Alarm		.....	Zone 7 Alarm
.....	Zone 4 Alarm		.....	Zone 8 Alarm

Section [14] Program your zone as either [0][4] for 24 Hour Bell or [0][6] for 24 Hour Buzzer.

[14] Zone Definitions for Zones 1 to 8

Default	
<u>0</u> <u>0</u>	Zone 1
<u>0</u> <u>1</u>	Zone 2
<u>0</u> <u>1</u>	Zone 3
<u>0</u> <u>1</u>	Zone 4
➤ <u>0</u> <u>2</u>	<u>0</u> <u>6</u> Zone 5
<u>0</u> <u>2</u>	Zone 6
<u>0</u> <u>2</u>	Zone 7
<u>0</u> <u>2</u>	Zone 8

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

This feature permits local supervision of elements of the security system whether or not the burglar alarm system is armed. Examples of typical applications include: fire exit doors that must not be locked during normal business hours; temperature sensitive environments such as food storage lockers; sump pump water level, and so forth. The example shown here is programmed to operate the keypad buzzer. Bell or siren operation is possible by programming the second digit as [4] or [5].

The sales advantage of this feature is that by offering it, you add value to your sales proposal and help your customer solve a problem. The chances are slim that either of these considerations will occur to your competitor and, as a result, your proposal will look more professional. And if your price is a little higher it will be seen to be worth every penny when the full benefits of this feature are explained to your prospect.

ON-SITE PRINTER

HOW IT WORKS

A serial printer may be connected to the panel to provide an on-site printout of events as they occur. By programming the Dialer Direction Options Section you can program the panel to:

- print and communicate all events assigned to both phone numbers
- print all events assigned to either phone number but not communicate
- print and communicate all events assigned to phone number 1; print all events assigned to phone number 2 but do not communicate

All events, whether printed or communicated, must have a reporting code programmed.

If the panel has been programmed to print only, the communicator must still be enabled.

The on-site printer requires the use of both the PGM output and the AUX IN zone. If an on-site printer is to be used, the PGM and AUX IN terminals cannot be used for any other purpose.

The printer cannot be located more than 6' from the control panel.

The printer will print the date, time, station, account number and event, including user or zone number where applicable. "Station" refers to the phone number the event was assigned to. The following is an example of the printout created by the PC2550:

```
07:33 04\01\91 STATION 2 ACC. # 5678
CLOSING ACCESS 1
12:57 04\01\91 STATION 1 ACC. # 1234
ALARM ZONE 2
ALARM ZONE 12
13:01 04\01\91 STATION 1 ACC. # 1234
RESTORE ZONE 2
RESTORE ZONE 12
18:01 04\01\91 STATION 2 ACC. # 5678
OPENING AFTER ALARM
OPENING ACCESS 1
```

WHAT YOU NEED TO PROGRAM

Sections [05] to [13], Section [50] Enter a reporting code for events to be communicated and/or printed

Section [30] Enter option [0] for the AUX IN zone and [C] for the PGM output option

[30] Programmable Input and Output Options

Default

➤ 2 0 **Auxiliary Input Zone**
(Normally open, momentary closure to AUX+)

➤ 2 C **Programmable Output**
(50mA switch to ground)
NOTE: A relay must be used to obtain more current.

Section [35] Select which phone number the different events will report to. Events that go to Phone Number 2 may be selected to print only. Shown here is an example of the programming required to have the panel print only openings and closings, and to print and communicate all other events.

[35] Communicator Call Direction Options

Default

<u>1</u>	<u>1</u>	Zones Group A Alarms and Restorals
<u>1</u>	<u>1</u>	Zones Group B Alarms and Restorals
<u>1</u>	<u>2</u>	Access Codes Group A Openings and Closings
<u>1</u>	<u>2</u>	Access Codes Group B Openings and Closings
<u>1</u>	<u>1</u>	Priority Alarms and Restorals
<u>1</u>	<u>1</u>	Maintenance Alarms and Restorals

Section [48] Select the proper baud rate by turning on Light [1], [2] or [3]. Select which pin of the RS-232 port will be used as the control (RTS, DTR or SRTS) by turning Light [6] on or off accordingly.

NOTES:

Light [4] off and Light [5] on: print and communicate all events assigned to phone number 1; print only events assigned to phone number 2

Light [4] off and Light [5] off: print and communicate all events assigned to either phone number 1 or phone number 2

Light [4] on and Light [5] off: print all events assigned to phone number 1 or 2; do not communicate any events

[48] Printer Configuration

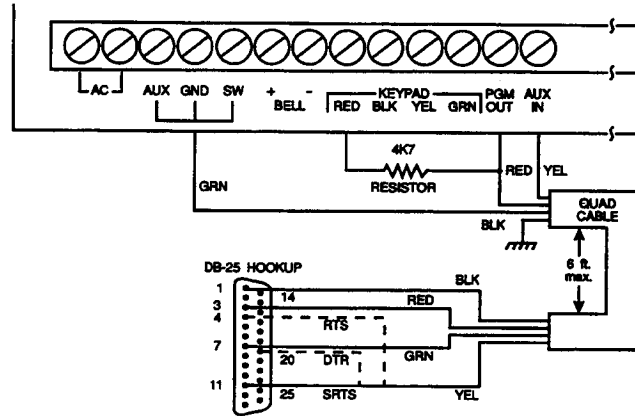
Default		Zone Light On	Zone Light Off
<u>OFF</u>	Zone Light 1	110 baud	Not 110 baud
<u>OFF</u>	Zone Light 2	300 baud	Not 300 baud
➤ <u>OFF</u> , <u>ON</u>	Zone Light 3	1200 baud	Not 1200 baud
<u>OFF</u>	Zone Light 4	Printer only	Printer and normal communication
➤ <u>OFF</u> , <u>ON</u>	Zone Light 5	See note	Printer and normal communication
➤ <u>OFF</u> , <u>ON</u>	Zone Light 6	(RTS, PIN 4) (DTR, PIN 20)	(SRTS, PIN 11)
<u>OFF</u>	Zone Light 7	Test transmission enabled	Test transmission disabled
<u>OFF</u>	Zone Light 8	Periodic download enabled	Periodic download disabled

ADDITIONAL EQUIPMENT REQUIRED:

- RS-232 connector
- 4.7K resistor
- length of 4 conductor cable
- serial printer The printers in the following list are recommended for use with the PC2550:

Brother M-1109	Brother M-1809
Star DP 40	Rolland DG PR 1112 with serial card
Epson EP 40	Panasonic KX P1091 I with serial card
C-Itoh model 8510 B	Mannesman Tally MT81 with serial card
Citizen 120-D with serial card	Citizen 180-D with serial card
Raven 9101 with serial card	

WIRING DIAGRAM:



BENEFITS

This feature will give you the added advantage you need for the commercial customer who likes the idea of a permanent record of openings and closings, but is deterred by the additional price usually tacked on to the monthly monitoring fee. No other panel on the market gives you the ability to print, on-site, openings and closings as they occur.

PGM OUTPUT KEYPAD ACTIVATED

HOW IT WORKS

The PGM Output can be activated by pressing [*][7] or [*][7] followed by a valid Access Code. The PGM Output will switch to ground and can be used to activate a relay or turn on a low current device. The PGM Output can sink up to 50 mA. If more than 50 mA will be needed, a relay will be required.

When the keypad sequence is entered, the keypad buzzer will sound for 5 seconds and the PGM Output will switch to ground for that amount of time.

WHAT YOU NEED TO PROGRAM

Section [30] Program either [2] or [3] for the PGM Output option depending if an Access Code will or will not be required. In this example, [3] is programmed, so any valid Access Code will be required in order to activate the PGM output.

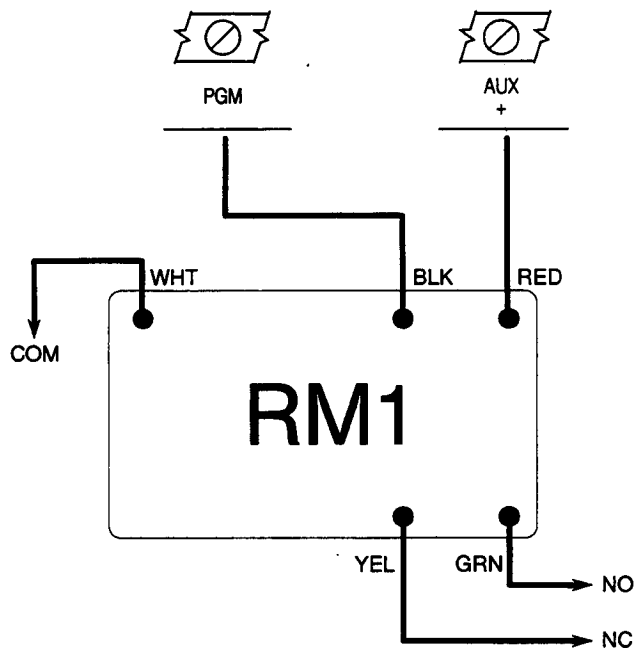
[30] Programmable Input and Output Options

Default

[2] [3] Auxiliary Input Zone
 (Normally open, momentary
 closure to AUX-)

➤ [2] [3] Programmable Output
 (50mA switch to ground)
**NOTE: A relay must be used to
 obtain more current.**

TYPICAL PGM OUTPUT RELAY WIRING



ADDITIONAL EQUIPMENT REQUIRED:

RM-1 relay if more than 50 mA is required to operate a device.

BENEFITS

This feature has many strong applications and can make the sales proposal virtually bulletproof against the competition when properly presented under the right circumstances.

In commercial applications, the need for controlled access is frequently encountered in addition to and separate from burglary protection. The PC2550 can provide that service at a fraction of the cost which would normally be the case with standard access control products.

To ensure an effective sales presentation, obtain from two or three full service locksmiths flat-rate prices for installing 12 volt DC-operated door strikes. Armed with this information, the sales person can offer the prospective alarm user remote door access control from any keypad on the burglar alarm system, or from any keypad specifically installed for that purpose. It is becoming more common, for example, that in high crime neighborhoods many retail establishments use remote door operators to admit customers. Many businesses have computer installations where access is permitted only to certain personnel. The alert sales person will spot these and many other needs which, when properly satisfied, will almost guarantee sales success. By including in your sales proposal a door control system limiting access to those authorized to use the burglar alarm system, you create serious problems for your competitor. And just as important, by including the cost of installing the electronic door strike and associated hardware in your proposal, you can increase your profit margin and still be way below the price of the same system offered by a conventional access control supplier.

PGM OUTPUT REMOTE SOUNDER

HOW IT WORKS

By connecting a sounding device (a piezoelectric buzzer, for example) the PGM Output can be used to remotely annunciate the keypad buzzer for the following 3 functions:

- door chime
- pre-alert
- 24 hour buzzer zones

WHAT YOU NEED TO PROGRAM

Section [30] Enter the number for the desired operation of the PGM Output.

[30] Programmable Input and Output Options

Default

 2

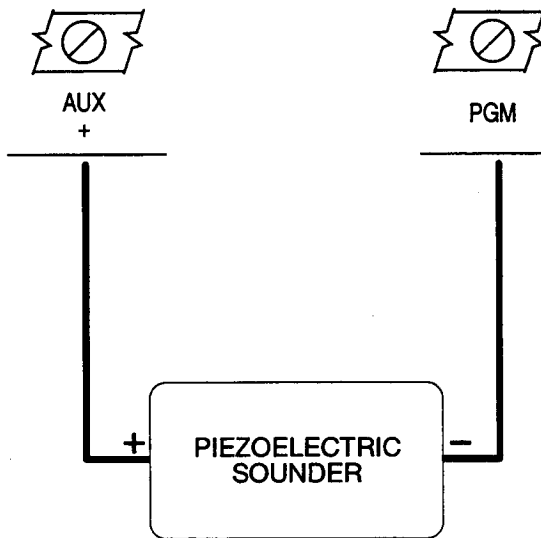
Auxiliary Input Zone
(Normally open, momentary closure to AUX+)

➤ 2

 6

Programmable Output
(50mA switch to ground)
NOTE: A relay must be used to obtain more current.

TYPICAL CONNECTIONS FOR PIEZOELECTRIC SOUNDERS



ADDITIONAL EQUIPMENT REQUIRED:

- piezoelectric sounder (12 volt) or a relay to switch bells or sirens

BENEFITS

It is occasionally necessary to alert personnel in other parts of a protected area or, because of ambient noise, provide higher sound levels for these functions. It may also be the case that an individual has a hearing impairment and cannot hear the pre-alert warning tone. This feature facilitates the operation of other devices when this requirement is present.

REMOTE KEYSWITCH ARMING

HOW IT WORKS

The Auxiliary Input (AUX IN) is a dedicated zone on the PC2550 that may be programmed for keyswitch arming. The zone is activated by a momentary short to the AUX+ terminal.

When the AUX IN zone is used for keyswitch arming and Opening and Closing reporting is required, the panel will send the Restoral Reporting code as the Opening code and the Alarm Reporting code as the Closing code. The panel will not arm or disarm until the zone is both tripped and then restored.

The PGM Output can be programmed to reflect the armed status of the panel. The PGM Output will be 13.8 volts when the panel is disarmed and will switch to 0 volts when the panel is armed.

Any wireless panic switch can be used with the AUX IN zone, provided that a dry contact, normally open output can be obtained from the receiver. This dry contact output will be used to activate the AUX IN zone to arm and disarm the panel remotely. The PGM Output can be connected to an LED to annunciate the armed status of the panel.

WHAT YOU NEED TO PROGRAM

Section [11] Program the Reporting codes for both the alarm and restoral in this Section. Remember that if the zone is being used for key switch arming, these will be the Opening and Closing Reporting codes.

[11] Priority Alarms and Restorals Reporting Codes

- Fire Zone Alarm
- **Auxiliary Input Zone Alarm**
- Keypad [P]anic Alarm
- Keypad [F]ire Alarm
- Keypad [A]uxiliary Alarm
- Fire Zone Restoral
- **Auxiliary Input Zone Restoral**
- Keypad [P]anic Restoral
- Keypad [F]ire Restoral
- Keypad [A]uxiliary Restoral

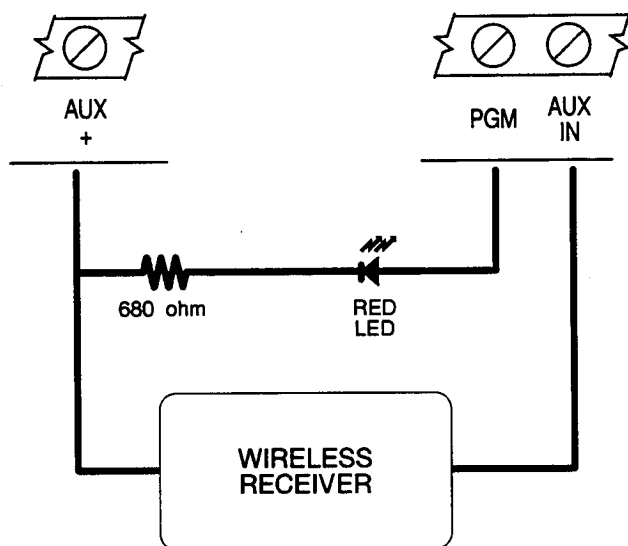
Section [30] Enter the number for the desired operation of the AUX IN zone here ([3] for Keyswitch Arming) and the PGM Output ([7] for Armed Status).

[30] Programmable Input and Output Options

Default

- **Auxiliary Input Zone**
(Normally open, momentary closure to AUX+)
- **Programmable Output**
(50mA switch to ground)
NOTE: A relay must be used to obtain more current.

WIRING DIAGRAM:



ADDITIONAL EQUIPMENT REQUIRED:

- wireless panic transmitter
- wireless receiver with normally, open dry contact output
- red LED - 680 ohm resistor

BENEFITS

Permits the convenience of arming and disarming the system from outside the protected premises.

SIREN SUPERVISION

HOW IT WORKS

The panel always monitors the load on the Bell output of the panel. If the loop goes open, the panel will immediately indicate a trouble on the keypad and beep the keypad buzzer twice every 10 seconds. The trouble will remain as long as the siren loop is open. A siren trouble may be transmitted to the central station. When the circuit is returned to normal, a restoral code may be transmitted.

If no siren is connected to the control panel, as in a silent alarm installation, connect a 1000 ohm resistor across the BELL+ and BELL- terminals. If a siren driver is being used, the panel will only monitor the connection from the panel to the driver.

Occasionally you will find the siren supervision current may cause the siren to hum. To prevent this, connect a 1000 ohm resistor across the + and - terminals at the siren. If the resistor is connected to the panel's terminals, it will defeat the supervision of the loop.

WHAT YOU NEED TO PROGRAM

Section [12] Program the reporting code for Bell Circuit failure.

[12] Maintenance Alarm Reporting Codes

.....	Battery Trouble Alarm
.....	AC Failure Trouble Alarm
.....	Day Zone(s) Trouble Alarm
➤ F 3	Bell Circuit Trouble Alarm
.....	Fire Zone Trouble Alarm
.....	Auxiliary Power Supply Trouble Alarm
.....	Periodic Test Transmission

Section [13] Program the reporting code for Bell Circuit restoral.

[13] Maintenance Alarm Restoral Codes

.....	Battery Trouble Restoral
.....	AC Failure Trouble Restoral
.....	Day Zone(s) Trouble Restoral
➤ F 6	Bell Circuit Trouble Restoral
.....	Fire Zone Trouble Restoral
.....	Auxiliary Power Supply Trouble Restoral

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

A very important part of any security system is the siren or bell output. The audible device will both frighten any intruder as well as draw attention to the break in. Therefore, it is of utmost importance to ensure that the bell or siren circuit is functional at all times.

If fire protection is being utilized with the panel, the siren plays an extremely important role in that protection. Early detection and clear, audible warnings in order to allow escape is the whole point of having fire protection enabled on the security system. If the wire run to the siren has been cut or disconnected, there will be no audible indication that a fire has broken out. Without ample warning, the home owner is in greater danger of being overcome by smoke or fumes. Because of the importance of the sounding device, the PC2550 constantly monitors the siren circuit will immediately indicate a specific trouble if the siren circuit goes open, and will report this condition to the central station.

Once the home owner has been informed as to the importance of siren supervision, they will look for it in your competition. The advantage will be yours if your competitor cannot offer the same feature.

SPLIT ARMING

HOW IT WORKS

The PC2550 control panel has the ability to be partitioned into two separate systems. For simplicity these two systems are called Side A and Side B.

Zones or Access Codes may be assigned to either Side A, Side B or be common to both. The zones and Access Codes do not have to be split the same way. For example, you could program 1 zone to be armed and disarmed by 15 different Access Codes, and 7 zones to be armed and disarmed by only 1 Access Code.

If a zone is programmed as common to both Side A and Side B, then that zone will only be armed when both systems are armed.

If an Access Code is programmed as common to both Side A and Side B, then that code will be able to arm and disarm the entire system. Code 1 (the Master Code) should always be programmed as common to both Sides.

In a Partitioned system, Access Codes 9 through 16 automatically arm and disarm Side A only. Therefore, whichever Side needs more Access Codes should be programmed as Side A.

The zones programmed to operate on only one Side can only be armed and disarmed by Access Codes assigned to arm and disarm that Side, or by a common Access Code.

When the panel has only one Side armed, it will flash the "Armed" light as well as the zone lights for the zones armed. The "Ready" light will be on if the other Side is secure. If the entire panel is armed, the "Armed" light will be on and all the zone lights will be off since they are all armed.

The panel may be programmed so that an Access Code is required to enter the Bypass mode. If this option is selected, the panel will then only allow you to Bypass the zones that your Access Code would be able to arm and disarm. This will prevent a User who is authorized to arm and disarm part of the system from Bypassing zones on the Side they do not have access to.

Note that armed zones can never be Bypassed.

Operators for either Side can access the system through any keypad. This means that the entire system, even though it may be split, requires only one keypad.

The Bell Output on the panel is also common to the whole system. If an alarm is to occur, any Access Code entered on any keypad will shut the siren off.

Note that if one Side of the panel is armed and a code common to both Sides is entered, the entire system will disarm.

WHAT YOU NEED TO PROGRAM

Section [16] Turn on light 8 on if an Access Code is required to bypass zones.

[16] 2nd System Option Code

Default	Zone Light On	Zone Light Off
<input type="checkbox"/> OFF	Zone Light 1	Partial closing identified
<input type="checkbox"/> OFF	Zone Light 2	Master Code not changeable
<input type="checkbox"/> OFF	Zone Light 3	Bell squawk enabled
<input type="checkbox"/> OFF	Zone Light 4	PC16 OUT enabled
<input type="checkbox"/> OFF	Zone Light 5	TLM trouble only
<input type="checkbox"/> OFF	Zone Light 6	1400Hz Radionics
<input type="checkbox"/> OFF	Zone Light 7	TLM disabled
<input checked="" type="checkbox"/> ON	Zone Light 8	Access Code req'd for bypass

Partial closing not identified
Master Code changeable
Bell squawk disabled
PC16 OUT disabled
TLM audible when armed
2300Hz Radionics
TLM enabled
Access Code not req'd

Section [31] Turn on the lights for the zones you wish to assign to Side A. Remember that if a zone is to be common to both Sides the light must be on both in Section [31] and Section [32].

[31] Zone Group A Assignment

Default

ON Zone Light 1
 ON Zone Light 2
 ON Zone Light 3
 ON Zone Light 4
 ON Zone Light 5
 ON Zone Light 6
 ON Zone Light 7
 ON Zone Light 8

Section [32] Turn on the lights for the zones you wish to assign to Side

[32] Zone Group B Assignment

Default

ON Zone Light 1
 ON Zone Light 2
 ON Zone Light 3
 ON Zone Light 4
 ON Zone Light 5
 ON Zone Light 6
 ON Zone Light 7
 ON Zone Light 8

Section [33] Turn on the lights for Access Codes that will be able to arm and disarm Side A only. For an Access Code to be able to arm and disarm the entire panel the light must be turned on both in Section [33] and Section [34].

[33] Access Code Group A Assignment

Default

ON Zone Light 1
 ON Zone Light 2
 ON Zone Light 3
 ON Zone Light 4
 ON Zone Light 5
 ON Zone Light 6
 ON Zone Light 7
 ON Zone Light 8

Section [34] Turn on the light for any Access Codes that will arm and disarm Side B only or that will arm and disarm the entire panel.

[34] Access Code Group B Assignment

Default

- ON** Zone Light 1
- ON** Zone Light 2
- ON** Zone Light 3
- ON** Zone Light 4
- ON** Zone Light 5
- ON** Zone Light 6
- ON** Zone Light 7
- ON** Zone Light 8

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

Many protection applications can be improved by using a second independently controlled system such as is available using the split arming feature. Office/warehouse or office/factory are the more obvious examples, but there are many more examples in both residential and commercial applications. By including this feature in your sales proposal, you pick up a major advantage in price and in quality of system design. Your competition will rarely suggest this feature in the first place, and will likely be unable to supply it without significant additional cost in most cases.

SPLIT REPORTING

HOW IT WORKS

The panel can be programmed to call phone number 1 and report using account number 1. The panel can also be programmed to call phone number 2 and report using account number 2. Events can be directed to the first, second or both phone numbers.

The second number can be used to back up the first number in the event of a failure.

A different format can be selected for each number.

WHAT YOU NEED TO PROGRAM

Section [01] Enter the phone number of the central station followed by the [#] sign. Additional spaces are available for special commands to disable call waiting or get around a PBX system. The following hex digits perform the following functions:

- [B] - panel will simulate the [*] key
- [C] - panel will pause 4 seconds
- [D] - panel will search for dial tone
- [E] - panel will simulate the [#] key
- [F] - end of phone number marker

For example, assume you have to disable a call waiting feature and then wait for a dial tone. The command to disable the call waiting feature is, in this example, *70. You would enter the phone number as follows, in HEX format:

- [B][7][0][D][phone number]
- Actual keyed entry: [*2*][7][0][*4*][PHONE NUMBER]

Enter [#] to exit the Section when done

[01] 1st Phone Number

Section [02] Enter the account number. You must enter 4 digits. For a 3 digit account, the fourth digit must be [0]. If a [0] is present in the account number, you must enter a hex [A] in its place ([*1*]).

[02] 1st Customer Account Code

Section [03] Enter the phone number of the central station using the same format as described in Section [01].

[02] 2nd Phone Number

Section [04] Enter the account number using the same format as described in Section [02].

[04] 2nd Customer Account Code

Section [15] Turn off Light [7] if the 2nd number will be used to backup the 1st number. DO NOT turn the light off unless the 2nd number has been programmed.

[15] 1st System Option Code

Default		Zone Light On	Zone Light Off
<input type="checkbox"/> OFF	Zone Light 1	Communication disabled	Communication enabled
<input type="checkbox"/> OFF	Zone Light 2	Restorals on bell timeout	Restorals Follow Zone
<input type="checkbox"/> OFF	Zone Light 3	Alarm display while armed	No alarm display while armed
<input type="checkbox"/> OFF	Zone Light 4	DTMF dialing	Pulse dialing
<input type="checkbox"/> OFF	Zone Light 5	N/C loops	EOL resistor loops
<input type="checkbox"/> OFF	Zone Light 6	Keypad [P]anic audible	Keypad [P]anic silent
<input checked="" type="checkbox"/> ON	Zone Light 7	Call 1st phone only	Backup to 2nd phone
<input type="checkbox"/> ON	Zone Light 8	16th code = maid's code	16th code normal

Section [29] Select the format to be used with each phone number. The format need not be the same. Two digits must be entered in this Section even if the 2nd number is not being used. In this example, the 1st Telephone Number is formatted for option [0] Silent Knight/Ademco slow and the 2nd Telephone Number is formatted for option [5] SESCOA super speed.

[29] Communicator Format Options

Default			
<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 0		1st Telephone Number
<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 5		2nd Telephone Number

Section [35] Select which phone number the events will report to. The options are:

- [1] call 1st phone number
- [2] call 2nd phone number
- [3] call both phone numbers
- [0] call no phone number

[35] Communicator Call Direction Options

Default			
<input type="checkbox"/> 1	<input type="checkbox"/> 1		Zones Group A Alarms and Restorals
<input type="checkbox"/> 1	<input type="checkbox"/> 2		Zones Group B Alarms and Restorals
<input type="checkbox"/> 1	<input type="checkbox"/> 1		Access Codes Group A Openings and Closings
<input type="checkbox"/> 1	<input type="checkbox"/> 2		Access Codes Group B Openings and Closings
<input type="checkbox"/> 1	<input type="checkbox"/> 3		Priority Alarms and Restorals
<input type="checkbox"/> 1	<input type="checkbox"/> 3		Maintenance Alarms and Restorals

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

Communication with the central station is the most important feature you offer your customer. It is your source of recurring revenue and the customer's source of peace of mind.

Programming the second phone number and account number identical to the first and selecting the 2nd phone number as a back-up will give you, in effect, 16 calling attempts to the central station. Even at the busiest times, the panel should be able to communicate.

The 1st and 2nd phone numbers with a split system will allow you to report each account separately, thus doubling your recurring revenue.

Finally, all events can be reported to both numbers, allowing you to connect your own receiver to back-up the central station. This will allow you to immediately contact the customer in the event of a false alarm or trouble report without waiting to be contacted by the central station.

SWINGER SHUTDOWN

HOW IT WORKS

When an alarm occurs, the panel will communicate the alarm and trigger a counter. When the zone goes into alarm a programmed number of times within a programmed time frame, the panel will no longer communicate the alarm for that zone, effectively shutting it down. If any other zone goes into alarm, that alarm will communicate if it has not yet shut down.

The panel also has the option to shut down the siren activation for a zone that has shut down.

The programmable time frame for the shutdown can be either a 24 hour period or an armed period. If the 24 hour period option is selected, the panel will reset the counters at midnight. For the armed period option, it will reset the counters every time the panel is armed.

Note that Fire zones never shut down.

WHAT YOU NEED TO PROGRAM

Section [17] Turn on Light [7] to reset the shutdown variables every night at midnight, or turn Light [7] off to reset the shutdown variables every time the system is armed.

[17] 3rd System Option Code

Default		Zone Light On	Zone Light Off
OFF	Zone Light 1	No bell during auto arm	Bell during auto arm
OFF	Zone Light 2	AC excluded from trouble	AC Included
OFF	Zone Light 3	90 second shunt on power up	Zones active on power up
OFF	Zone Light 4	Auto arm cancel req. access code	No code required
OFF	Zone Light 5	Home Away with delay	Home Away as interior
OFF	Zone Light 6	Force arm on aux. delay	Aux. delay normal
➤ OFF ON	Zone Light 7	TX limit to 24 hr. period	TX limit to armed period
OFF	Zone Light 8	Show bypass status always	Show bypass status/disarmed

Section [18] With Light [8] turned on, the Bell output will not activate if a zone that is shutdown trips again. With Light [8] turned off, the Bell output will activate every time a zone goes into alarm.

[18] 4th System Option Code

Default		Zone Light On	Zone Light Off
OFF	Zone Light 1	Quick exit enabled	Quick exit disabled
OFF	Zone Light 2	Bell pulses always	Bell pulses on Fire only
OFF	Zone Light 3	Show bypassed zones/armed	Bypass display normal
OFF	Zone Light 4	2 min keypad timeout enabled	2 min keypad timeout disabled
OFF	Zone Light 5	Partial close on auto arm	No partial close on auto arm
OFF	Zone Light 6	Keypad [P]anic silent buzzer	Keypad [P]anic audible buzzer
OFF	Zone Light 7	[F]ire key disabled	[F]ire key enabled
➤ OFF ON	Zone Light 8	Bell shutdown active	Bell shutdown not active

Section [22] Program the maximum number of transmissions before the shut down for a zone occurs. Programming [0][0] disables the shutdown. In this example, 5 transmissions have been specified as the maximum.

[22] Communication Variables

Default		
➤ 0 3	0 5	Maximum Transmissions until Swinger Shutdown
0 0		Delay Before Transmission (Burglary Zones Only)

ADDITIONAL EQUIPMENT REQUIRED:

None.

TELEPHONE LINE MONITOR (TLM)

HOW IT WORKS

TLM is built into the PC2550 control panel. TLM checks the phone line for voltage only: the voltage on the line must drop below 1 volt for 30 seconds for the panel to activate a telephone line trouble.

The TLM can act in three different ways: it can be disabled for a local system; it can be programmed to activate a trouble indication at the keypad only; or it can activate a trouble indication when disarmed and activate the Bell output if armed.

A reporting code can be programmed to be sent when the phone line has been restored. The phone will restore within 10 seconds of the phone line being reconnected.

WHAT YOU NEED TO PROGRAM

Section [16] Turn Light [7] on to disable the TLM in a local system. Turn Light [5] on if you only want a Trouble indication at the keypad. If Light [5] is off, the panel will activate the alarm if the phone line drops and the panel is armed.

[16] 2nd System Option Code

Default		Zone Light On	Zone Light Off
OFF	Zone Light 1	Partial closing identified	Partial closing not identified
OFF	Zone Light 2	Master Code not changeable	Master Code changeable
OFF	Zone Light 3	Bell squawk enabled	Bell squawk disabled
OFF	Zone Light 4	PC16 OUT enabled	PC16 OUT disabled
➤ OFF OFF	Zone Light 5	TLM trouble only	TLM audible when armed
➤ OFF OFF	Zone Light 7	TLM disabled	TLM enabled
OFF	Zone Light 6	1400Hz Radionics	2300Hz Radionics
OFF	Zone Light 8	Access Code req'd for bypass	Access Code not req'd

Section [50] Program the reporting code to indicate the phone line has been restored.

[50] System Test Code and TLM Restoral Code

➤ 6 6 System Test Code
 TLM Restoral Code

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

An important part of any security system is its connection to the outside world. The PC2550 monitors electrical characteristics of the telephone line to ensure its continued presence. If the line is cut or otherwise disconnected and the system is armed, the local bell or siren will operate as if a burglary had been detected. If the system is disarmed, such a condition will display locally at all of the system keypads as a system trouble. This feature may be programmed to display as a trouble only whether the system is armed or disarmed, or it may be shut off entirely. Once the prospect fully understands the importance of this feature to their security, they will want it and will look for it from your competitor.

TEST TRANSMISSION

HOW IT WORKS

The panel can be programmed to send a test signal to the central station at a programmable time every 1 to 99 days.

WHAT YOU NEED TO PROGRAM

First you must set the 24 hour clock in the panel. Do the following;

- [*][6][Master Code] to enter User Function programming
- [1] to select the set 24 hour clock option
- [H][H][M][M] to program the time; use 24 hour format
- Press [#] to return to the Ready mode

Section [12] Program the code you want to send as a test signal.

[12] Maintenance Alarm Reporting Codes

- Battery Trouble Alarm
 - AC Failure Trouble Alarm
 - Day Zone(s) Trouble Alarm
 - Bell Circuit Trouble Alarm
 - Fire Zone Trouble Alarm
 - Auxiliary Power Supply Trouble Alarm
- **6 6** Periodic Test Transmission

Section [20] Program the number of days between test transmissions.

[20] System Times

Default

- 3 0** Entry Delay Time (in seconds)
 - 4 5** Exit Delay Time (in seconds)
 - 0 4** Bell Cut-off Time (in minutes)
 - 3 0** AC Failure Transmission Delay (in minutes)
 - 5 0** Normal Loop Response Time (x 10 ms)
- **3 0** **0 7** Test Transmission / Periodic Download Cycle Time (in days)

Section [23] Program the time you want the panel to send the test transmission.

[23] System Clock Times

Default

- 9 9 9 9** Automatic Arming Time of Day
 - 9 9 9 9** For Future Use
- **9 9 9 9** **0 2 0 0** Test Transmission Time of Day

Section [48] Make sure Light [7] is on to enable the test function.

[48] Printer Configuration

Default

- | | Zone Light On | Zone Light Off |
|-------------------------------------|----------------------------------|-----------------------------------|
| OFF Zone Light 1 | 110 baud | Not 110 baud |
| OFF Zone Light 2 | 300 baud | Not 300 baud |
| OFF Zone Light 3 | 1200 baud | Not 1200 baud |
| OFF Zone Light 4 | Printer only | Printer and normal communication |
| OFF Zone Light 5 | See note | Printer and normal communication |
| OFF Zone Light 6 | (RTS, PIN4) (DTR, PINS 20) | (SRTS, PIN 11) |
| ➤ OFF ON Zone Light 7 | Test transmission enabled | Test transmission disabled |
| OFF Zone Light 8 | Periodic download enabled | Periodic download disabled |

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

The PC2550 may be programmed to transmit a signal to the monitoring station at a precisely timed interval varying between once every 24 hours to once every 99 days. This is used with computerized monitoring stations, and the absence of the test signal is displayed as a fault condition. It is the central station's assurance that they are receiving signals from their panel properly and will be able to act accordingly in case of a break-in.

As with most other features available in DSC panels, its value to your prospect can't be known until it has been pointed out and discussed. Your doing so will set you apart from the majority of the people engaged in selling security systems, and thereby give you an important edge.

USER INITIATED BELL TEST

HOW IT WORKS

The customer can activate a bell test which will perform the following 5 functions simultaneously:

- sound the keypad buzzer for two seconds
- sound the siren output for 2 seconds
- light all the lights on the keypad for 2 seconds
- activate a battery test
- send a signal to the central station

All functions are automatic except for the report to the central station. The panel will only communicate if a valid reporting code has been programmed.

WHAT YOU NEED TO PROGRAM

The function does not have to be enabled. Any time the customer enters the following sequence the panel will activate the test:

Press [*][6][Master Code][8]

Section [50] Program the reporting code to indicate the customer has activated a test.

[50] System Test Code and TLM Restoral Code

➤ A A System Test Code
TLM Restoral Code

ADDITIONAL EQUIPMENT REQUIRED:

None.

BENEFITS

This feature will reassure the customer that their security system is functioning properly. It should also be stressed that the panel performs a battery test when the bell test is initiated, thus ensuring that the vital backup supply will operate properly in the event of a power failure. And when the central station receives the reporting code indicating that a bell test is being performed, it is their assurance that their client is testing the system on a regular basis as specified in the monitoring contract.



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