Installation Manual

Digital Security Controls

PC1500

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MANUAL # 29000080 R1

FEATURES

KEYPAD PROGRAMMABLE

The PC1500 is complete with a default program so that it is operational with a minimum of programming. The control panel is completely programmable from the keypad.

EEPROM MEMORY

The panel uses EEPROM memory which will retain all program information even if AC and Battery power is removed from the panel. The EEPROM memory can be reprogrammed thousands of times.

STATIC/LIGHTNING PROTECTION

The PC1500 has been carefully designed and tested to provide reliable in-use protection against static and lightning induced transients. Special "Zap-Trac" circuit board design catches high voltage transients right at the wiring terminals and transient protection devices are placed in all critical areas to further reduce damaging voltages.

SUPERVISION

LOW OR DISCONNECTED BATTERY

LOSS OF AC POWER

FUSE OPEN

UNSUCCESSFUL COMMUNICATION ATTEMPT

FIRE ALARM CIRCUIT OPEN

LOSS OF TIME ON SYSTEM CLOCK

PROGRAMMABLE TEST TRANSMISSION

MICROPROCESSOR "WATCHDOG" CIRCUIT

OPERATION

DOWNLOADING CAPABILITY

PROGRAMMABLE AUTO DOWNLOADING

SWINGER SHUTDOWN

TRANSMISSION DELAY

SIX USER CODES

"MASTER KEY" CODE

ALL ZONES PROGRAMMABLE AS FIRE ZONES

PROGRAMMABLE TEST TRANSMISSION

ZONE BYPASS FROM THE KEYPAD

SIX ZONES

BELL/SIREN ZONE

PROGRAMMABLE OUTPUT

COMPATIBLE WITH LCD500 KEYPAD

THREE DEDICATED KEYS
FIRE/EMERGENCY/PANIC

BACKLIT
ESTHETICALLY PLEASING
KEYPAD

SPECIFICATIONS

PC1500 CONTROL PANEL

SIX FULLY PROGRAMMABLE ZONES
(EOL RESISTOR SUPERVISED)
ALL ZONES PROGRAMMABLE AS FIRE ZONES
MAX. ZONE LOOP RESISTANCE 100 OHMS

•

BELL / SIREN OUTPUT - 1 AMP
STEADY FOR BURGLARY
PULSING FOR FIRE

•

PROGRAMMABLE OUTPUT - 300 mA
9 PROGRAMMABLE OPTIONS

•

AUXILIARY POWER OUTPUT - 475 mA

•

PC1500RK KEYPAD - 3 MAXIMUM

•

BATTERY - 12 VDC, 1.2 AH MIN.
GELLED ELECTROLYTE TYPE

•

TRANSFORMER - 16 VAC, 30 VA

•

PANEL DIMENSIONS
8" HIGH x 10" WIDE x 3" DEEP
SURFACE MOUNT

•

PANEL COLOR - LIGHT BEIGE

PC1500RK KEYPAD

THREE KEYPAD ACTIVATED ZONES
FIRE / EMERGENCY / PANIC

•

BACKLIT KEYS

•

5 SYSTEM LIGHTS
READY / ARMED / MEMORY
BYPASS / TROUBLE

•

6 ZONE LIGHTS

•

KEYPAD DIMENSIONS
4.5" HIGH x 4.5" WIDE x 15/16" DEEP
SURFACE MOUNT

•

KEYPAD COLOR - WHITE

INSTALLATION

MOUNTING THE PANEL - Select a dry location close to an unswitched AC source, close to a good ground connection and close to the telephone line connection.

Remove the printed circuit board, the mounting hardware and the keypad from the cardboard retainer inside the panel. Before attaching the cabinet to the wall, press the four white nylon printed circuit board mounting studs into the box from the back. Also insert the grounding screw into the box from the back.

Once the cabinet is mounted to the wall, pull all the cables into the box and prepare them for connection. Use a meter to test the wiring for opens, shorts and grounds. Press the circuit board onto the mounting studs.

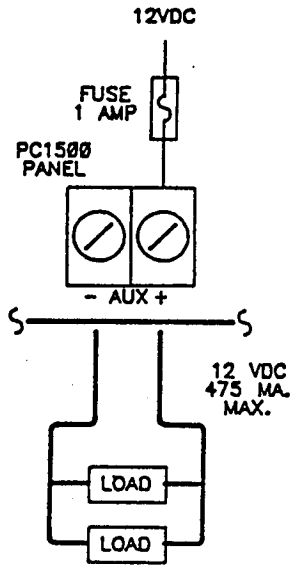
MOUNTING THE KEYPAD - Keypads should be located close to the designated "Entry-Exit" door(s) and mounted at a height convenient for all users.

♦ WIRING ♦

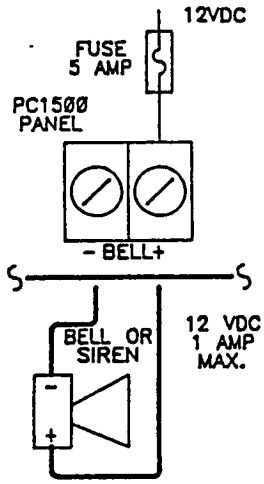
Complete all wiring to the control panel before applying AC power or connecting the battery.

AUXILIARY POWER CONNECTION - The Auxiliary Power Supply can be used to power keypads, motion detectors, smoke detectors and other devices that require 12 VDC. See the Fire Zone Wiring section for the Power connection of 4-wire smoke detectors.

The **Total** load for the Auxiliary Power Output must be calculated for all devices connected across the Aux. +/- terminals and for devices connected between the AUX. + and the PGM terminals. Allow 25 mA for each PC1500RK keypad connected to the panel.



BELL/SIREN CONNECTION -

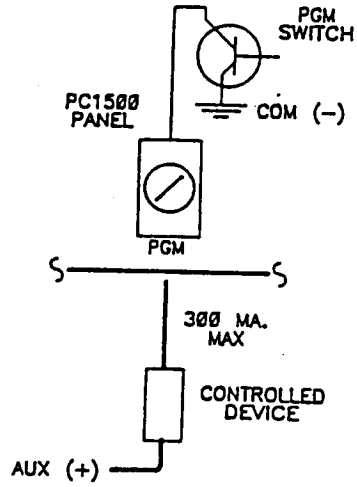


BELL LOOP WIRING CHART

CURRENT mA	AWG 14	AWG 16	AWG 18	AWG 19	AWG 22
	DISTANCE TO LAST BELL/SIREN (FT.)				
100	2375	1500	940	750	370
200	1190	750	470	370	185
300	790	500	310	250	120
400	595	375	235	185	90
500	475	300	190	150	75
600	400	250	155	125	60
700	340	210	135	105	50
800	300	190	115	90	45
900	265	170	100	80	40
1000	240	150	90	75	35

Wire run distances are in feet from the control panel to the last device on the loop. Calculations are based on 12 VDC at the panel with a maximum 10% voltage drop at the last device. Observe polarity when connecting Siren Drivers, Sirens and Polarized Bells.

PGM TERMINAL CONNECTION - The PGM terminal is a switched negative output which can be controlled by various programming options. (See Programming Guide section [24]). Devices controlled by the PGM output must be connected between the PGM terminal, which is (-), and the Aux. (+) terminal.

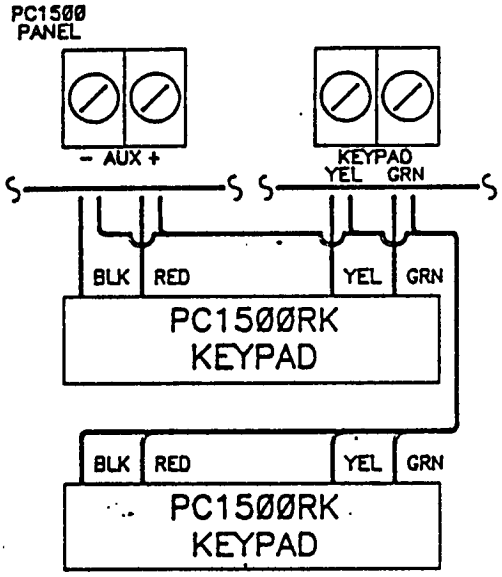


KEYPAD WIRING - Up to three Keypads may be connected in parallel. Do not connect multiple Keypads on the same keypad wire run.

For Standby Loading purposes, use a current draw of 25 mA per Keypad. This represents the panel in the Disarmed state with two zones open .

The wiring table gives the wire run length from the control panel to the Keypad for various guages of wire. Wire run lengths are based on the maximum current drawn by the Keypad. (All lights ON)

If two wires of the same guage are paralleled, the run length can be doubled. e.g. If 8 #22 AWG wires are used, 2-Red, 2-Blk, 2-Grn & 2-Yel, the run length would go from 420' to 840'.



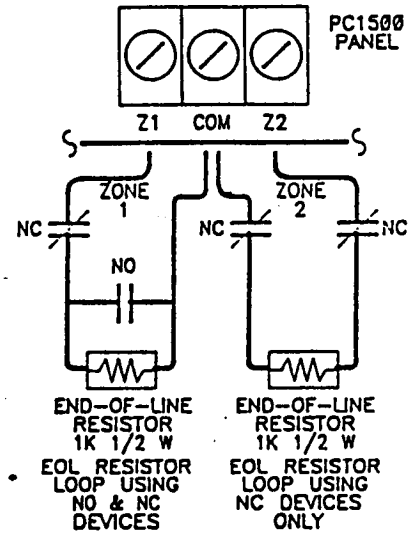
WIRING CHART PC1500RK

WIRE GUAGE	MAX. RUN LENGTH KEYPAD TO PANEL
24 AWG	260'
22 AWG	420'
20 AWG	660'
19 AWG	830'
18 AWG	1050'

FIRE ZONE WIRING - Up to 6 zones may be programmed as a Fire Loop. See Programming Guide section [11].

Smoke Detectors should be the latching type and have N.O. Alarm initiating contacts. Power wiring from the Aux. +/PGM terminals should be supervised using an RM-1 relay after the last Smoke Detector. The RM-1 N.O. contacts, (closed with power applied) should be wired in series with the Alarm Initiating Loop End-of- Line Resistor so that should power to the detector(s) fail, a Fire loop "Trouble" will be initiated.

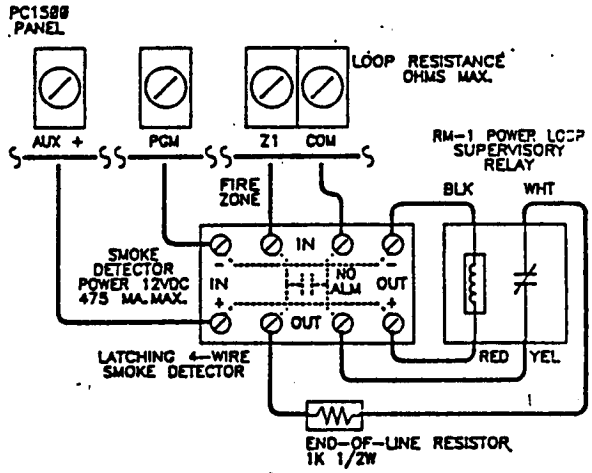
BURGLARY ZONE WIRING - Burglary zone definition, Delay, Instant, 24 Hr. etc., is programmed via the Keypad.. See the Programming Guide, section [11].



maximum loop resistance = 100 ohms

ZONE WIRING CHART

WIRE GUAGE	MAX. RUN LENGTH TO E.O.L.R.
24 AWG	1,900'
22 AWG	3,000'
20 AWG	4,900'
19 AWG	6,200'
18 AWG	7,800'



SMOKE LOOP POWER WIRING CHART

CURRENT mA	AWG 14	AWG 16	AWG 18	AWG 19	AWG 22
	MAX. WIRE RUN TO E.O.L. RELAY				
50	4750	3000	1880	1500	750
100	2375	1500	940	750	370
200	1190	750	470	370	185
300	790	500	310	250	120
400	595	375	235	185	90

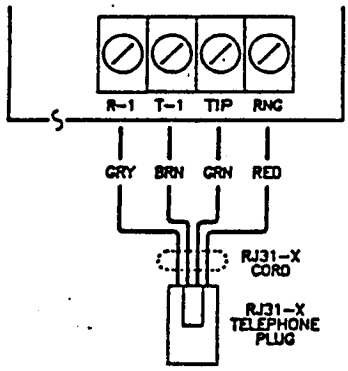
Wire run distances are in feet from the Aux. +/PGM terminals to the End-of-Line Power Supervisory Relay. Calculations are based on 12 VDC at the Aux. +/PGM terminals and a maximum 10% voltage drop at the RM-1 Relay.

ALARM INITIATING LOOP WIRING CHART

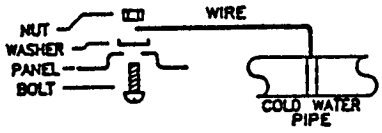
WIRE GUAGE	AWG 14	AWG 16	AWG 18	AWG 19	AWG 22	AWG 24
DISTANCE TO END-OF-LINE RESISTOR	19,800	12,400	7,800	6,200	3,000	1,900

THIS CHART IS BASED ON A MAX LOOP RESISTANCE OF 100 OHMS

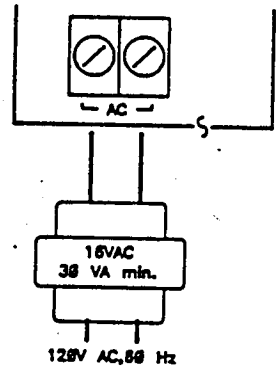
TELEPHONE LINE WIRING -



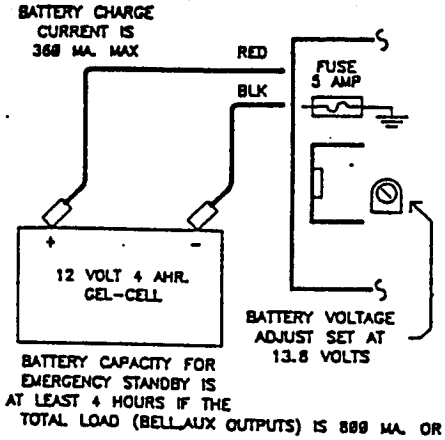
GROUND CONNECTION -



AC POWER WIRING - Complete all wiring to the control panel before connecting AC power or the Battery. DO NOT plug the transformer into an outlet that is controlled by a switch.



BATTERY CONNECTION - If the Battery is reverse connected, the 5A fuse will blow. The battery charging voltage is factory set at 13.8 volts and normally needs no adjustment. If the Battery charging voltage is out of adjustment, remove the battery and connect a 1000 ohm, 1/2 W resistor across the battery leads and adjust the trimpot near the heatsink until the voltage across the resistor is 13.8 volts. DO NOT adjust the trimpot with the Battery connected as it may give an incorrect reading of the end-of-charge voltage if the battery is not fully charged.



KEYPAD FUNCTIONS

INTRODUCTION

The PC1500RK remote keypad provides complete information and control of the PC1500 control panel. The panel can be fully programmed from the keypad. The 6 zone lights provide alarm and status indication for the alarm circuits. Each zone can be programmed to be a Burglary zone or a Fire zone. The 5 function lights guide the user in operating the system and the built-in sounder lets the user hear correct key entries and other alert signals. The 12 digit keypad is used for code entry and other programming functions. The single button [F]ire, [E]mergency and [P]anic keys provide the user with simple operation for emergency signalling. All keypad entries are made by pressing one key at a time.

MASTER CODE

A default Master Security Code "1234" is factory programmed into the PC1500. The Master Security Code is used to Arm and Disarm the panel, to program up to 5 additional Security Codes using the [*],[5] command, and to enter other user functions using the [*],[6] command. The panel default program allows the User to change the Master Code. The panel can be programmed, by the Installer, so the User cannot change the Master Code. See 2nd System Option Code light 2.

2ND MASTER CODE

A second Master Security Code "xxxx" can be programmed into the PC1500. This code can be changed by the installer only, and is useful where there are multiple panels in a complex. The 2nd Master Code can be used as a "Master Key".

INSTALLER'S PROGRAMMING CODE

A default Installer's Programming Code "1500" is programmed into the PC1500. Using this code and the [*],[8] command, the installer can gain access to the system to enter panel or communicator program information. This code can be changed by the installer.

ARMING

Before Arming the panel, close all protected doors and windows and stop movement in areas covered by motion detectors. If the Trouble light is on, check for the type of trouble ([*],[2] command) and correct the fault condition. If the Bypass light is on, insure that the zones bypassed are bypassed intentionally. ([*],[1] command)

If the READY light is not on, one or more zones is open. The system can only be Armed when the READY light is ON

To ARM, enter a [4 digit Security Code]. As each digit is entered, the keypad sounder will beep. When the correct Security Code has been entered the ARMED light will come ON and the keypad buzzer will sound a series of short beeps.

If the Security Code was entered incorrectly, the keypad buzzer will sound steadily for 2 seconds. Press the [#] key and enter the Security Code again.

When the correct Security Code has been entered and the Armed light is on, exit through the designated Entry/Exit door before the Exit Delay time expires. At the end of the allowed Exit time, all lights on the keypad will go out except the Armed light.

See Installer's Programming section, [*],[8] command for instructions on changing the Exit Delay time.

AUTO-BYPASS/HOME-AWAY ARMING

If a correct Security Code is entered, and you do not exit the premises, the system will, at the end of the Exit delay time, Arm with interior zones automatically Bypassed if those interior zones have been programmed as "Home-Away" zones. The Bypass light will come on. (see programming section [11], Zone Definitions for programming zones as "Home-Away")

This is a convenience feature for the user who wishes to remain at home with the system armed. The user does not have to manually Bypass the interior zones.

To reactivate the interior zones that have been automatically Bypassed, press [*],[1]. The Bypass light will go out. This command is a quick method of fully Arming the system before going to bed and is useful for the user who has a keypad outside the areas protected by the interior zones.

ENTRY DELAY OFF ARMING

To eliminate the Entry Delay, Arm the system using [*],[9],[ANY VALID USER CODE]. The Armed light will flash to remind the user that the system is Armed. An exit may be made as in normal Arming. The system will arm as described above in "Auto-Bypass/Home Away" arming whether an exit is made or not.

DISARMING

Enter the premises through the designated Entry-Exit door. The keypad buzzer will be on as a reminder to Disarm the system. Go to the keypad and enter a valid [4 digit Security Code]. If an error is made entering the code, press the [#] key and enter the code again. The armed light will go out and the buzzer will stop. The correct security code must be entered before the Entry time expires or the panel will go into alarm. To change the Entry time see Installer's Programming [*],[8].

Upon Disarming and if an alarm occurred while the panel was Armed, the Memory light and the Zone light(s) of the zone(s) that caused the alarm will come on Flashing for 2 minutes. Pressing the [#] key will stop the Flashing, extinguish the zone light and return the panel to the Ready mode. The Memory light will stay on steady to indicate that an alarm did occur during the last Armed period. To view the zone(s) that caused the alarm, see Alarm Memory Display [*],[3].

ZONE BYPASSING - [*],[1]

A Bypassed zone will not cause an alarm. Use zone Bypassing when access is needed to part of a protected area or if damage to contacts or wiring cannot be repaired immediately. The panel can be Armed with one or more zones Bypassed even if the zone(s) are open. The Ready light will be on and the Bypass light will be on if a zone is Bypassed.

If the Bypass light is on when Arming, use the [*],[1] command to insure that any zone Bypassed is intentionally Bypassed.

Zone Bypasses are automatically canceled when the panel is Disarmed.

To Bypass zones :

Enter [*],[1] - The Bypass light will start flashing

Enter [zone number to be bypassed], the zone light will come on to indicate that the zone is Bypassed. To remove a Bypass, enter the zone number and the zone light will go out. Continue entering the zone numbers for the zones you wish Bypassed . PRESS [#] TO RETURN TO READY.

To Recall Bypassed zones :

Enter [*],[1],[9],[#]

This command will recall the last zone or group of zones that were Bypassed. If the same group of zones are Bypassed regularly, the Bypass recall feature can be used instead of bypassing zones individually.

Bypass Disable :

The PC1500 can be programmed by the installer to prevent certain zones from being Bypassed by the user. Lights for these zones will not come on in response to the Bypass command. See the "Zone Bypass Mask" instruction in the [*],[8] Installer programming section.

TROUBLE DISPLAY - [*],[2]

The PC1500 continuously monitors a number of trouble conditions. If one of these conditions occur, the keypad Trouble light will come on and the buzzer will sound two short beeps every 10 seconds. To silence the buzzer, press the [#] key. The buzzer will stop but the Trouble light will remain on until the Trouble condition is cleared. See the Programming Guide section [10]-Maintenance Alarms & Restorals for a list of those zones that can be transmitted to the monitoring station.

To view the Trouble condition, Press [*] then [2]. The zone light indicates the type of trouble.

Zone
Light

[1] LOW BATTERY... If the Battery voltage is low or the battery is disconnected or the battery fuse is blown, a Trouble will be displayed and can be reported.

[2] LOSS OF AC POWER - On loss of AC power, the Trouble light will come on immediately but the keypad buzzer will not sound. The keypad buzzer will sound if AC power remains off and the battery reaches a low voltage. The delay before transmitting AC Fail can be programmed from 1 to 99 minutes. See Programming Section [17]

[3] FUSE FAILURE BELL/SIREN OR AUX. OUTPUT - A trouble is displayed if the Bell/Siren fuse is open. If the Aux. output fuse fails, it will not be displayed but will be transmitted if programmed to do so.

[4] UNSUCCESSFUL COMMUNICATION ATTEMPT - If the Digital Communicator is unsuccessful at communicating with the monitoring station after the programmed number of attempts, a Trouble is generated. See section [15] Communication Variables. If a later attempt at communication is successful, the Trouble is cleared.

[5] FIRE ALARM CIRCUIT TROUBLE - An open circuit on any zone programmed as a Fire loop will initiate a Trouble. If more than one Fire loop has a trouble (open), light # 5 will remain on until ALL Fire loop troubles have been cleared. See Zone Definitions section [11] for Fire loop zone assignment.

[6] LOSS OF TIME ON SYSTEM CLOCK - When the PC1500 is powered up or reset, the internal time of day clock needs to be reset to the correct time. This Trouble is cleared after entering the Trouble view mode then pressing [#] to exit. The Trouble will also be cleared on any attempt to set the time of day. See [*],[6] User Function Command for setting the clock. PRESS [#] TO RETURN TO READY

NOTE : If [9] is pressed while in the Trouble Display Mode, the most recent trouble will be displayed on the zone lights. This Trouble Memory is most useful as a diagnostic tool when installing and servicing the PC1500.

ALARM MEMORY DISPLAY - [*],[3]
Alarms caused during the previous Armed period are stored in memory. To view these alarms, Press the [*] then [3] keys. The Memory light will flash and the alarms will be displayed on the zone lights.

In addition to the last alarm memory there are two history levels. After entering the memory mode, pressing [9] will cause the keypad to display the two other levels of alarm history. Each time [9] is pressed, the keypad will beep 1,2 or 3 time to indicate which level of history is being viewed.

When the panel is Armed, the Alarm Memory is cleared and the contents moved to the second history level. The second history level contents are moved to the 3rd history level and the 3rd history contents are discarded. The memory light will only be ON if there was an alarm during the previous Armed period. PRESS [#] TO RETURN TO READY

DOWNLOADING CALLUP COMMAND - [*],[4]
The [*],[4] command is used to initiate a call to the downloading computer so that the panel can be reprogrammed from the computer. This command must be enabled in section [14], 3rd system option code, zone light 4. Sections [26], [27] and [28] must be programmed with the downloading computer's telephone number, the downloading access code and the panel identification code.

USER PROGRAMMING COMMAND - [*],[5]
The [*],[5] Programming Command, allows the user to program Security Codes 2 through 5. The 1st Security Code is the Master Code and the installer may choose to allow the user to program this code. See section [13] 2nd System Option Code light 2. The factory default for the Master Security Code is 1234. The 6th code may changed from a regular code to a "one-time" use or "maid's code". See section [13] 2nd System Option Code light 5. NOTE: The "one-time" use code is cleared only if it is used to Open and Close or just to Close. If the Quick-Arm command [*],[0] is used to close, the "one-time" use code will NOT be erased.

Programming Security Codes :
Press [*],[5],[Master Security Code] to enter the Security Code programming mode. The default Master Security Code is [1234]. The zone lights are used to indicate the program status of the 6 Security codes.

Zone Light.....Security Code Status
OFF.....That Code is not programmed
ON STEADY.....That Code is programmed
FLASHING.....That Code is being programmed

Upon entering this programming mode, the 1st zone light will be on steady to indicate that the Master Security Code is programmed with the Factory Default Code. The Master Code may be changed.

Changing or Adding a Code :
Enter [*],[5],[Master Security Code]

Press the key of the Code you wish to ADD or CHANGE. e.g. If you press [2] then zone light 2 will Flash to indicate that you are programming CODE #2.

Enter the new 4 digit code. DO NOT press the [#] or [*] keys. After the 4 digits are entered, the keypad sounder will beep 3 times and the zone light will come on steady. If you are changing an existing code, the new code will simply replace the old one.

If you wish to program another code, press the key number for the code to be programmed and enter the 4 digit code.

PRESS THE [#] KEY TO RETURN TO READY

Erasing a Code :
Enter [*],[,5],[Master Security Code]

Press the key of the code you wish to erase. The zone light for that code number will flash. Enter [****].

*** THE MASTER SECURITY CODE CANNOT BE ERASED ***

PRESS THE [#] KEY TO RETURN TO READY

If the Master code is forgotten and the panel is left Disarmed, program a new Master Code using the [*],[8],[Installer's Code],[19] command.

EEPROM RESET - If the Master Code is forgotten and the panel was left Armed, see Programming Section [30] for Software and Hardware methods of resetting the panel to the Factory Default condition.

USER FUNCTIONS COMMAND [*],[6]
This function is used to set the System Clock time and to set the Auto-Arm time as well as toggle a number of system functions.

Enter [*],[6],[Master Code],[Number from list below]

[1] System 24 Hr. Clock (Enter HH:MM)

[2] Auto Arming Time (Enter HH:MM)

[3] For future use

[4] Quick-Arm Enable/Disable

[5] Auto-Arm Enable/Disable

[6] Door Chime Enable/Disable

[7] For future use

[8] Bell Test Function

[0] Installer's Test (turn OFF after use)

NOTE : The System Clock is a 24 Hr. clock and times must be entered as two digit numbers.
e.g. HH - 01,02.....10,11.....23,24
MM - 01,02.....35,36.....58,59

8:05 AM would be entered as 0805
1:30 PM would be entered as 1330

Items 0,4,5 & 6 turn ON and OFF various features. When the item key is pressed and the feature is being turned ON, the keypad sounder will beep 3 times. If the feature is being turned OFF the sounder will give one long beep.

Pressing item [8] gives a 2 second Bell/Siren and Keypad Buzzer and Light test.

SETTING THE CLOCK - [*],[6],[MASTER CODE],[1]
Setting the system 24 Hr. clock simply tells the system the correct time of day. If the System is without power (AC or Battery), it cannot continue to keep time. When the panel is first powered up or has been without both AC and Battery power, the System Clock must be reset. If the time needs to be reset, a Trouble #6 will be indicated on the Keypad. (See [*],[2] System Trouble Command)

AUTO-ARM - [*],[6],[MASTER CODE],[2]
The PC1500 can be programmed to Arm at the same time each day. At the selected Auto-Arm time the keypad buzzer begins to sound to alert anyone on the premises that the system is about to Arm. One minute later the system will Arm. If any key on the keypad is pressed while the keypad is beeping, the Auto-Arming will be aborted. Auto-Arming will be attempted at the same time the next day. As well as setting the time for Auto-Arm, this feature must be enabled. (Item [5])

QUICK-ARM - [*],[6],[MASTER CODE],[4]
Pressing [4] while in the User Function Command mode will Enable (3 beeps) or Disable (one long beep) the Quick-Arm feature. With this feature enabled, the panel can be Armed by simply entering [*],[0]. The Closing Code transmitted for Quick-Arm is the same as the code programmed for the Master Code.

DOOR CHIME - [*],[6],[MASTER CODE],[6]
Pressing [6] while in the User Function Command mode will Enable (3 beeps) or Disable (one long beep) the Chime feature. With this feature enabled, the keypad sounder will beep 5 times each time any zone defined as a delay or instant circuit, opens or closes. The Door Chime feature does not operate on other zone definitions. Zone Bypass may be used to eliminate beeping on zones where it is not wanted. The Door Chime feature functions only while the panel is in the Disarmed mode.

INSTALLER'S TEST - [*],[6][MASTER CODE],[0]
Pressing the [0] key while in the User Function Command mode will Enable/Disable the Installer's Test function. This feature facilitates final testing of the system and when Enabled, the Bell/Siren will operate for 2 seconds each time a zone is put into Alarm. The Bell/Siren will respond to all zones regardless of how they are defined in the program. To exit the Installer's Test mode, Arm then Disarm the panel.

BELL TEST - [*],[6],[MASTER CODE],[8]
Pressing [8] while in the User Function Command mode will sound the Bell/Siren, the keypad sounder and turn on all the keypad lights for 2 seconds.

UTILITY OUTPUT COMMAND - [*],[7]
OR - [*],[7],[USER CODE]
The Programmable Output (PGM terminal) can be activated by a keypad command. This output can be used to operate other devices such as door openers, special lighting, door strikes or to reset smoke detectors. (see Programming section [24] item 2,3 or 4 for functions that are controlled by the [*],[7] keypad command) Depending on the option chosen, the [*],[7] command may or may not require a subsequent User Code.

When the correct command is entered, the keypad sounder and the PGM output will operate for 5 seconds.

INSTALLER'S PROGRAMMING COMMAND - [*],[8],[INSTALLER'S CODE]
The PC1500 is completely programmed from the keypad by using commands in the [*],[8] section. These commands are described in detail in the programming section of this manual. The default Installer's Code is [1500]

ENTRY DELAY OFF ARMING - [*],[9],[USER CODE]
Entering [*],[9] before the Arming Code Arms the panel without the Entry Delay on Delay zones.
When armed using the [*],[9] command, the Armed light will flash to remind the user that the system is Armed without the Entry Delay. This command allows the user to remain at home and have an Instant Alarm on the Entry doors.

ARMING FOR THE NIGHT - [*],[1] COMMAND
Upon retiring for the night, the user may reactivate the interior "Home-Away" zones that have been Bypassed using the [*],[9] command by entering the [*],[1] command. When this command is entered, the armed light will continue to Flash to remind the user of the Instant door and the Bypass light will go out. The [*],[1] command will not remove the bypass from zones that have been Manually Bypassed.

QUICK-ARM COMMAND - [*],[0]
Entering [*],[0] is accepted as a valid Arming Code if the Quick-Arm feature is Enabled. This command is often used when individuals are required to Arm the system but not Disarm the system. This could be used with home visitors in the case of a residential alarm system or for junior employees and maintenance staff in the case of commercial systems. See Instructions in the [*],[6] User Programming Command section for Enabling and Disabling the Quick-Arm feature.

KEYPAD ZONES - [F] - [E] - [P]
There are three zones which can be activated with single key entries on the keypad. For the [F],[E] and [P] key to be functional for transmission they must be enabled by the installer by entering the Alarm and Restoral Codes in Programming section [09]

[F]ire Key
Pressing the [F] key and holding it for 2 seconds will initiate a local Pulsing Alarm and, if programmed, will transmit the alarm to the monitoring station.

[E]mergency Key
Pressing the [E] key and holding it for 2 seconds will, if programmed, transmit an Emergency alarm to the monitoring station. There is no local alarm and no keypad lights will come on when this key function is activated. The keypad sounder will sound a series of short beeps once the panel has accepted the alarm and when the transmission has been successfully completed, the sounder will again sound a series of beeps.

[P]anic Key
Pressing the [P] key and holding it for 2 seconds will, if programmed, send a transmission to the monitoring station.

This key function can be programmed to be Audible or Silent. See Programming section [12], 3rd System Option Code, Light 6. If programmed as Audible, the local Bell/Siren will sound steady.

Keypad annunciation for this key operation is programmable, section [14] light 5, for feedback (3 beeps) or silent (no buzzer feedback).

◆

PROGRAMMING GUIDE

INTRODUCTION

The PC1500 is fully programmable from the Keypad and uses an EEPROM memory which can be reprogrammed thousands of times. The EEPROM memory will not lose the program data even on total loss of power. The essential information which defines the operation of the control panel and communicator is stored in a section of the EEPROM memory which is only accessible using the Installer's programming code. If the Installers' code is forgotten, the EEPROM may be reset to the Factory Default code. See section [30], Reset to Factory Default.

TO PROGRAM THE PC1500

With the panel in the Disarmed mode, Enter [*],[8],[1500].The panel can only be programmed while it is in the Disarmed mode. The Default Installer's Code is [1500]. The Installer's Code can be changed. See section [20] New Installer's Code.

Once the Installer's Command is entered the Armed light will come on steady and the panel is ready to be programmed. NOTE: If no key entry is made for 2 minutes, the panel will return to the Ready mode and the complete Installer's command will have to be entered before programming can be resumed.

With the Armed light on Steady, enter two digits for the section you wish to program. The sections for the 1500 panel go from [01] to [30] and each section can be programmed independently and in any order. Section [00] is reserved for Binary programming which is normally done on instruction from factory technical personnel.

Once the 2 digits for the section you wish to program are entered, the Armed light will go out, the Ready light will go on steady and the keypad sounder will beep 3 times. The Keypad is now ready to accept data for the selected section.

Most sections contain groups of two digit entries and the keypad buzzer will beep twice after each 2 digit group is entered.

When the section is first entered, the first 4 zone lights will indicate, in a Binary format, the value of the first digit in that section. (see Binary display description below) If you wish to change that digit simply enter the new digit. If you wish to keep that digit unchanged you can enter the same number or skip that digit by pressing the 'F' key. Once the first digit has been entered or skipped, the 4 zone lights will display the value of the second digit. After each digit is entered or skipped, the zone lights show the value of the next digit in the Binary format.

When the required data for the section being programmed is completely entered, the keypad sounder will beep several times and the Armed light will come back on to indicate that the expected data has been entered.

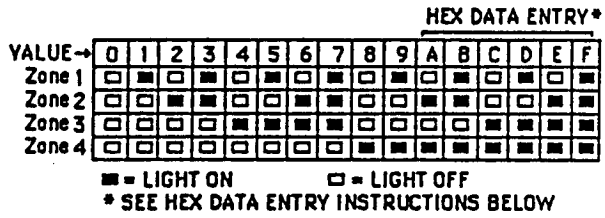
At this point, you will still be in the program mode and need only enter the section number for the next section you wish to program.

It is not necessary to program all 2 digit pairs in any given section. A section can be entered and selectively programmed by going only to the digit(s) you wish to change and then pressing [#] to return to the programming section where you can then enter another section for programming. For 2 digit pairs, Both digits must be programmed before pressing the [#] key. Only the data entered before pressing the [#] key, will be changed in the EEPROM.

PROGRAM DATA REVIEW - Enter the section you wish to review by entering the 2 digit section number. ([01]....[28]). To review the data, press the 'F' key and the first four zone LED's will present the value (Binary format) of the first digit in that section. Each press of the 'F' key will advance the display to the next digit. At the end of the section, the keypad buzzer will beep several times and return you to the program mode where another section can be selected for review or programming.

BINARY DATA DISPLAY

Zone lights 1 through 4 are used to display the value, in Binary format, of the data as shown in the table below.



ZONE LIGHT DISPLAY SECTIONS [12],[13],14],[16]

These sections are entered using the zone lights to indicate which functions are active and which number key to press to turn them on and off. When the section is entered, zone lights 1 to 6 will display which functions are currently on. Pressing the key number corresponding to the zone light number will alternately turn the function on and off and the zone light will follow. All functions can be turned OFF by pressing [0]. When the correct selections have been made, press [#] to save the selections in memory and return to the program mode where another section can be selected.

HEX DATA PROGRAMMING

Certain programming entries may require the entry of data in HEX format. HEX numbering uses the digits 0 thru 9 and the letters A thru F.

The letters A thru F are represented by the number keys 1 thru 6. To enter data in HEX format, first press the [*] key. The Ready light will Flash. Enter the HEX value then press the [*] key again to return to the normal entry mode. The Ready light will stop flashing.

To Enter 'A' - Enter [*1*]
To Enter 'B' - Enter [*2*]
To Enter 'C' - Enter [*3*]
To Enter 'D' - Enter [*4*]
To Enter 'E' - Enter [*5*]
To Enter 'F' - Enter [*6*]

Enter "*" BEFORE and AFTER each digit EXCEPT for the last digit you enter in each section.

The following pages give a complete description of each programming section and the final section is a Programming worksheet where you can record all entries for future reference.

◆

PROGRAMMING SECTIONS - DESCRIPTIONS

[01] 1ST PHONE NUMBER (Communicator)
This is the first telephone number that the Communicator will dial. See section [25] - Communicator Call Direction Options.

After entering section [01], enter the telephone number the same way you would dial it on a touchtone telephone. Press [#] after the last digit to complete the telephone number programming.

A second dial tone search, as required in a PBX system, can be added by programming a HEX 'D' between the digits in the phone number where it is required. To enter HEX 'D', press [*] then [4] then [*].

Instead of a dial tone search, a pause of 4, or 8 seconds can be inserted between digits in the telephone number.

Enter [*3*] for a 4 second pause (HEX 'C')
Enter [*5*] for an 8 second pause (HEX 'E')

The total number of digits, including dial tone searches and pauses must not exceed 17. Remember, press [#] to complete entry of the telephone number.

Enter two digits to program another section.

[02] 1ST ACCOUNT CODE (Communicator)
The 1st Account Code is always transmitted to the 1st telephone number to identify the customer. Enter a 4 digit number. If the HEX digits A to F are required, remember to enter "*" before and "*" after the digit entry.

Where a zero digit is required in the account code, enter HEX 'A' ([*1*]) to transmit 10 pulses which will be interpreted as a zero by the monitoring station receiver.

If a three digit code is required, as in 3/1 formats, enter [0] as the LAST digit. The [0] represents a null digit....no pulses transmitted.

[03] 2ND PHONE NUMBER (Communicator)
This is the second telephone number to which the communicator will dial. See [01] for programming instructions.

[04] 2ND ACCOUNT CODE (Communicator)
The second account code is always transmitted to the 2nd telephone number. See [02] for programming instructions.

REPORTING CODES [05] TO [10]
These sections are used to program the communicator reporting codes. A reporting code is transmitted along with the account code with each transmission. If the reporting codes are not programmed, no transmission will be sent when an event takes place. (i.e. Alarm, Restoral, Opening/Closing, Trouble, etc.) To prevent a transmission from being sent for any event in the following sections, leave it unprogrammed or enter [00] as the reporting code.

Section [05] and [06] each have 6 reporting codes. Sections [07], [08] and [10] each have 7 reporting codes while section [09] has 8 reporting codes. Once a section is entered the system expects a series of two digit numbers to be entered. The keypad beeps twice and the Armed light flashes after each two digit entry. After the last two digit number is entered, programming of the current section is complete. The keypad gives a series of beeps, the Ready light goes OFF and the Armed light goes ON. The keypad is then ready to accept the next section number for programming.

When changing reporting codes in a section, you can scroll to the code you wish to change by pressing the 'F' key. Only codes actually changed will be altered in the EEPROM. Press [#] to exit from the programming sequence.

[05] ZONE ALARM REPORTING CODES
Once section [05] is entered, the panel expects 6 two digit numbers for the Alarm Reporting Codes for zones 1 to 6. These codes are used by the communicator when there has been an Alarm on zones 1 to 6.

Listed below are several programming examples and the resulting transmission using different formats for the reporting codes. Obtaining different formats requires entering data in the Account Code section, [02] or [04], the Reporting Code sections, [05] to [10] and the Communicator Format section [23].

3/1 FORMAT - NON-EXTENDED REPORTING
REQUIRES :
- 3 digit Account Code in sections [02] or [04]
  i.e. enter 1230 for account code 123
- Format Code [0],[1],[2],[3],[4] depending on receiver type in section [23]
- Single line digit Alarm Reporting Code section [05]
  i.e. enter [30] for single digit code 3 (0=no pulses)
- TRANSMISSION SENT : 123 3

[05] ZONE ALARM REPORTING CODES (cont'd)
4/2 FORMAT - NON-EXTENDED REPORTING
REQUIRES :
- 4 digit Account Code in sections [02] or [04]
  i.e. enter [1234] for Account Code 1234
- Format Code [0],[1],[2],[3],[4] depending on receiver type in section [23]
- Two digit Alarm Reporting Code in section [05]
  i.e. enter [31] for two digit code 31

TRANSMISSION SENT : 1234 31

3/1 FORMAT - EXTENDED REPORTING
REQUIRES :
- 3 digit Account Code in section [02] or [04]
  i.e. enter 1230 for Account Code 123
- Format Code [8],[9],[A],[B],[C] depending on receiver type in section [23]
- Two digit Alarm Reporting Code in section [05]
  i.e. enter [31] for two digit code 31

TRANSMISSION SENT : 1st round 123 3
2nd round 333 1

If a transmission is not wanted for a particular reporting code, then enter '00' or 'FF' to disable that reporting code.

[06] ZONE RESTORAL REPORTING CODES
These reporting codes are used by the communicator to transmit zone restorals for zones 1 thru 6. Use instructions in section [05] above as a guide for programming.

[07] CLOSING (ARMING) REPORTING CODES
PARTIAL CLOSING REPORTING CODE
Reporting codes 1 to 6 are used to identify Closings for Access Codes 1 to 6. If Partial closing is identified in section [14] then the Partial Closing code will be transmitted when the system is closed with one or more zones Bypassed.

[07] CLOSING REPORTING CODES (cont'd)

When transmitting in 4/2,3/1 or any other of the extended formats, see section [05], the 6 closing codes are programmed as follows.

[C1],[C2],[C3],[C4],[C5],[C6] - Where the first digit HEX 'C' represents a closing signal and the second digit represents the User Access Code which was used to Arm the system. (HEX 'C' could be any other number depending on what is used at the monitoring station)

The Closing Code transmission takes place after the Exit Delay time. Therefore, if the system is Armed and Disarmed before the expiry of the Exit Time, no closing transmission will take place.

The Partial Closing Code, if used, is transmitted in tandem with the regular Closing Code to identify the closing as a Partial Closing.

When the system has been Armed using the Quick-Arm, command, [*],[0] or, using the Auto-Arm feature, User Code # 1 will be transmitted.

[08] OPENING (DISARMING) REPORTING CODES AFTER ALARM REPORTING CODE

The 6 Reporting Codes correspond to the 6 User access Codes. When the system is Disarmed, using one of the Access Codes, the corresponding Reporting Code in this section is transmitted.

See section [07] for examples of Reporting Code programming.

If the After Alarm Code is programmed, that code will be transmitted to the monitoring station on Opening if an Alarm occurred during the previous Armed period. This feature is useful for installations where Openings and Closings are not reported normally but it is desired to have a report to the monitoring station on Opening if an Alarm did occur during the previous Armed period. This feature allows the monitoring station to know when the user is on the premises and available to receive a report about Alarms that occurred while the system was closed.

[09] PRIORITY ALARMS & RESTORALS

These Reporting codes are used by the communicator to transmit the following list of Troubles/Alarms and Restorals. See section [05] as a guide to programming.

- Fire loop Trouble
- Keypad [P]anic Alarm
- Keypad [F]ire Alarm
- Keypad [E]mergency Alarm
- Fire loop Trouble Restore
- Keypad [P]anic Restore
- Keypad [F]ire Restore
- Keypad [E]mergency Restore

Since multiple zones can be programmed as Fire zones, Fire loop Trouble transmission takes place when any ONE Fire zone has a Trouble (open circuit), and the Restoral is only transmitted when ALL Fire loops are clear of Troubles.

Transmission for operation of the 'F', 'E' and 'P' keys will only take place if the appropriate sections in [09] are programmed with a Reporting Code.

[10] MAINTENANCE ALARMS & RESTORALS

These Reporting Codes are used by the communicator to transmit the following list of Alarms and Restorals. See section [05] as a guide to programming.

- Low Battery Alarm
- AC Failure Alarm
- Fuse Failure Alarm
- Low Battery Restore
- AC Fail Restore
- Fuse Failure Restore
- Automatic Test Code

For Automatic Test Code Reporting, the time between reports (in days) must be entered in section [17] and the time of day for the report must be entered in section [19].

[11] ZONE DEFINITIONS

As in the Reporting Codes sections, once this section is entered, 6 two digit numbers are required. Each two digit number entered defines how a zone will operate.

DIGIT # 1

The first digit determines whether the zone will cause a Silent Alarm or an Audible Alarm and whether the zone response will be Fast or Slow. Loop response time can be programmed in section [17] and can be set from 10 msec. to 990 msec. The Facory Default loop response time is 500 msec. If set at Fast, the loop response time is 10 msec and, if set at Slow, the loop response time is 500 msec or whatever time is set in section [17]. All loops will have the same response as set in section [17] except for loops set as type [7]. (described below under digit # 2)

[0] = SLOW & AUDIBLE
[1] = SLOW & SILENT
[2] = FAST & AUDIBLE
[3] = FAST & SILENT

DIGIT #2

Digit # 2 determines the Zone Type, [0] thru [8] as described below.

[0] = STANDARD DELAY LOOP - This loop has an Entry and Exit Delay and is normally used for Entry/Exit doors. The Exit Delay starts as soon as the panel is Armed. The loop may be Opened and Closed during the Delay Time without causing an Alarm. After the Exit Delay Time has expired, Opening the loop will start the Entry Delay Timer. During the Entry Delay Time, the keypad buzzer will sound steadily to advise the user that the system should be Disarmed. If the panel is Disarmed before the Entry Time expires, no Alarm will be generated.

The Default times for this type of loop are a 30 second Entry Delay and a 45 second Exit Delay. The Entry and Exit Delays may be independently programmed in section [17] for periods from 1 second to 99 seconds. All loops programmed as type [0] will have the Entry and Exit delays as programmed in section [17] or the default times if section [17] is not programmed.

[1] = INSTANT LOOP - The instant loop is normally used for door and window contacts. This loop has the standard Exit delay but is instant when opened after the Exit Delay expires. The Exit Delay will be the default time of 45 seconds or the time as established in programming section [17].

[2] = INTERIOR LOOP - This loop is normally used with interior motion detectors. This loop has the standard Exit Delay time. The loop also has the standard Entry Delay time provided that a Delay loop has been tripped first. If the premises are entered without coming through a normal delay entrance, and a type [2] loop is tripped, an immediate Alarm will be generated.

[3] = INTERIOR HOME/AWAY LOOP - This loop operates the same as the type [2] loop with the following exception. If the system is armed and the delay loop is NOT tripped during the Exit Delay time, the type [3] loop will be BYPASSED

[4] = 24 HR. BELL LOOP - This type of loop is active at all times and will create an Alarm if the panel is Armed or Disarmed. This loop will always activate the Bell/Siren output.

[5] = 24 HR BELL/BUZZER - Operates as the Type [4] except the Bell/Siren output is activated only when the panel is Armed and only the keypad buzzer is activated while the panel is Disarmed.

[6] = 24 HR BUZZER - Operates as the Type [4] except only the Buzzer will be activated in the Armed or Disarmed mode.

[7] = AUX. DELAY LOOP - This loop operates as the Type [0] loop except the Entry/Exit times can be independently set in section [18]. This loop type is useful when a loop with an Entry and/or Exit time is required that is different from the Standard times as established for Type [0] zones in section [17].

[8] = FIRE LOOP - Any number of zones from 0 to 6 may be programmed as a Fire loop. A Fire loop is a Supervised (N.O. alarm initiating contacts), end-of-line resistor circuit designed to accept Latching four-wire smoke detectors.. See the Fire circuit installation drawing.

On Alarm, Fire loop shorted, the Bell/Siren will pulse to indicate that a Fire loop has been activated. Transmission by the Digital Communicator is delayed 30 seconds. If the alarm is acknowledged, by pressing the [#] key, the alarm will silence and, if the 30 second delay has NOT expired, the transmission will be aborted. If the Alarm is NOT acknowledged within the 30 second period, transmission will proceed and cannot be aborted. If the Alarm has been silenced and ALL smoke detectors are not restored to normal, the Alarm will resound after 90 seconds and 30 seconds after that, the communicator will transmit. If the Alarm resounds, it may again be silenced using the [#] key and the communicator transmission will be aborted if the Alarm is silenced within the 30 second transmission delay period.

To restore the Smoke Detectors to normal, clear all products of combustion from the detectors and perform a reset by pressing the [*] then [7] keys. See section [24] for programming the PGM terminal for smoke detector reset. Pressing [*],[7] will remove power from the smoke detectors for 5 seconds and if the detectors are clear of smoke they will return to normal. If the detectors still have smoke in them, the Alarm will resound and the sequence described above will repeat.

[8] = FIRE LOOP (cont'd)
For an Open on any loop programmed for Fire, the Trouble light will come on and the keypad sounder will beep every 10 seconds. The keypad trouble buzzer will sound regardless of whether the panel is Armed or Disarmed. The communicator will transmit the Trouble condition if programmed in section [09]. The audible Trouble may be silenced by pressing the [#] key. The trouble light will only go out when ALL Fire loop troubles are cleared. To determine which zone has the Trouble, press [*],[2] to view the trouble.

DIGIT #2 SUMMARY :

[0] = Standard Delay Loop
[1] = Instant Loop
[2] = Interior Loop
[3] = Interior...Home/Away Loop
[4] = 24 Hr.....Bell Loop
[5] = 24 Hr.....Bell/Buzzer Loop
[6] = 24 Hr.....Buzzer Loop
[7] = Aux. Delay Loop
[8] = Fire Loop

[12] 1ST SYSTEM OPTION CODE

The 1st System Option Code is set using the zone lights as shown in the table below. Once section [12] is entered, the 6 zone lights will indicate the status of each option. Press a number key corresponding to the zone light number to turn the option ON or OFF. Pressing key [0] will turn all the zone lights OFF and the options will be set as shown against "Light Off".

Zone Light

[1] ON = Communicator Disabled
*OFF = Communicator Enabled
[2] ON = Transmission per 24 Hr. Period
*OFF = Transmission per Armed Period
[3] *ON = Alarm Display While Armed
OFF= No Alarm Display While Armed
[4] *ON = DTMF Dialing**
OFF = Pulse Dialing
[5] ON = N.C Loops (Except Fire Loops)
*OFF = End-of-Line Resistor Loops
[6] *ON = Keypad [P]anic Audible
OFF = Keypad [P]anic Silent

* Factory Default Settings
** DTMF dialing will default to PULSE dialing after 2 unsuccessfull DTMF dialing attempts.

[13] 2ND SYSTEM OPTION CODE

Use the same method of programming as section [12]

[1] *ON = Call 1st Phone number Only
OFF = Call 1st Phone Number with Backup to 2nd Phone Number
[2] ON = Master Not User Changeable
*OFF = Master Code User Changeable
[3] ON = Bell Squawk Enabled**
*OFF = Bell Squawk Disabled
[4] ON = PC16OUT Module Enabled
*OFF = PC16OUT Module Disabled
[5] ON = 6th Code is Maid's Code (One-Time Use)
*OFF = 6th Code is Normal User Code
[6] ON = 1400 Hz. Handshake for Radionics Formats # 3,4,B & C
*OFF = 2300 Hz. Handshake for Radionics Formats # 3,4,B & C

* Factory Default Settings
** With Bell Squawk enabled, the Bell/Siren will sound one short burst on Arming and two short bursts on Disarming. When the panel is set for Auto-Arming, and Bell Squawk is Enabled, the Bell/Siren will sound 4 short bursts every 10 seconds for one minute before the panel Auto-Arms.

[14] 3RD SYSTEM OPTION CODE
Use the same programming method as section [12]

[1] ON = User Code Required for Bypass
*OFF = User Code Not Required for Bypass
[2] ON = Enable [*],[4] Downloading Call Feature
*OFF = Disable [*],[4] Call Feature**
[3] ON = Periodic Downloading***
*OFF = Periodic Test Transmission
[4] ON = [*],[4] Requires a User Code
*OFF = [*],[4] Does Not Require User Code
[5] *ON = [P]anic key Has Keypad Audible Feedback
OFF = [P]anic key No Keypad Audible Feedback
[6] ON = Partial Closings Identified****
*OFF = Partial Closings Not Identified

* Factory Default Settings

** The [*],[4] Command can be enabled so that using this command the User or on-site Installer can initiate a Call to the Downloading Computer.

*** The panel can be enabled to periodically call the Downloading Computer. The cycle time (in days) for the call is set in section [17] and the time of day for the call is set in section [19]. The automatic call to the Downloading Computer can be used to Update the panel program and /or to Upload status information from the panel.

**** If Partial Closings are enabled as identified, then a Partial Closing Code should be entered in section [08]

[15] COMMUNICATION VARIABLES
Once this section is entered, two 2 digit numbers are expected. The first two digit number defines the number of attempts (Alarm & Restoral pairs) per zone that the Communicator will make before it shuts down for that zone.(Swinger Shutdown) The number of attempts is for the period as defined in the 1st System Option Code Section, zone light # 2. The number of attempts may be programmed from '00' to '99' where '00' means the communicator will never shut down.

The second two digit number defines the delay before transmission. This Delay is for zones defined as Burglary zones only. The time may be programmed from '00' to '99' seconds where '00' means no delay.

[16] ZONE BYPASS MASK
Use the same method of programming as used in section [12]. If the zone light is ON, the zone can be Bypassed, if OFF, it cannot be Bypassed using the [*],[1] command.

[17] SYSTEM TIMES
There are 6 System Times which can be programmed in this section and each entry requires a two digit number.

[1] Entry Delay Time (01 to 99 seconds) - This entry determines the STANDARD Entry Delay Time. The Factory Default Entry Time is 30 seconds. See section [11] for zone definitions.

[2] Exit Delay Time (01 to 99 seconds) - This entry determines the STANDARD Exit Delay Time. The Factory Default Exit Time is 45 seconds. For Zone Definitions see section [11].

[3] Bell Cut-Off Time (01 to 99 minutes) - This entry determines the time the Bell/Siren will sound before automatically turning off. The Factory Default Bell Cut-Off Time is 4 minutes.

[4] AC Fail Transmission Delay (01 to 99 minutes) - This entry determines the time before the communicator will transmit an AC failure report. The Factory Default is 1 minute.

[5] Normal Loop Response Time ({01 to 99} x 10 msec) - This entry determines the 'SLOW' loop response time and provides times from 10 msec to 990 msec. The Factory Default 'SLOW' loop response time is 500 msec. NOTE : The 'FAST' loop response time is fixed at 10 msec. See section [11] Zone Definitions.

[6] Test Transmission Cycle Time (01 to 99 Days) - This entry determines the frequency, in days, of the Test Transmission either via the Communicator or by calling the Downloading Computer. See section [14] 3rd System Option Code, Light # 3. The factory default value is 1 day.

[18] AUX DELAY LOOP TIMES
This section requires 2 three digit entries to establish the Auxiliary Entry and Exit Delay times. The Entry default time is 45 seconds and may be changed to any time from '000' seconds to '255' seconds. The Exit default time is 60 seconds and may be changed to any time from '000' seconds to '255' seconds.

For the Aux. delay times to be effective on a loop, the loop must be set as type [7] in section [11] Zone Definitions.

[19] SYSTEM CLOCK TIMES
This section requires 2 four digit entries to set the Automatic Arming Time of Day and the Test Transmission Time of Day. Factory default for both these times is 'FFFF', that is, NO Automatic Arming or Test Transmission will take place even if those functions are enabled. VALID times must be entered in this section before these features will function.

The System Clock is in Military time. Two digits from '00' to '23' are entered for the hour of the day and two digits from '00 to '59' are entered for the minute of the hour.

Test Transmission or Periodic Downloading is selected in section [14] 3rd System Option Code , Light 3 and the cycle time time in days, for the Test Transmission or Periodic Downloading is set in section [17] System Times. For a Test Transmission using the Communicator, an Automatic Test Code should be entered in section [10]. For Periodic Downloading or a Test Transmission using the communicator, a VALID Transmission Time must be entered in section [19]

To enable Automatic Arming, use the [*],[6],[Master Code] command item [5] and insert a VALID Time in this section. If an invalid time such as 99:99 for HH:MM is enterd, Automatic Arming will not be available to the end-user via the [*],[6] command.

NOTE : If the System Clock is not set at a VALID time and either Auto-Arm time of day or Test Transmission time of day has a VALID time entered, then a Loss of Time Trouble for the System Clock will be initiated. Enter [*],[2], to view the trouble. Light 6 will be on. If neither the Auto-Arm or Test Transmission has a VALID time , then the setting of the System Clock does not matter.

[20] NEW INSTALLER'S CODE
[21] NEW MASTER CODE
[22] 2ND MASTER CODE
Enter a new 4 digit code in each of the above once the section number has been entered, Only use digits 0 thru 9 as code numbers. Do not press the [*] or [#] keys. If an error is made entering the code, complete entry of the 4 digits then enter the section number again to enter the correct code. Do not press [*] or [#] while entering any of these codes and make all the codes different.

[23] COMMUNICATION FORMATS

This section sets the type of format which will be sent to each of the two telephone numbers programmed in section [01] and [03]. For each telphone number, enter one digit from the list below. See HEX data programming section for digits 'A' thru 'F'. The selection for each phone number is determined by the type of receiver being called. Enter the Format number for the 1st telephone number first. It is necessary to program both telephone format numbers even if the first phone number is the only one being used. Select from the following options.

[0] SILENT KNIGHT/ADEMCO SLOW, 10 BPS (1400 Hz. HANDSHAKE), 3/1, 3/2, 4/1, AND 4/2 NON-EXTENDED FORMAT

[1] SESCOA, FRANKLIN,DCI, VERTEX, 20 BPS (2300 Hz. HANDSHAKE), 3/1, 3/2, 4/1 AND 4/2 NON-EXTENDED FORMATS

[2] SILENT KNIGHT FAST, 20 BPS (1400 Hz, HANDSHAKE), 3/1, 3/2, 4/1 AND 4/2 NON-EXTENDED FORMAT.

[3] RADIONICS (2300/1400 Hz. HANDSHAKE*), 3/1, 4/2 NON-EXTENDED FORMAT

[4] RADIONICS (2300/1400 Hz. HANDSHAKE*), 3/1, 4/2 NON-EXTENDED WITH PARITY FORMAT

[5] DO NOT USE
[6] DO NOT USE
[7] DO NOT USE

[8] SILENT KNIGHT, ADEMCO SLOW, 10BPS (1400 Hz. HANDSHAKE) 3/1 EXTENDED FORMAT

[9] SESCOA, FRANKLIN,DCI,VERTEX, 20 BPS (2300 Hz. HANDSHAKE), 3/1 EXTENDED FORMAT

[A] SILENT KNIGHT FAST, 20 BPS (1400 Hz. HANDSHAKE) 3/1 EXTENDED FORMAT.

[B] RADIONICS (2300/1400 Hz. HANDSHAKE*), 3/1 EXTENDED FORMAT.

[C] RADIONICS (2300/1400 Hz. HANDSHAKE*), 3/1 EXTENDED WITH PARITY FORMAT.

[D] DO NOT USE
[E] DO NOT USE
[F] DO NOT USE

* SEE SECTION [13] FOR RADIONICS HANDSHAKE OPTION.

10 BPS AND 20 BPS FORMATS

10 BPS is the standard slow format used on Silent Knight/Ademco receivers. DATA =1900 Hz. KISSOFF=1400 Hz. and SPEED = 10 baud.

20 BPS is the standard fast format used on the DCI/Franklin/Sescoa and Vertex receivers. DATA = 1800 Hz. - KISSOFF = 2300 Hz. and SPEED = 20 baud.

RADIONICS FORMAT

For conventional Radionics 3/1 format, the communications mode should be set to either Radionics rounds [B] or Radionics parity [C]. The extended version of the Radionics format is normally used. The following guidelines are provided to help in configuring the PC1500 for Radionics format.

1. The Customer Account Code must be only 3 digits with a zero making up the 4th digit. (i.e. Enter 1230 to program for an account code of 123)

2. The Zone Alarm Reporting Codes must all be single digit numerical codes with with no extended 2nd round being sent. (i.e. Zone 1=10, Zone 2 = 20,.....Zone 6 = 60) The zero in the 2nd digit position tells the PC1500 not to send an extended round.

3. All other non-alarm reporting codes must be set up to send an extended 2nd round. The 1st digit of the reporting code is used to identify the event while the 2nd or extended digit is used to associate the event with a particular item.

(i.e. A reporting code of E3 means restore zone 3.
E for restore and 3 for zone 3)

4. The following is a list of 1st digit identifiers that should be used with the Radionics format.

- RESTORALS "E"
  EXAMPLE "E3" = RESTORE ZONE 3
- OPENINGS "B"
  EXAMPLE "B2" = OPENING BY USER 2
- CLOSINGS "C"
  EXAMPLE "C4" = CLOSING BY USER 4
- TROUBLES "F"
  EXAMPLE "F5" = TROUBLE FROM SOURCE 5
- MISCELLANEOUS "D"
  EXAMPLE "D1" = PARTIAL CLOSING

[24] PROGRAMMABLE OUTPUT OPTIONS (PGM TERMINAL)

The PGM output can be programmed in this section to operate in response to various panel operations. The ouput pulse is a short to the negative power rail and is 5 seconds long.

[01] GROUND START PULSE - This option provides a 5 second output pulse before dialing begins to obtain the dial tone on Ground Start telephone equipment.

[02] UTILITY OUTPUT, NO ACCESS CODE - When activated by entering the [*],[7], the PGM output will go low for 5 seconds.

[03] UTILITY OUTPUT, ANY ACCESS CODE - The same as [02] above except the command is [*],[7],[Any Valid User Access Code]

[04] 5 SEC. RESET PULSE - When this option is selected, the PGM output is normally LOW. That is, it is just the reverse of all other options which are normally high and go low when activated. This option is normally used as the negative return for power to 4-wire smoke detectors. (+ comes from the Aux. + terminal) To activate this output (reset smoke detectors) enter the [*],[7] command. The PGM terminal will go high (open circuit) and thus remove power from the devices connected.

[05] COURTESY PULSE - This option provides an output which follows the Entry and Exit times. It can be used to turn on a courtesy light near the Exit for the duration of the Entry/Exit times.

[06] KEYPAD BUZZER FOLLOW MODE - The PGM output will go low as long as the keypad buzzer is ON.

[07] SYSTEM STATUS (ARMED/DISARMED) - The PGM output switches to and remains at ground as long as the panel is Armed. The output goes high (open) while the panel is Disarmed.

[24] PROGRAMMABLE OUTPUT OPTIONS (cont'd)

[08] STROBE OUPUT (LATCHED ALARM OUTPUT) - The PGM switches to ground on an Alarm and remains low until the panel is Disarmed. It can be used to indicate that an Alarm has occurred before entering the premises.

[09] FAILURE TO COMMUNICATE - The PGM output switches to ground if the system fails to communicate after 8 attempts The output remains low until a successful communication takes place or until Trouble # 5 is cleared from the keypad. This option can be used to tie two systems together so that if one fails to communicate the other system will report the failure.

[25] COMMUNICATOR CALL DIRECTION This section requires four single digit entries using digits 1 to 3 only. This section defines how the communicator will call the telphone numbers programmed in sections [01] and [03].

ZONE ALARMS & RESTORALS
ACCESS CODES OPENINGS & CLOSINGS
PRIORITY ALARMS & RESTORALS
MAINTENANCE ALARMS & RESTORALS

Enter ONE digit for each of the above categories from the list below. Factory Default=1 for all 4 code groups.

[1] Call 1st Phone Number and Backup to the 2nd Phone Number. (The 2nd phone number becomes the 1st phone number only when section [13] light 1 is ON)

[2] Call the 2nd Phone Number Only

[3] Always Call Both Phone Numbers.

[26] DOWNLOADING TELEPHONE NUMBER
This telephone number is used by the panel to call the Downloading Computer when a request to call is made by entering [*],[4] or for an Auto-Download. See section [13] 3rd System Option Code lights 3 & 4. See section [01], 1st Phone Number for instructions on programming this telephone number.

[27] DOWNLOADING ACCESS CODE
This 4 digit code allows the panel to confirm that it is communicating with a valid Downloading Computer. Enter 4 digits using the numbers 0 thru 9 only. The Factory Default code is [1515].

[28] PANEL IDENTIFICATION CODE
This 4 digit code allows the Downloading Computer to confirm that it is talking to a valid control panel. Enter 4 digits using the numbers o thru 9 only. The Factory Default code is [1501]. .

[29] reserved for future use

[30] RESET TO FACTORY DEFAULT (software)
Entering [30] will perform a Software Reset to the Factory Default values. Once this command is entered, the keypad buzzer will beep several times and at the end of the reset period the buzzer will beep several times.

NOTE : HARDWARE RESET
If the Installer's code is forgotten and a software resct cannot be performed, the panel can be reset to the Factory Default values with the following method.

1. Remove all power, AC & Battery, from the panel.
2. Short the pads on the panel labelled EEPROM RESET
3. While maintaing the short, power up the panel for at least 5 seconds then power down.
4. Remove the short between the EEPROM RESET pads. DO NOT remove the short while the panel is powered up.
5. Power the panel up. It will now be reset to the Factory Default values.

◆◆

LIMITED WARRANTY

Digital Security Controls Ltd. warrants that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, Digital Security Controls Ltd. shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls Ltd. such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

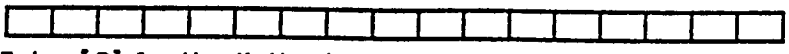
The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties., whether expressed or implied and of all other obligations on the part of Digital Security Controls Ltd.. This warranty contains the entire warranty, Digital Security Controls Ltd. neither assumes, nor authorizes any other person purporting to act act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

In no event shall Digital Security Controls Ltd. be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product.

WARNING : Digital security Controls ltd. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

PROGRAMMING WORK SHEET

[01] 1ST PHONE NUMBER



Enter [0] for the digit 0 in the phone number
Enter [*4*] (HEX D) for additional dial tone detection between phone number digits as in local PBX systems
Enter [#] to end the phone number entry

NOTE : IN SECTION [01] THRU SECTION [10], DO NOT ENTER ANY DATA IN SECTIONS THAT ARE NOT USED.

[02] 1ST CUSTOMER ACCOUNT CODE

Enter [*1*] (HEX A) for digit 0 in the account code
For a 3 digit code, Enter 0 for the 4th digit

[03] 2ND PHONE NUMBER

[04] 2ND CUSTOMER ACCOUNT CODE

[05] ZONE ALARM REPORTING CODES

ZONE 1 ALARM		
ZONE 2 ALARM		
ZONE 3 ALARM		
ZONE 4 ALARM		
ZONE 5 ALARM		
ZONE 6 ALARM		

NOTE : FOR SINGLE DIGIT REPORTING CODES ENTER [0] AS THE 2ND DIGIT

ENTER [*1*] (HEX A) TO TRANSMIT A 0 (A ZERO IS 10 PULSES)

[06] ZONE RESTORAL REPORTING CODES

ZONE 1 RESTORE		
ZONE 2 RESTORE		
ZONE 3 RESTORE		
ZONE 4 RESTORE		
ZONE 5 RESTORE		
ZONE 6 RESTORE		

NOTE : FOR SINGLE DIGIT REPORTING CODES ENTER [0] AS THE 2ND DIGIT

ENTER [*1*] (HEX A) TO TRANSMIT A 0 (A ZERO IS 10 PULSES)

[07] CLOSING (ARMING) REPORTING CODES
PARTIAL CLOSING REPORTING CODE

ACCESS CODE 1		
ACCESS CODE 2		
ACCESS CODE 3		
ACCESS CODE 4		
ACCESS CODE 5		
ACCESS CODE 6		
PARTIAL CLOSING CODE		

NOTE : DATA MUST BE ENTERED FOR THE PARTIAL CLOSING CODE IF PARTIAL CLOSINGS ARE IDENTIFIED... SECTION [14] LED 6 ON

[08] OPENING (DISARMING) REPORTING CODES
AFTER ALARM REPORTING CODE

ACCESS CODE 1		
ACCESS CODE 2		
ACCESS CODE 3		
ACCESS CODE 4		
ACCESS CODE 5		
ACCESS CODE 6		
AFTER ALARM CODE		

NOTE : THE "AFTER ALARM" CODE IS SENT ON DISARMING IF AN ALARM OCCURED DURING THE PREVIOUS ARMED PERIOD.

[09] PRIORITY ALARMS & RESTORALS

FIRE LOOP TROUBLE		
KEYPAD [P]ANIC ALARM		
KEYPAD [F]IRE ALARM		
KEYPAD [E]MERGENCY ALARM		
FIRE LOOP TROUBLE RESTORE		
KEYPAD [P]ANIC RESTORE		
KEYPAD [F]IRE RESTORE		
KEYPAD [E]MERGENCY RESTORE		

[10] MAINTENANCE ALARMS & RESTORALS

LOW BATTERY ALARM		
AC FAIL ALARM		
FUSE FAILURE ALARM		
LOW BATTERY RESTORE		
AC FAIL RESTORE		
FUSE FAILURE RESTORE		
AUTOMATIC TEST CODE		

NOTE : FOR AUTOMATIC TEST CODE REPORTING TIME BETWEEN REPORTS (IN DAYS) MUST BE ENTERED IN SECTION [17] AND TIME OF DAY FOR THE REPORT MUST BE ENTERED IN SECTION [19]

[11] ZONE DEFINITIONS

ZONE 1		
ZONE 2		
ZONE 3		
ZONE 4		
ZONE 5		
ZONE 6		

1ST DIGIT
0 = SLOW, AUDIBLE
1 = SLOW, SILENT
2 = FAST, AUDIBLE
3 = FAST , SILENT

***NOTE** : Any or all zones may be programmed as Fire zones

2ND DIGIT
0 = STANDARD DELAY
1 = INSTANT
2 = INTERIOR
3 = INTERIOR...HOME/AWAY
4 = 24 HR...BELL
5 = 24 HR...BELL/BUZZER
6 = 24 HR...BUZZER
7 = AUX. DELAY (USES AUX. ENTRY/EXIT TIMES)
*8 = FIRE

FACTORY DEFAULT	
0	0
0	1
0	1
0	2
0	2
0	8

[12] 1ST SYSTEM OPTION CODE

	ZONE LIGHT ON	ZONE LIGHT OFF	FACTORY DEFAULT
ZONE LIGHT 1	COMMUNICATOR DISABLED	COMMUNICATOR ENABLED	OFF
ZONE LIGHT 2	TX LIMIT TO 24 Hr. PERIOD	TX LIMIT TO ARMED PERIOD	OFF
ZONE LIGHT 3	ALARM DISPLAY WHILE ARMED	NO ALARM DISPLAY /ARMED	ON
ZONE LIGHT 4	DTMF DIALING	PULSE DIALING	ON
ZONE LIGHT 5	N.C LOOPS (EXCEPT FIRE)	EOL RESISTOR LOOPS	OFF
ZONE LIGHT 6	KEYPAD [P]ANIC AUDIBLE (BELL)	KEYPAD [P]ANIC SILENT(BELL)	ON

[13] 2ND SYSTEM OPTION CODE

	ZONE LIGHT ON	ZONE LIGHT OFF	FACTORY DEFAULT
ZONE LIGHT 1	CALL 1ST PHONE ONLY	BACKUP TO 2ND PHONE	ON
ZONE LIGHT 2	MASTER CODE NOT CHANGEABLE	MASTER CODE CHANGEABLE	OFF
ZONE LIGHT 3	BELL SQUAWK ENABLED (1)	BELL SQUAWK DISABLED	OFF
ZONE LIGHT 4	PC16 OUT ENABLED	PC16 OUT DISABLED	OFF
ZONE LIGHT 5	6TH CODE - MAID'S CODE	NORMAL CODE	OFF
ZONE LIGHT 6	1400 Hz. RADIONICS	2300 Hz. RADIONICS	OFF

(1) With Bell Squawk enabled, the Bell/Siren will sound one short burst on Arming and two short bursts on Disarming. If Auto-Arm is enabled the Bell/Siren will sound 1 short burst every 10 seconds for 1 min. before the panel Auto-Arms.

[14] 3RD SYSTEM OPTION CODE

	ZONE LIGHT ON	ZONE LIGHT OFF	FACTORY DEFAULT
ZONE LIGHT 1	USER CODE REQ'D FOR SHUNT	USER CODE NOT REQUIRED	OFF
ZONE LIGHT 2	[*],[4] ENABLED	[*],[4] DISABLED	OFF
ZONE LIGHT 3	PERIODIC DOWNLOADING	PERIODIC TEST TRANSMIT	OFF
ZONE LIGHT 4	[*],[4] [USER CODE]	[*],[4] [NO USER CODE]	OFF
ZONE LIGHT 5	KEYPAD [P]ANIC AUDIBLE(BUZZER)	KEYPAD [P]ANIC SILENT(BUZZER)	ON
ZONE LIGHT 6	PARTIAL CLOSING IDENTIFIED	NOT IDENTIFIED	OFF

[15] COMMUNICATION VARIABLES

FACTORY DEFAULT	
0	3

NUMBER OF TRANSMISSIONS BEFORE COMMUNICATOR SHUTDOWN | | |

ENTER DIGITS FROM 00 TO 99 FOR NUMBER OF ATTEMPTS PER ZONE DURING THE PERIOD AS DEFINED IN THE 1ST SYSTEM OPTION CODE , ZONE LIGHT 2.

"00" = COMMUNICATOR WILL NOT SHUT DOWN.

FACTORY DEFAULT	
0	0

DELAY BEFORE TRANSMISSION..... | | |

ENTER DIGITS FROM 00 TO 99 - DELAY IN SECONDS

"00" = NO DELAY

TRANSMISSION DELAY AS PROGRAMMED HERE IS FOR BURGLARY ZONES ONLY.

[16] ZONE BYPASS MASK

		FACTORY DEFAULT
ZONE LIGHT 1		ON
ZONE LIGHT 2		ON
ZONE LIGHT 3		ON
ZONE LIGHT 4		ON
ZONE LIGHT 5		ON
ZONE LIGHT 6		ON

NOTE: IF THE ZONE LIGHT IS "ON" THE ZONE CAN BE BYPASSED USING THE [*],[1] COMMAND

IF A ZONE IS DEFINED AS A FIRE ZONE, IT CANNOT BE BYPASSED.

[17] SYSTEM TIMES

		FACTORY DEFAULT
ENTRY DELAY TIME (SECONDS)		3 0
EXIT DELAY TIME (SECONDS)		4 5
BELL CUT-OFF TIME (MINUTES)		0 4
AC FAIL TRANSMISSION DELAY (MINUTES)		0 1
NORMAL LOOP RESPONSE TIME (X 10 MSEC)		5 0
TEST TRANSMISSION CYCLE TIME (DAYS)		0 1

NOTE
VALID ENTRIES ARE 01 TO 99
DO NOT ENTER 00

[18] AUX DELAY LOOP TIMES

		FACTORY DEFAULT
ENTRY TIME (SECONDS)		0 4 5
EXIT TIME (SECONDS)		0 6 0

NOTE
VALID ENTRIES ARE 001 TO 255

[19] SYSTEM CLOCK TIMES

		FACTORY DEFAULT
AUTOMATIC ARMING (TIME OF DAY)		F F F F
TEST TRANSMISSION (TIME OF DAY)		F F F F

ENTER 4 DIGITS - 00 TO 23 HOURS
00 TO 59 MINUTES

IF NOT USED LEAVE AT FACTORY DEFAULT
'FFFF' = NOT PROGRAMMED

					FACTORY DEFAULT
[20] NEW INSTALLER'S CODE					1 5 0 0
[21] NEW MASTER CODE					1 2 3 4
[22] 2ND MASTER CODE					A A A A

ENTER 4 DIGITS FROM 0 TO 9
DO NOT ENTER [*] OR [#]

[23] COMMUNICATION FORMAT OPTIONS

			FACTORY DEFAULT
1ST TELEPHONE NUMBER		IT IS NECESSARY TO PROGRAM THE	1
2ND TELEPHONE NUMBER		FORMAT FOR BOTH TELEPHONE NUMBERS	1

ENTER ONE HEX DIGIT FROM [0] TO [F] FOR EACH PHONE NUMBER FROM THE FOLLOWING LIST :

[0] SILENT KNIGHT/ADEMCO SLOW, 10 BPS (1400 Hz. HANDSHAKE) 3/1, 3/2 AND 4/1,4/2 NON-EXTENDED FORMAT

[1] SESCOA, FRANKLIN, DTI, VERTEX, 20 BPS (2300 Hz. HANDSHAKE) 3/1, 3/2 AND 4/1, 4/2 NON-EXTENDED FORMAT

[2] SILENT KNIGHT FAST, 20 BPS (1400 Hz. HANDSHAKE) 3/1,3/2 AND 4/1, 4/2 NON-EXTENDED FORMAT

[3] RADIONICS (2300/1400 Hz. HANDSHAKE*) 3/1, 4/2 NON-EXTENDED FORMAT

[4] RADIONICS (2300 /1400 Hz HANDSHAKE*) 3/1, 4/2 NON-EXTENDED WITH PARITY FORMAT

[5] FOR FUTURE USE [6] FOR FUTURE USE [7] FOR FUTURE USE

[8] SILENT KNIGHT/ADEMCO SLOW, 10 BPS (1400 Hz HANDSHAKE) 3/1 EXTENDED FORMAT

[9] SESCOA, FRANKLIN, DCI, VERTEX, 20 BPS (2300 Hz HANDSHAKE) 3/1 EXTENDED FORMAT

[A] SILENT KNIGHT FAST, 20 BPS (1400 Hz HANDSHAKE) 3/1 EXTENDED FORMAT

[B] RADIONICS (2300/1400 Hz HANDSHAKE*) 3/1 EXTENDED FORMAT

[C] RADIONICS (2300/1400 Hz HANDSHAKE*) 3/1 EXTENDED WITH PARITY FORMAT

[D] FOR FUTURE USE [E] FOR FUTURE USE [F] FOR FUTURE USE

*** SEE SECTION [13] FOR RADIONICS HANDSHAKE OPTION**

[24] PROGRAMMABLE OUTPUT OPTIONS (PGM TERMINAL)

		FACTORY DEFAULT
PROGRAMMABLE OUTPUT		0 4

ENTER TWO DIGITS FROM 01 TO 09 ONLY

[0 1] GROUND START PULSE
[0 2] UTILITY OUTPUT NO ACCESS CODE
[0 3] UTILITY OUTPUT ANY ACCESS CODE
[0 4] 5 SEC. RESET PULSE - [*],[7]
[0 5] COURTESY PULSE (FOLLOWS ENTRY/EXIT TIMES)
[0 6] KEYPAD BUZZER FOLLOW MODE
[0 7] SYSTEM STATUS (ARM/DISARM) OUTPUT
[0 8] STROBE OUTPUT (LATCHED ALARM OUTPUT)
[0 9] FAILURE TO COMMUNICATE OUTPUT

[25] COMMUNICATOR CALL DIRECTION OPTIONS

		FACTORY DEFAULT
ZONE ALARMS AND RESTORALS		1
ACCESS CODES OPENINGS AND CLOSINGS		1
PRIORITY ALARMS AND RESTORALS		1
MAINTENANCE ALARMS AND RESTORALS		1

THIS SECTION MUST BE PROGRAMMED IN TOTAL DO NOT PRESS [*] TO EXIT UNTIL ALL ENTRIES ARE COMPLETED

ENTER [1] CALL 1ST PHONE NUMBER AND BACK UP TO 2ND PHONE NUMBER *
[2] CALL 2ND PHONE NUMBER ONLY
[3] ALWAYS CALL BOTH PHONE NUMBERS
* BECOMES FIRST PHONE NUMBER ONLY WHEN SECTION [13] LIGHT 1 IS ON

[26] DOWNLOADING TELEPHONE NUMBER

THIS TELEPHONE NUMBER IS USED BY THE PANEL TO CALL THE DOWNLOADING COMPUTER EITHER BY THE PERIODIC AUTO-DOWNLOAD OR BY ENTRY OF THE [*],[4] COMMAND.

DOWNLOADING PHONE NUMBER | | | | | | | | | | | | | | | | |

Enter [0] for the digit '0' in the phone number
Enter [*4*] (HEX D) for additional dial tone detection between phone number digits as in local PBX systems
Enter [*] to end the phone number entry

[27] DOWNLOADING ACCESS CODE

THIS CODE ALLOWS THE PANEL TO CONFIRM THAT A VALID DOWNLOADING COMPUTER IS REQUESTING ACCESS TO THE PANEL.

DOWNLOADING ACCESS CODE | | | | |

FACTORY DEFAULT			
1	5	1	5

[28] PANEL IDENTIFICATION CODE

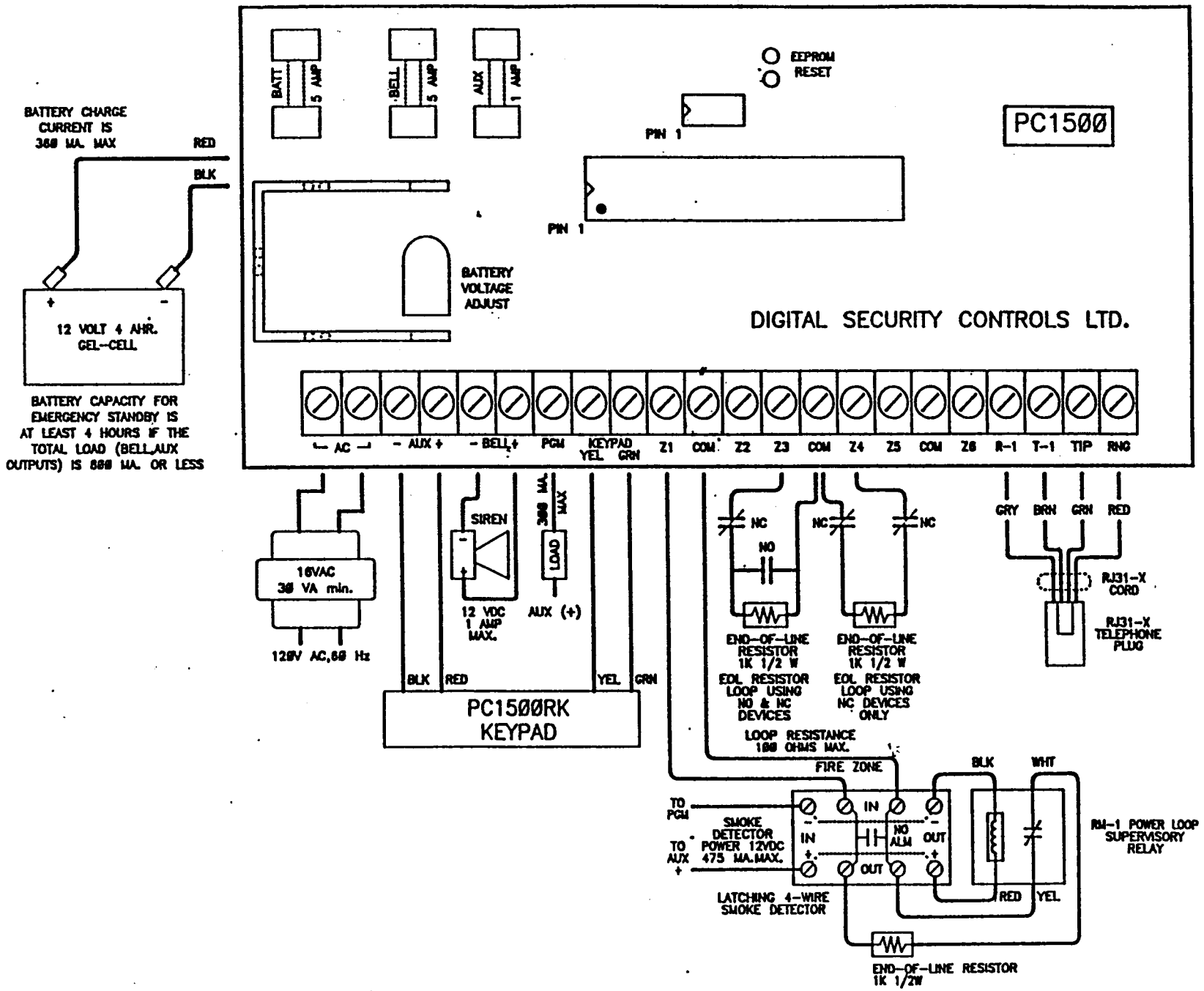
THIS CODE CONFIRMS TO THE DOWNLOADING COMPUTER THAT THE CORRECT PANEL HAS BEEN REACHED.

PANEL IDENTIFICATION CODE | | | | |

FACTORY DEFAULT			
1	5	0	1

[29] RESERVED FOR FUTURE USE

[30] RESET TO FACTORY DEFAULT


BATTERY CHARGE CURRENT IS 350 MA. MAX
RED
BLK
12 VOLT 4 AHR. GEL-CELL
BATTERY CAPACITY FOR EMERGENCY STANDBY IS AT LEAST 4 HOURS IF THE TOTAL LOAD (BELL,AUX OUTPUTS) IS 500 MA. OR LESS
BATT 5 AMP
BELL 5 AMP
AUX 1 AMP
EEPROM RESET
PIN 1
PC1500
PIN 1
BATTERY VOLTAGE ADJUST
DIGITAL SECURITY CONTROLS LTD.
AC
AUX +
BELL +
PGM
KEYPAD YEL GRN
Z1
COM
Z2
Z3
COM
Z4
Z5
COM
Z6
R-1
T-1
TIP
RING
16VAC 30 VA min.
120V AC,60 Hz
SIREN
12 VDC 1 AMP MAX.
350 MA. MAX
LOAD
AUX (+)
BLK
RED
YEL
GRN
PC1500RK KEYPAD
NC
NO
NC
NC
END-OF-LINE RESISTOR 1K 1/2 W
EOL RESISTOR LOOP USING NO & NC DEVICES
END-OF-LINE RESISTOR 1K 1/2 W
EOL RESISTOR LOOP USING NC DEVICES ONLY
LOOP RESISTANCE 100 OHMS MAX.
FIRE ZONE
GRY
BRN
GRN
RED
RJ31-X CORD
RJ31-X TELEPHONE PLUG
BLK
WHT
TO PGM
TO AUX +
SMOKE DETECTOR POWER 12VDC 475 MA.MAX.
IN
IN
OUT
OUT
NO ALM
LATCHING 4-WIRE SMOKE DETECTOR
RED
YEL
RM-1 POWER LOOP SUPERVISORY RELAY
END-OF-LINE RESISTOR 1K 1/2W