

Installation Manual



PC3000

NOTES ON U.L. INSTALLATION

This equipment is U.L. listed in accordance with U.L. standard # 1023 (Household Burglar Alarm System Units) and U.L. standards # 985. (Household Fire Warning Units)

This equipment has the capability of being programmed for operational features that are not allowed for U.L. recognized installations. To stay within the standard for Household applications, the Installer should stay within the following guidelines when configuring the system.

1. ALL components of the system should be U.L. listed for the intended application. Note elsewhere in this manual, recommendations for smoke detectors and battery to be used with this equipment.
2. If this system is configured for "Fire", the installer should refer to NFPA Standards # 74 for details on locating smoke detectors. When the "Fire" feature is enabled, there must be at least one U.L. recognized indoor Fire Alarm Warning Signaling Appliance.
3. This equipment is listed for Local applications only and should NOT be programmed for "Silent Alarm" (section [16] [17], Zone Definitions)
4. Maximum allowed Entry Time = 45 seconds
Maximum allowed Exit Time = 60 seconds
Minimum allowed Bell Cutoff Time = 4 minutes
5. The "Split-Arming" feature is not allowed for U.L. recognized installations. The equipment must be configured as a Single System.
6. User Bypass must be enabled so that a User Code is required to Bypass zones.
7. The Installer should caution the User to NOT give system information to casual users. e.g. Codes, Bypass methods, etc. to babysitters or home service people. Only the "One-Time" Use Code should be given to the casual user.
8. The Installer should advise the User and note in the User Manual:
 - i) Service organization name & telephone number
 - ii) The programmed Exit time
 - iii) The programmed Entry time
9. This equipment is listed for local applications only and thus the connection to a Central Receiving Station via the Digital Communicator has not been evaluated by U.L. and the following should be noted.
 - *Connection of the fire alarm signal to a fire alarm headquarters or a central station shall be permitted only with the approval of the local authority having jurisdiction.*
 - *The burglar alarm signal shall not be connected to a police emergency number.*
 - *The receiving unit to which this equipment transmits signals has not been evaluated by UL.*

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SPECIFICATIONS

CONTROL PANEL SPECIFICATIONS

21 zones including:

- 16 fully programmable supervised zones (EOL resistors)
- supervised fire zone
- 1 auxiliary normally open zone
- 3 Keypad activated zones

Audible alarm output:

- bell output - 700mA, Fused at 5 Amps
- steady or pulsed output

EEPROM memory:

- does not lose codes or system status on complete AC and battery failure

Programmable output:

- Transistor switch sinks 50 ma to ground
- operation controllable through program options

Powerful 1.5 amp regulated power supply:

- 400 ma auxiliary supply
- separately fused for battery, keypad/auxiliary supply and bell output
- supervision for loss of AC power, low battery
- internal clock locked to AC power frequency

Switched Smoke Detector Supply Output:

- controlled from keypad ([*][4] keypad command)

Battery required:

- 12 volt 4 AH minimum rechargeable gel-cell or sealed lead-acid battery

Transformer required:

16 VAC minimum 30VA

Dimensions:

9.5" x 11.8" x 3.3" deep

Weight:

6.5 lbs.

REMOTE KEYPAD SPECIFICATIONS (PC3000RK)

Four wire (QUAD) hook-up and up to 3 keypads per system

Built-in piezoelectric sounder

Full annunciation of zones and system status

Nominal current draw 60 ma

Dimensions 5.5" x 3" x 1" deep

DIGITAL COMMUNICATOR SPECIFICATIONS

88 reporting codes
Transmits all 10BPS and 20BPS in single line and extended formats
Radionics Rounds and Radionics Parity formats
Sescoa Superfast format
3/1, 4/2 and hexadecimal numbers
DTMF and Pulse dialing
DPDT line seizure
True dial tone detection
Anti-jam feature
Two telephone numbers and two account codes
Split reporting of selected transmissions to each telephone number

FEATURES

Keypad Programming

The PC3000 comes with a default program so it is operational with a minimum of programming. It is completely programmed from the keypad. The panel uses EEPROM memory so that all information is retained even if the panel loses both AC and battery power. A built-in EEPROM copy command is included which almost eliminates programming.

Multiple Level Static/Lightning Protection

The PC3000 has been carefully designed and tested to provide reliable service. It is built to take Static and Lightning induced surges and keep on working. Multiple level surge filters are on all zone inputs, the power supply, the keypad connections, the bell output, the auxiliary power supply and the telephone interface. A special "ZAP-TRAC" circuit board configuration catches high voltage impulses right at the wiring terminals. Protective ground planes surround sensitive areas preventing the spread of damaging voltage surges. Metal Oxide Varistors (MOV's) are placed in all the critical areas to further reduce impulses to safe levels.

"WATCHDOG MONITOR" Circuit

Even when all precautions are taken so that voltage surges do not cause damage to the control panel, it is possible to cause temporary disruption to the operation of the microprocessor causing it to lose track of the program sequence. The PC3000 is equipped with an external "Watchdog Monitor" circuit which continually checks the microprocessor program execution.

System Supervision Features

The PC3000 continuously monitors a number of possible trouble conditions including:

- an active battery supervision circuit that periodically tests the battery under load,
- a loss of the AC power supply,
- a supervised circuit trouble condition,
- a telephone line monitoring circuit,
- a bell circuit failure indicates open circuit or fuse failure,
- a test code feature which transmits a communicator test code to the monitoring station at a selected time every day. The test code can be sent at intervals from one to 99 days.
- a bell/siren test feature which can be activated from the keypad.

Advanced Features

The PC3000 has many advanced features. Features which provide the security system design flexibility and selling advantage necessary to win those demanding jobs and make them profitable.

Some of these features include:

EEPROM memory retains all data even on complete AC and battery failure. Panel powers up in last armed or disarmed state before power loss.

All programmable zones may be selected as one of 10 different types including; delay, double delay, quadruple delay, instant, follower, follower with home-away and 4 types of 24 hour emergency and supervisory circuits.

Keypad programming of up to sixteen security codes.

Zone by-passing from the keypad.

Individual zone and system function indicators on keypad.

A keypad activated utility output function for operating lights, door openers, cameras or other devices.

Although the PC3000 has many features, it is not difficult to use. All keypad commands are similar and are assisted by audible and visual cues.

INSTALLATION

Bench Testing

The PC3000 contains a factory default program. Any additional programming required is done through the keypad. For many applications all that will be required is to enter the telephone number and alarm codes with keypad entries that are as straight forward as dialing a telephone number. If you need help talk to your DSC equipment distributor.

Connect 1K ohm 1/2 watt end of line resistors from each zone (Z1 to Z16) input to the closest common "COM" terminal. Connect an end of line resistor between the "FIRE" input terminal and the "COM" terminal between "Z1" and "Z2". Unless all zone loops are properly terminated with end of line resistors the "READY" light will not be on and the panel will not arm unless the "READY" light is on.

Connect the four keypad wires to the control panel as shown in the connection drawing.

To completely test the PC3000 including the communicator data, it is necessary to connect the panel to a digital receiver through a telephone line connection or by connecting the telephone terminals on the PC3000 to a digital communicator test set such as the DSC DTS-1. The DSC DTS-1 digital communicator test set is an inexpensive unit which can simulate the telephone system dial tone and the receiver hand shake and kiss-off tones as well as display the data sent out by a digital communicator. Also, the DTS-1 has a "listen-in" feature which makes it ideal for monitoring the transmission between communicator and receiver when the PC3000 is connected to the telephone line.

If you are using a DTS-1, connect the red and green telephone clips to the "TIP" and "RING" terminals and connect the red and black power clips to the "AUX+" and "AUX-" terminals on the PC3000. When power is applied to the panel press the red local-line button on the DTS-1 and observe the display window area. The "local-line" indicator should be in the local position.

For testing purposes, so that the sound level is not too loud, connect a small buzzer to the "BELL+" and "BELL-" terminals to indicate when the panel is in alarm.

Connect a 16 VAC 30 VA transformer to the "AC" terminals. Before plugging in the transformer be sure the circuit board is not resting on anything metallic which may cause a short.

NOTE: THE PC3000 WILL NOT START UP IF 'AC' IS OFF AND THE BATTERY IS LOW. The panel will display trouble #1 under these conditions.

When the transformer is plugged in there should be lights on the keypad and the buzzer connected to the bell terminals may go on for a few seconds. The "ARMED" light may be on or off the first time the panel is powered. The last armed/disarmed condition is stored in the EEPROM memory so the panel will always power up in the last armed/disarmed state. If the "ARMED" light is on, enter the default master code [1234] to disarm the panel. If the keypad is not active, check for the presence of AC power at the "AC" terminals, check the keypad connections and check the panel fuses.

If all the zones are properly connected with end of line resistors all of the zone lights will be off. Note that the panel will arm only if all zones are properly connected with end of line resistors (including FIRE circuit) so that the "READY" light is on. The keypad should beep several times to indicate acceptance of the master code. Enter the master code to arm or disarm the panel.

Read the "KEYPAD COMMANDS" section of this manual or the USER INSTRUCTION MANUAL and enter commands on the keypad to become familiar with the different commands.

Turn to the "PROGRAMMING GUIDE" in this manual and enter a sample program into the panel through the keypad to become familiar with the programming commands.

Mounting Panel

Select a dry location close to an unswitched AC source, close to a ground connection and close to the telephone connection.

Remove printed circuit board, mounting hardware and keypad from cardboard retainer inside panel. Before attaching cabinet to wall, press the five white nylon printed circuit board mounting studs and the ground connection screw into cabinet from the back.

Pull all cables into cabinet and prepare them for connection before mounting the circuit board to the back of the cabinet. Press circuit board down onto mounting studs.

Hook-up Procedure

DO NOT connect transformer or battery until all other wiring has been connected. See power-up procedure.

Connect a ground cable from the cabinet ground connection by the shortest and most direct route to a grounding rod.

Connect zone cables to zone loop inputs. Put end of line resistors on any unused zones. Connect wires supplying power to motion detectors to auxiliary supply.

Install keypads and connect wires to keypad terminals on panel.

Connect RJ31-X cord to telephone terminals. Do not insert plug into RJ31-X jack.

Warning: FCC restricts using this equipment on certain types of telephone lines. Read FCC COMPLIANCE STATEMENT at the end of this manual. Also, do not use this equipment on a telephone line equipped with "call holding" feature because the tone generated may interfere with the communicator operation.

Connect bell or siren to "BELL+" and "BELL-" terminals. Observe correct polarity for sirens and polarized bells. Connect 1K ohm 1/2 watt resistor across terminals to eliminate trouble condition if bell circuit is not being used.

Terminal Connections

AC Power Terminals "AC"

Use a 16 VAC transformer with a minimum 30 VA rating to supply AC power to the PC3000. The transformer should not be connected to an outlet that is controlled by a switch. If AC failure occurs it is displayed as a trouble on the keypad (see KEYPAD COMMANDS [*][2] trouble conditions). It can also be transmitted to the monitoring station as a trouble condition (see PROGRAMMING GUIDE [*][8] section 09 and 10 for alarm and restore codes and section 22 for transmission delay).

Auxiliary Power Terminals "AUX" and "GND"

The auxiliary power supply can be used to power motion detectors and other devices requiring 12VDC. 400ma 12VDC is available from the "AUX"(positive) and "GND"(negative) terminals when the PC3000 is used with one keypad. For each additional keypad the auxiliary supply rating must be reduced by 60ma. The auxiliary supply is fused with the keypad supply at 1 amp. Auxiliary fuse failure transmission can be sent (see [*][8] section 09 and 10).

Switched Auxiliary Power Terminals "SW AUX" and "GND"

The switched auxiliary supply can be switched off momentarily from the keypad (see KEYPAD COMMANDS [*][4]). The "SW AUX" terminal is positive and the "GND" terminal negative. The 400 ma auxiliary supply rating must be reduced by any current taken from the switched auxiliary supply. The switched supply shares the same fuse as the auxiliary supply.

Bell/Siren Terminals "BELL+" and "BELL-"

These terminals are for powering bells or other audible devices requiring a steady output voltage on alarm. The bell output is fused for 5 amps. When connecting sirens (speakers with siren driver already built-in), be sure to observe the correct polarity. Connect the positive lead to the "BELL+" terminal and the negative lead to the "BELL-" terminal.

If no siren or bell is used, connect a 1000 ohm resistor between bell [+] to bell [-]. The bell/siren alarm output is pulsed (1 second on 1 second off) when an alarm is created by the [F] keypad zone or by the FIRE zone.

Keypad Terminals "RED", "BLK", "YEL" and "GRN"

Connect the four colored wires from the keypads to these terminals. When connecting more than one keypad, connect in parallel across the keypad terminals at the control panel (i.e. all RED wires together, all BLACKS together, all YELLOWS together and all GREENS together). The keypad red and black power supply terminals are fused through the auxiliary fuse.

Programmable Output Terminal "PGM OUT"

The operation of the Programmable Output depends upon which option is selected in the programming table. See the PROGRAMMING GUIDE section [28] for a list of options for the "PGM OUT" output. The "PGM OUT" is a switch to ground. A 100 ohm current limiting resistor is connected in series. A small relay, a buzzer or other DC operated device may be connected between the 12VDC "AUX"(positive) terminal and the "PGM OUT"(switched negative) terminal on the main board.

Auxiliary Input Terminal "AUX IN" (also KEY ARMING)

The "AUX IN" input terminal is a normally open 24 hour zone. It can be programmed from the keypad to be silent or audible. There is no display on the keypad for the "AUX IN" input. An alarm on this input is created by applying a positive voltage or by closing a contact between the "AUX IN" terminal and the positive auxiliary supply. See Programming Guide [*][8] sections [09] and [10] for programming the alarm and restoral codes. The Aux. input is intended to be used as a burglary zone only.

The "AUX IN" terminal can also be used as a momentary key arming/disarming input. See PROGRAMMING GUIDE section [28] for a list of options for the "AUX IN" terminal. The keyswitch Arming feature must be implemented using a UL listed device.

"FIRE" Zone Input

The "FIRE" zone is a supervised (normally open alarm initiating contact) end-of-line resistor circuit designed to accept "Latching" four-wire smoke detectors. (see fire circuit installation diagram)

On alarm, (fire loop shorted) the bell output will pulse the signal to indicate that the fire loop has been activated. Transmission by the digital communicator is delayed 30 seconds. If the alarm is acknowledged, by pressing the [#] key, the signals will silence and, if the 30" delay has not expired, the transmission will be aborted. If the alarm is not acknowledged and the 30" delay expires, the transmission proceeds and cannot be aborted.

If after signal silence, the smoke detector is not restored to normal, the signals will resound after 90" and 30" after that, the communicator will transmit. If the signals resound, they may again be silenced, [#] key, and the communicator will be aborted if silence occurs within the 30" delay period.

To restore the smoke detector to normal, clear all products of combustion from the detector and reset the detector by pressing [*] and then holding down [4] for 2 or 3 seconds. This action will remove power from the smoke detector and if it is clear of smoke, the detector will return to normal. If the detector is still in alarm, the signals will sound immediately and the above sequence will repeat.

For an open on the FIRE loop, the keypad sounder will beep twice every 10" and the "TROUBLE" light will show on the keypad. The communicator will transmit the trouble condition if programmed for trouble transmission. The audible trouble signal may be silenced by pressing the [#] key. To determine the nature of the trouble, press [*][2]. (see the "TROUBLE DISPLAY" section)

Zone Input Terminals "Z1" to "Z16"

Zone inputs "Z1" to "Z16" are supervised end of line (E.O.L.) resistor circuits. Each input must be terminated with a 1K ohm E.O.L. resistor. An alarm condition will be created if a normally open contact is used to short across the E.O.L. resistor. An alarm is also created if normally closed contacts, wired in series with the E.O.L. resistor, are opened. See the wiring diagram for normally open and normally closed contact connection. The type of circuit or zone definition (delay, instant, 24 hour etc.) is programmed from the keypad using the [*][8] installer programming commands (PROGRAMMING GUIDE sections 16 & 17).

Telephone Terminals "TIP", "RING", "T-1" and "R-1"

The wires from the RJ31-X telephone jack are connected to these terminals in the following way.

TIP	green wire from RJ31-X cord
RING	red wire from RJ31-X cord
T-1	brown wire from RJ31-X cord
R-1	grey wire from RJ31-X cord

Battery Connections

Do not connect the battery or the transformer until the wiring is complete. Connect the red battery lead to the positive battery terminal and the black lead to the negative battery terminal. If the connection is made in the reverse the battery fuse will blow. The small "pot" below the heat sink can be used to adjust the battery charging voltage. It is factory adjusted for 13.8 volts and normally needs no adjustment.

Keypad Installation

Mount the keypads near the exit-entry doors. The PC3000RK keypad has a red, a black, a green and a yellow wire on the back. Connect these four wires to the four keypad terminals on the control panel using four conductor (quad) telephone wire. Up to three keypads may be connected to one PC3000. Connect all green wires from the keypads to the "GRN" terminal on the panel. Connect all yellow wires from the keypads to the "YEL" terminal on the panel. Connect all red wires from the keypads to the "RED" terminal. Connect all black wires from the keypads to the "BLK" terminal.

Power-up Procedure

If the keypads are located a distance from the panel, install an extra keypad temporarily at the panel during power up and testing. An extra keypad with a short length of cable and alligator clips attached is helpful for testing and programming PC3000 systems.

Connect the transformer, wait approx. 5 seconds.

Enter a few keypad commands and open a zone to be sure that the panel and keypad are responding to signals. If the keypad does not respond and there are no indicators on, check for AC voltage at the "AC" terminals. If there is 16 VAC present, check that the keypad wiring is correct and check the keypad/auxiliary supply fuse. If the keypad/auxiliary supply fuse is blown check for a short between the keypad red and black wires before replacing the fuse.

If the keypad is responding normally, connect the battery. The red battery lead attaches to the positive battery post and the black battery lead attaches to the negative battery post.

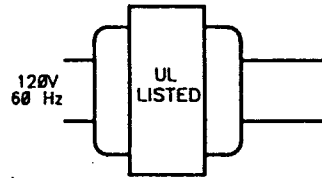
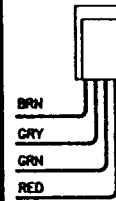
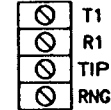
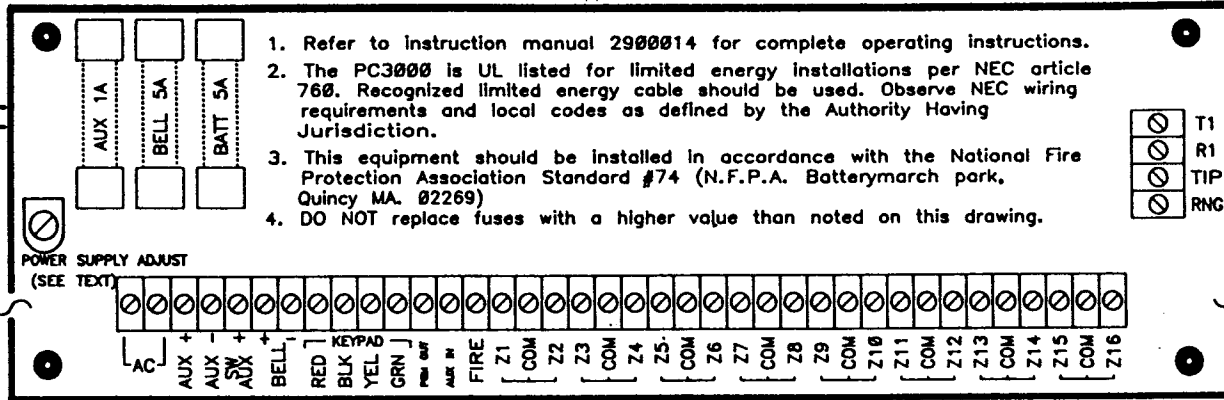
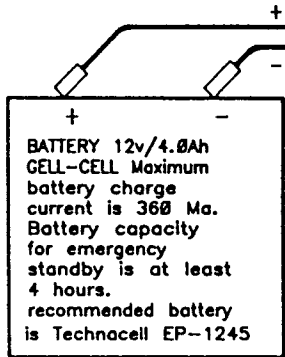
NOTE: THE PC3000 WILL NOT START UP IF 'AC' IS OFF AND THE BATTERY IS LOW. The panel will display trouble #1 under these conditions.

PC3000 HOOKUP DIAGRAM

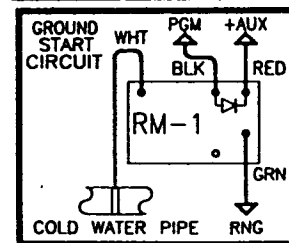
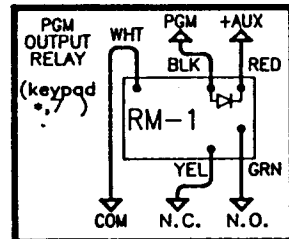
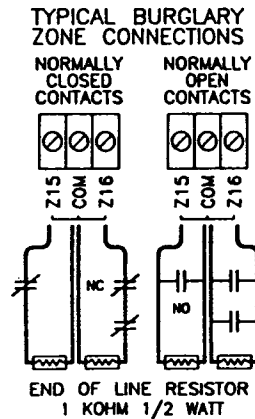
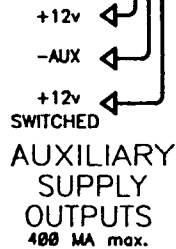
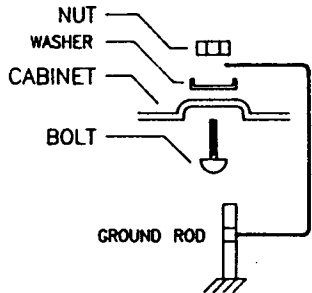
DRW # B-51-00013

TELEPHONE INTERFACE

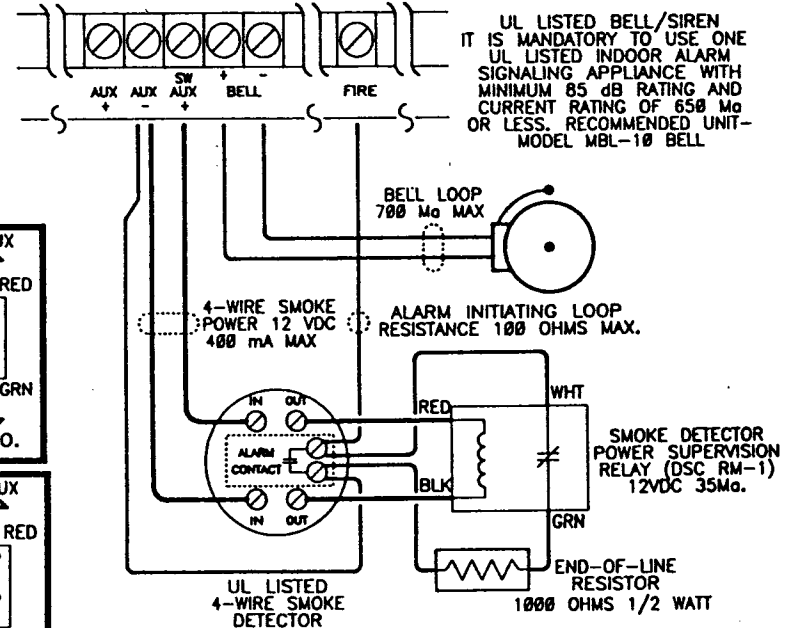
1. Refer to instruction manual 2900014 for complete operating instructions.
2. The PC3000 is UL listed for limited energy installations per NEC article 760. Recognized limited energy cable should be used. Observe NEC wiring requirements and local codes as defined by the Authority Having Jurisdiction.
3. This equipment should be installed in accordance with the National Fire Protection Association Standard #74 (N.F.P.A. Batterymarch park, Quincy MA. 02269)
4. DO NOT replace fuses with a higher value than noted on this drawing.



TRANSFORMER - 16VAC 40VA
Do not connect transformer to a receptacle controlled by a switch. The transformer must be UL listed and have a restraining means

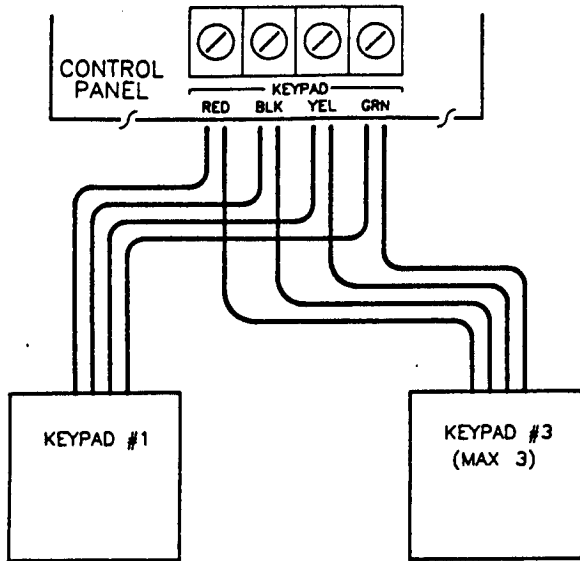


TYPICAL FIRE ALARM ZONE CONNECTIONS



NOTE: SMOKE DETECTORS MUST BE LATCHING TYPE (BRK MODEL 1812) TO RESET SMOKE DETECTORS--PRESS (*) THEN HOLD DOWN KEY (*) FOR 2-3 SECONDS

PC3000RK KEYPAD INSTALLATION



HINT:

If two wires of the same gauge are paralleled, the run length can be doubled. eg. if 8 #22awg wires (2-RED,2-BLK,2-YEL,2-GRN) are run to the keypad, the run length would double from 540 ft. to 1080 ft.

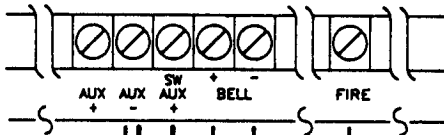
NOTES:

- Each keypad has four coloured leads, Red, Black, Yellow and Green. Connect the leads to the corresponding terminals on the panel.
- Up to three keypads may be connected in parallel. DO NOT connect multiple keypads on the same loop.
- The wiring table gives the maximum wire run from the control panel to the keypad for various gauges of wire. Wire run lengths are calculated based on the maximum current drawn by the keypad. eg. All lights "ON".
- For standby loading purposes, it is recommended that a current draw of 20 ma. per keypad be used. This represents the panel in the "disarmed" state with two zones in alarm.

WIRING CHART PC3000RK

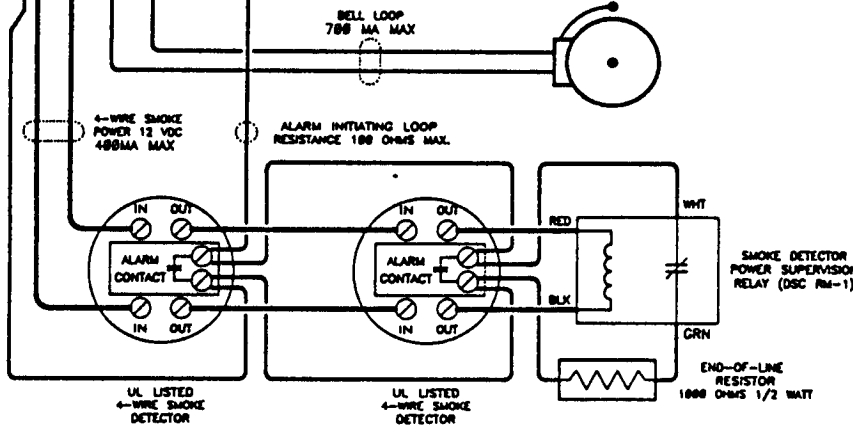
WIRE GAUGE	MAX. RUN LENGTH KEYPAD TO PANEL
24 AWG.....	330 FEET
22 AWG.....	540 FEET
20 AWG.....	850 FEET
19 AWG.....	1,000 FEET
18 AWG.....	1,360 FEET

PC3000 CONTROL PANEL



PC3000 FIRE LOOP HOOKUP

UL LISTED BELL/SIREN IT IS MANDATORY TO USE ONE UL LISTED INDOOR ALARM SIGNALING APPLIANCE WITH MINIMUM 85 db RATING AND CURRENT RATING OF 700 MA. OR LESS, RECOMMENDED UNIT-MODEL MBL-18 BELL



NOTE: SMOKE DETECTORS MUST BE LATCHING TYPE (BRK MODEL 1812) TO RESET SMOKE DETECTORS-PRESS (+) THEN HOLD DOWN KEY (-) FOR 2-3 SECONDS

WIRE GAUGE	MAX. WIRE RUN TO END-OF-LINE RESISTOR
AWG	FEET
14	15500
16	9740
18	6120
19	4800
20	3640
21	3000
22	2420

BELL CURRENT	AWG #14	AWG #16	AWG #18	AWG #19	AWG #22
Ma.	MAX. WIRE RUN TO BELL/SIREN FEET				
50	2750	1740	1000	800	433
100	1375	870	545	434	216
200	690	435	270	217	106
300	460	290	180	144	74
400	345	215	135	106	54
500	275	170	105	84	43
600	230	140	90	72	36
700	195	120	80	62	30

LOOP CURRENT	AWG #14	AWG #16	AWG #18	AWG #19	AWG #22
Ma.	MAX. WIRE RUN TO EOL RELAY FEET				
50	2750	1740	1000	800	433
100	1375	870	545	434	216
200	690	435	270	217	106
300	460	290	180	144	74
400	345	215	135	110	55

GUIDELINES FOR SMOKE DETECTOR LOCATION

Experience has shown that all hostile fires in family living units generate smoke to a greater or lesser extent. Experiments using typical fires in family living units indicate that detectable quantities of smoke precede detectable levels of heat in most cases. For these reasons, NFPA standard 74 requires smoke detectors to be installed outside of each sleeping area and on each additional story of the family living unit.

The following information is for general guidance only and it is recommended that NFPA standard 74 be consulted and that the smoke detector manufacturer's literature be used for detail installation instructions.

It is recommended that additional smoke detectors beyond those required be installed for increased protection. The added areas include: Basement, Bedrooms, Dining rooms, Furnace room, Utility room and Hallways not protected by the required detectors.

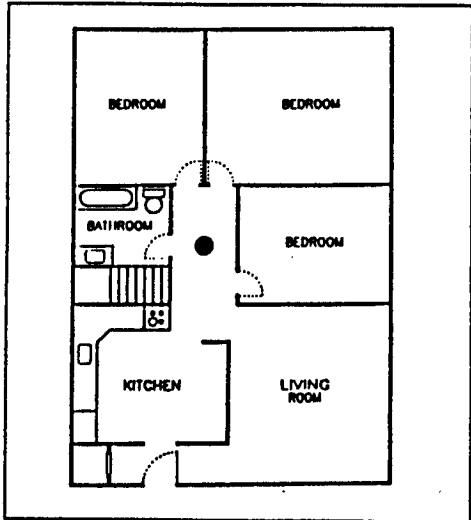


Fig. 1 - A smoke detector should be located between the sleeping area and the rest of the family living unit.

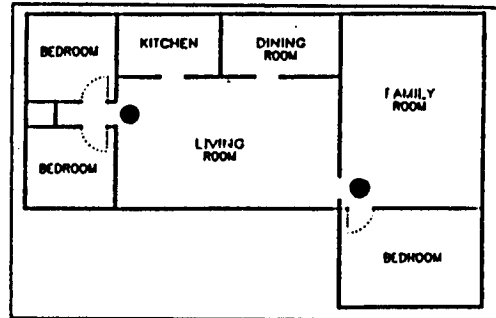


Fig. 2 - In family living units with more than one sleeping area, a smoke detector should be located to protect each sleeping area.

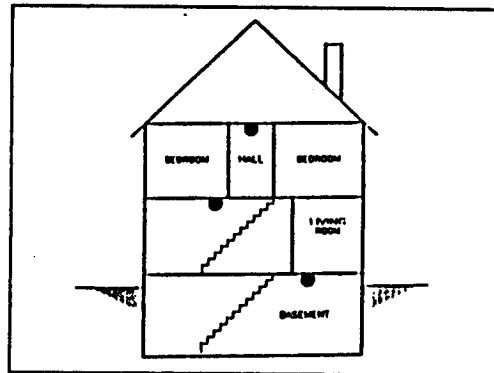


Fig. 3 - A smoke detector should be located on each story of the living unit.

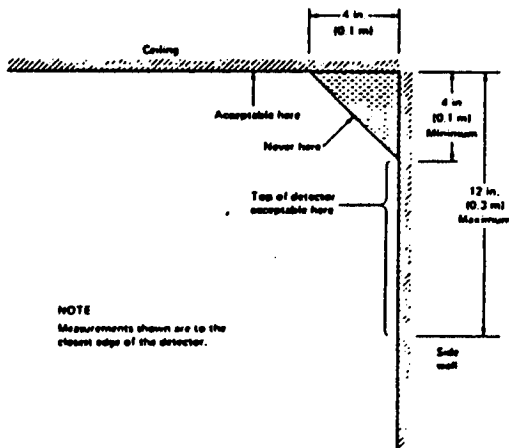


Fig. 4 - Smoke Detector mounting — "Dead" Air Space. The smoke from a fire generally rises to the ceiling, spreads out across the ceiling surface and begins to bank down from the ceiling. The corner where the ceiling and wall meet is an air space into which the smoke may have difficulty penetrating. In most fires, this "dead" air space measures about 4 in. (0.1 m) along the ceiling from the corner and about 4 in. (0.1 m) down the wall as shown in Figure 4. Detectors should not be placed in this "dead" air space.

System Testing

See Installers' test - [*], [6], [MASTER CODE], [0] - page 16.

Contact the monitoring station to request a transmission test. Plug the telephone cord into the RJ31-X jack. If a DTS-1 is being used to monitor communicator transmissions, connect as described in BENCH TESTING section and place the DTS-1 in the line mode by pressing the red "LINE/LOCAL" button. Arm the panel, wait for the exit delay to expire and trip a detector on an instant circuit. Wait for the communication to complete. Disarm panel and check with the monitoring station to confirm the transmission. Perform additional transmissions required by the monitoring station.

Check the "TROUBLE" light on the keypad. If it is on, press [*] then [2] to determine if there is a system trouble. TROUBLE DISPLAY section in KEYPAD COMMANDS gives a description of the different trouble conditions.

Program the exit, entry and alarm cut-off times to the desired values. Program the internal clock time, auto arm time if used and the test code transmission time or Periodic Downloading time if used. Activate any other features being used.

Instructing End-User

Fill out the system reference guide in the PC3000 user instruction manual. Check off sections in the manual which apply to the user's system and make additional notes if necessary.

Describe the system to an authorized user. Describe arming and disarming procedures. Describe the basic keypad functions. Assist the user in working through examples of each type of command.

Provide user with the instruction manual and instruct them to read the manual to become familiar with the system operation.

Instruct the user to test the system on a regular basis as described in the user manual. The Master Code should be changed from the default setting and recorded in the End User Manual.

KEYPAD FUNCTIONS

INTRODUCTION

The PC3000RK remote keypad provides complete information and control of the PC3000 control panel. The panel can be fully programmed from the keypad. The 16 zone lights and the fire alarm light provide alarm and status indication for the alarm circuits. The 6 function lights guide the user in operating the system. 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. All keypad entries are made by pressing one key at a time.

The keypad is normally resting in the arm/disarm mode. In this condition the zone lights are indicating the opening and closing of zones. The READY LIGHT comes on when all zones are closed. The system can be directed to perform other functions such as zone bypassing, displaying trouble conditions, displaying alarm memory and programming by entering one of the various [*] commands described below. Pressing the [#] key or not making any key entry for 2 minutes always returns the keypad to the arm/disarm mode.

MASTER CODE:

A default master security code "1234" is programmed into the PC3000 at the factory. The master security code is used for arming and disarming the control panel, for programming up to fifteen additional security codes using the [*][5] command and for entering other user functions using the [*][6] command. The master code can be reprogrammed. Because the PC3000 uses EEPROM memory the codes and other data are retained even after complete AC and battery failure.

INSTALLER'S PROGRAMMING CODE:

A default installer's programming code "3000" is programmed into the PC3000. This code is used with the [*][8] command by the installer to gain access to the system in order to enter panel or communicator program information. The installer's program code may be changed by the installer.

ARMING:

Check to see if the "TROUBLE" or "BYPASS" light is on before arming the PC3000. Close all protected doors and windows and stop movement in areas covered by motion detectors. Check to see that the 'READY' light is on (all zones are closed). The system cannot be armed unless the 'READY' light is on. Enter a [4 digit security code]. As each digit is entered the keypad sounder will beep. The 'ARMED' light will come on and the keypad sounder will beep quickly. If the security code was entered incorrectly or the 'READY' light was not on, the keypad sounder will beep steadily for 2 seconds. When the correct code is entered and the system is armed, exit the premise through the designated exit-entry door. At the end of the allowed exit time all lights on the keypad will go out except the 'ARMED' light. See the "INSTALLERS PROGRAMMING [*][8] COMMAND" section for instructions on how to change the exit time. Also see, "QUICK-ARM" and "AT HOME ARM".

DISARMING:

Enter the premises through the designated exit-entry door. The keypad sounder will be on. Go to the keypad and enter the [4 digit security code]. If an error is made in entering the code, press the [#] key and enter the code again. The 'ARMED' light will go out and the keypad sounder will stop. The correct security code must be entered before the allowed entry time expires. To change the entry time see "INSTALLERS PROGRAMMING COMMAND [*][8]". If an alarm occurred while the panel was armed, the 'MEMORY' light and the 'ZONE' light which caused the alarm will start to flash and stay flashing for 2 minutes when the panel is disarmed. Pressing the [#] key returns the panel to the normal arm/disarm mode.

ZONE BYPASSING: [*]+[1]

A bypassed zone will not cause an alarm. If a zone is bypassed the panel may be armed ("READY" light will be on) even if the zone is open. Use zone bypassing when access is needed to part of the protected area. Also, damaged wiring or contacts on a zone may be temporarily bypassed until repairs can be made so that the panel can be armed.

To bypass zones, enter [*],[1] and the zone number(s) to be bypassed. Press [#] to return to 'READY' (arm/disarm mode). When bypassing zones, two digits must be entered for the zone number(s) to be bypassed. (eg. [*],[1],[01],...,[16]) To remove all bypasses, enter [*],[1],[00],[#]. The 'ZONE' lights which are on, while the "BYPASS" light is flashing, indicate the bypassed zones. Remember that if no keypad entry is made for more than 2 minutes the keypad will return to the normal arm/disarm display. Then, in order to bypass a zone the complete command must be re-entered. Once the bypass command is entered, pressing [99] recalls the last zone or group of zones which was bypassed. If the same group of zones is bypassed each time, this shunt recall feature can be used instead of having to bypass zones individually.

When the PC3000 is programmed, the ability to bypass certain zones may be eliminated. In this case, the 'ZONE' lights for those zones will not come on in response to the bypass command. See the "Zone Bypass Mask" instruction in the [*][8] installer programming section. If the "BYPASS" light is on when arming the panel, the [*][1] command should be used to see which zones are bypassed so that zones are not unintentionally bypassed. Zone bypasses are automatically cancelled when the panel is disarmed.

TROUBLE DISPLAY: [*]+[2]

The PC3000 continuously monitors a number of possible trouble conditions. If one of these conditions occurs, the keypad 'TROUBLE' indicator will light and the audible will sound (two short beeps every 10 seconds). When the [#] key is pressed the audible indication will stop but the trouble indicator light will remain on until the trouble is cleared. Trouble conditions can also be transmitted to the monitoring station (see PROGRAMMING GUIDE section 07 and 08 for alarm and restoral trouble codes). Press the [*] then [2] keys to display the type of trouble. The 'ZONE' lights indicate the type of trouble condition.

- 1- LOW STANDBY BATTERY
- 2- AC POWER FAILURE
- 3- FOIL LOOP TROUBLE
- 4- TELEPHONE LINE TROUBLE
- 5- UNSUCCESSFUL COMMUNICATION ATTEMPT WITH MONITORING STATION
- 6- BELL CIRCUIT FAILURE
- 7- SMOKE DETECTOR LOOP TROUBLE
- 8- LOSS OF TIME ON INTERNAL CLOCK

Press the [#] to return to 'READY'.

- 1- LOW BATTERY... A battery trouble will be displayed and can be reported if the battery is weak, disconnected or the battery fuse is blown. Only one low battery alarm or restoral transmission takes place per arming period. Low battery trouble display is latching and can only be cleared by battery restoration, arming and disarming panel then accessing trouble indication.
- 2- AC POWER FAILURE... There is no audible annunciation on AC power failure. The system trouble light will come on but the audible will not sound until there is a low battery condition. Transmission delay can be programmed for 1 to 99 minutes. See Programming Guide Section [22].
- 3- FOIL LOOP TROUBLE... This trouble applies only to zones which have been programmed as foil loops (PROGRAMMING GUIDE Section 16 & 17). A foil loop creates a trouble signal when the panel is disarmed and an alarm signal when the panel is armed.
- 4- TELEPHONE LINE TROUBLE... A telephone line trouble is generated when the line voltage drops below 3 volts for more than 30 seconds. It generates a keypad trouble when the system is disarmed and rings a local alarm when the panel is armed. See Section 19 for other options.
- 5- UNSUCCESSFUL COMMUNICATION... If the digital communicator is unsuccessful communicating with the monitoring station after eight attempts, a trouble is generated. If a later attempt to communicate is successful the trouble is cleared.
- 6- BELL CIRCUIT FAILURE... If the bell fuse is blown or the bell circuit is open, a keypad trouble and a trouble transmission are generated.
- 7- SMOKE DETECTOR LOOP TROUBLE... If a FIRE loop is open circuit, a keypad trouble and a trouble transmission are generated. A trouble on the FIRE loop will unconditionally initiate an audible keypad trouble. This means that even if any other previous trouble has been silenced, a FIRE loop trouble will restart the keypad buzzer.
- 8- LOSS OF INTERNAL TIME... When the PC3000 is powered up or reset, the internal time of day clock needs to be set to the correct time. This trouble is cleared when the trouble display is viewed and exited or when an attempt is made to reset the internal time of day clock. See [*][6] USER FUNCTION COMMAND for resetting time of day clock.

If the [9] is pressed while in the trouble display mode the most recent trouble will be displayed on the zone LEDs. This trouble memory feature is useful as a diagnostic aid when installing and servicing the PC3000.

ALARM MEMORY DISPLAY: [*][3]

Press [*] then [3] to enter the alarm memory mode. The 'MEMORY' light will flash and any alarm caused during the last armed period will be displayed on the zone lights. In addition to the last alarm memory there are 2 history levels. After entering the memory mode (pressing [*] then [3]), 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 times to indicate which level of history is being viewed. When the panel is armed, the last alarm memory is cleared and the contents moved to the 1st history level. The "MEMORY" light will only be on when there was an alarm during the last armed period.

Press [#] to return to 'READY'.

SWITCHED AUXILIARY SUPPLY CONTROL: [*][Hold Down 4]

To interrupt the switched auxiliary power supply press [*] then hold down [4] for the desired interrupt time. When the [4] is released the system returns to the ready mode and the switched auxiliary supply is restored.

USERS' PROGRAMMING COMMANDS: [*]+[5]+[Master Code]

The [*] [5] users' programming command is used to program additional user codes. Up to 16 user arm/disarm codes may be programmed. The 1st code is the master code (factory default [1234]). The 16th code is optionally a "one time use" or maid code. The 16th code may be changed from a "one time use" code to a regular code using an installers programming command (section 18...1st system definition code). Remember if no keypad entry is made for more than 2 minutes the keypad will return to the normal arm/disarm display and the complete command will have to be re-entered to program a new user code.

PROGRAMMING ADDITIONAL USER CODES

- 1: Press the [*] and [5] keys then enter the master security code (default [1234]) to enter the additional code programming mode. The "PROGRAM" light and "Zone 1" light will be on to show that the first code (the master code) is already programmed with the factory default code [1234]. The master code may be changed but do not try to erase the master code.
- 2: Fifteen additional codes may be programmed. The zone lights are used to indicate which of these codes are already programmed (zone light on steady) and the one which is currently being programmed (zone light is flashing).
- 3: To program the second code, press [02] then enter a 4 digit code. Zone 2 light will flash and sounder will beep three times and zone light will come on steady after the 4 digit code is entered.
- 4: To remove the second code, press [02] then enter [*],[*],[*],[*]. Zone 2 light will flash and the sounder will beep three times and zone 2 light will go out to show that the code has been removed.
- 5: Follow the instructions in 3: or 4: for programming or removing any of the other additional codes.
- 6: Do not try to remove the master code (1st code). The master code may be changed but it must not be removed. When changing the master code be sure to enter a valid 4 digit number (use only number keys 0 to 9). Do not enter [#] or [*] as one of the digits. If the master code is forgotten and the panel is left disarmed, program a new master code using the [*][8][Installer Code][25] command. If the Master code is forgotten and the panel is left armed, the installers code can be reset to [3000] by using the "hardware reset" method described on page 28.
- 7: To successfully program or remove additional codes, the panel must be put into the code program mode by following step one followed by steps 3 or 4. Note that if no key entry is made for 2 minutes the panel will go back to the normal arm/disarm mode. After which step one must be repeated to get back into the code program mode.
- 8: To exit the code program mode press [#].

To review:

programming a new code;
enter [*],[5],[master code],[02 to 16],[4 digit code].

eliminating an existing code;
enter [*],[5],[master code],[02 to 16],[****]

NOTE: The user code numbers must be entered as two digit numbers.
eg. 02,03,.....,15,16

USER FUNCTIONS COMMAND [*]+[6]+[MASTER CODE]...

This command is used to set the system clock time and to set the auto arm time. It is also used to turn on and off a number of system functions. The command is used by entering [*], [6], [MASTER CODE] then a number from the following list to select the item to be changed.

- [0] Installer's test
- [1] System 24 hour clock (enter HH:MM)
- [2] Auto arming time (enter HH:MM)
- [3] DO NOT USE
- [4] Quick arm enable/disable
- [5] Auto arm enable/disable
- [6] Door chime enable/disable
- [7] DO NOT USE
- [8] Bell test function
- [9] User Initiated Callup

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 - 00,01,....35,36,....58,59

IF A PRINTER IS ATTACHED

DAY - 01...31

MONTH - 01...12

YEAR - XX (two digits)

e.g. HH: MM: DAY: MONTH: YEAR

Items 1 & 2 are time setting functions. Enter 4 digits representing the time in hours and minutes (HH:MM) based on the 24 hour or military clock. Always enter a leading zero where only one digit is required. 8:05 AM would be entered as 0805. 1:30 PM would be entered as 1330. Items [0], [4] to [6] turn on and off various features. When the item key is pressed, the feature is turned on if the keypad beeps quickly 3 times. The feature is turned off if the keypad sounds one long beep. Pressing item [8] gives a 2 second bell and keypad light test. Pressing [9] makes the panel call the Downloading computer if enabled in section [47].

If a printer is attached to the panel (see Section [28]) and is enabled (see Section [49]) the clock data entry will be automatically extended to include the day (Two digits 01...31), the month (Two digits 01...12) and the year (Two digits...e.g. 88,89,90...etc.).

INSTALLER'S TEST [*]+[6]+[MASTER CODES]+0

This feature is designed to assist the installer in testing the system. In this mode, the Bell or Siren will operate for two seconds each time a device is tripped. The feature is automatically disabled when the panel is armed and disarmed. Each time a zone is tripped or restored in this mode, a signal, if programmed, will be transmitted to the monitoring station. If this is not desired, it is possible to disable the communicator during the test. (see Section [18] 1st system option code) NOTE: If a Printer is attached, it will not function if the communicator is disabled. If using a PC16OUT module with the installers' test, do not bypass zones or trip more than one zone at a time or restore a zone before the two second bell sounding finishes. This precaution is only required during the Installers' test.

SETTING THE CLOCK [*]+[6]+[MASTER CODE]+[1]

Setting the "System 24 Hour Clock" (item [1]) tells the system the correct time of day. If the system is without battery and AC power it cannot continue to keep time. Therefore when the panel is first powered up or when it has been without AC power long enough to completely discharge the standby battery the "System 24 Hour Clock" must be reset. If the time needs to be reset a "Trouble #8" will be indicated on the keypad (see [*][2] system trouble command). If a printer is attached to the panel setting the clock must include the Day, Month and Year. e.g. HH: MM: DAY: MONTH: YEAR (see previous page).

AUTO ARM [*]+[6]+[MASTER CODE]+[2]

The PC3000 can be programmed to arm at the same time each day. Programming item [2] sets this time. At the selected auto-arm time the keypad beeper begins to sound and the Bell/Siren will pulse once every 10 seconds to alert anyone on the premises that the system is about to arm. One minute later the system will arm. When the panel Auto-Arms, the panel is "Forced Armed". If any key on the keypad is pressed during the time that the keypad buzzer is beeping, Auto Arming will be aborted. Auto Arming will be attempted at the same time the next day. Besides setting the time for Auto Arming, the feature must be enabled. See Auto Arm Enable below.

QUICK ARM [*]+[6]+[MASTER CODE]+[4]

The "Quick Arm" feature is enabled by pressing the [4] key while in the "USER FUNCTIONS COMMAND". When enabled (enabled 3 beeps...disabled one long beep) the panel can be armed by entering [*][0]. The closing code transmitted for "Quick Arm" is the same as the code which is programmed for the master code.

AUTO ARM ENABLE [*]+[6]+[MASTER CODE]+[5]

Entering [*], [6], [Master Code], [5] will enable/disable the Auto Arming feature. When the feature is being Enabled, the keypad sounder will sound 3 beeps and when being Disabled the buzzer will sound one long beep.

DOOR CHIME [*]+[6]+[MASTER CODE]+[6]

The "Door Chime" feature is enabled by pressing the [6] key while in the "USER FUNCTIONS COMMAND". When enabled the keypad sounder will beep quickly 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 doors where it is not wanted. This feature operates only while the panel is disarmed.

BELL TEST [*]+[6]+[MASTER CODE]+[8]

The bell test feature sounds the bell or siren, lights the keypad indicators and beeps the keypad sounders for 2 seconds.

USER CALLUP [*]+[6]+[MASTER CODE]+[9]

This function is enabled in section [47]. When activated, the panel will call the Downloading computer. The Downloading computer must be on line and waiting for the panel to call before Downloading can be performed.

UTILITY OUTPUT COMMAND [*]+[7] or [*]+[7]+[USER CODE]

The programmable output (PGM terminal) on the PC3000 can be made to activate by a command from the keypad. This output can be used for operating other devices such as; garage door opener, special lighting or door strikes.

The programmable output must be selected for keypad utility using the [*][8][Installer Code][28] command and programming items [2],[3],[4] or [5].

Depending on the option chosen in the programming section, the programmable output is activated by pressing the [*] then [7] keys followed by a Group A access code, Group B access code, any access code or no code at all. When the proper keys are pressed the keypad sounder and the programmable output are activated for 1 second.

INSTALLERS' PROGRAMMING COMMANDS [*]+[8]+[INSTALLER CODE]

The PC3000 is completely programmed from the keypad by using commands in the [*] [8] section. The commands are described in detail in the programming section of this manual.

"AT-HOME" ARMING [*]+[9]+[USER CODE]

Entering [*],[9] before the arming code, arms the panel without any entry delay on the delay zones and bypasses zones that are defined as "Home-Away". This command is used for arming the system while at home. When the panel is armed using [*],[9], the Armed light will be on flashing to indicate that the "Home-Away" zones are shunted. Once the panel is Armed in this mode, using [*],[1] will remove the bypass from those zones defined as "Home-Away" if they have NOT been manually bypassed. The [*],[1] command used here, only removes the bypass from zones that have been Automatically shunted with the [*],[9] command.

"QUICK-ARM" COMMAND [*]+[0]

Entering [*] [0] is accepted as a valid arming code when the "QUICK-ARM" feature is activated. This command is often used when individuals are required to arm the system but it is not wanted that they be able to disarm the system. This could be used with home visitors in the case of a residential alarm or junior employees and maintenance staff in the case of a commercial alarm. See instructions in the "[*][6] USERS' PROGRAMMING COMMANDS" section for activating the "QUICK-ARM" feature. This feature should not be enabled if the One Time Use Code is enabled. The One Time Use Code must be used for arming before it is erased.

KEYPAD ZONES

There are three zones which can be activated from the keypad. The alarm and restoral codes for keypad zones are programmed using the [*] [8] command.

Pressing the [F] key for 2 seconds activates a fire alarm. The fire alarm sounds the siren/bell in a pulsed mode and is annunciated as a memory condition.

Pressing the [A] key for 2 seconds activates an emergency keypad zone. If a reporting attempt is made to an alarm receiver and it is successful the PC3000 will acknowledge the transmission with a short series of beeps from the keypad.

Pressing the [P] key for 2 seconds activates the Police (or Panic) alarm. The panic alarm can be programmed for audible or silent operation (see Section [18] in PROGRAMMING GUIDE).

There is no light annunciation from the keypad for the last two keypad zones, however, the keypad buzzer beeps 3 times to confirm activation on any of the keypad zones. If the keys are held down the buzzer continues to beep.

See Section [15] for alarm and restoral codes for all three keypad zones.

DOWNLOADING

The PC3000 with ver. 7.0 or higher software, supports the DSC "Downloading" package. See the Downloading manual for details on specific capabilities.

There are several sections pertaining to the Downloading feature which must be programmed.

SECTION [26] — DOWNLOADING ACCESS CODE

A four digit code must be programmed into this section to allow access to the control panel by the Downloading software.

SECTION [46] — DOWNLOADING CALLBACK TELEPHONE NUMBER

If Callback is enabled, Section [47] zone light [8], then this section must be programmed with the telephone number of the Downloading computer.

SECTION [47] — MODEM CONFIGURATION

Zone lights [1] to [4] are programmed to set the number of rings the panel will look for before it answers a call from the Downloading computer.

Zone light [5] is programmed to enable or disable the control panel for Downloading. If Downloading is disabled, all other programming sections relating to Downloading need not be programmed.

Zone light [6] Enables or Disables user initiated callup to the Downloading computer.

Zone light [7] Enables or Disables the answering machine defeat program.

Zone light [8] is programmed to enable or disable Callback. If Callback is disabled, the Downloading computer will have immediate access to the control panel. The disabled mode is useful if there are multiple Downloading computers (at different telephone numbers). If Callback is enabled the Downloading computer will call, request access then hang up and wait for the control panel to call. On the callback once the Downloading computer and the control panel accept each other as valid, downloading operations are enabled.

SECTION [48] — PANEL IDENTIFICATION CODE

A four digit code must be programmed into this section to allow the Downloading computer to identify the panel it is communicating with.

SECTION [49] — PRINTER CONFIGURATION

Zone lights [1] to [4] are programmed to set the baud rate for communication with the printer.

Zone lights [5] and [6] are programmed to establish which reporting codes are printed. (See notes section [49] of Programming work sheet.

Zone light [7] is programmed to match the panel with the printer. i.e. DTR or RTS operation (zone light ON) or SRTS operation (zone light OFF).

Zone light [8] is programmed to choose between Periodic Download (light ON) or Test Transmission (light OFF).

PROGRAMMING GUIDE

INTRODUCTION

The PC3000 is programmed by entering instructions from the panel keypad. The PC3000 memory is EEPROM and can be reprogrammed thousands of times. The EEPROM will not lose memory even on total AC and battery failure. All essential program information required to define the operation of the control panel and the communicator is stored in a section of the EEPROM which can only be accessed using the installers' programming code. If the code is forgotten the default program code can be reinserted by using the "hardware reset" described on page 29.

To begin programming the PC3000, enter [*],[8],[3000] while the panel is disarmed. Installer programming can only be done while the panel is disarmed and not in alarm. The factory default installers' program code is [3000]. This default code can be changed using the Section [24] command listed below (new installers' code). Once the basic installer command is entered ([*],[8],[3000]) the program light will start to flash. The program light will continue to flash while programming. Note that while programming, if no key entry is made for more than 2 minutes the keypad will return to the normal arm/disarm condition and the complete installers command ([*],[8],[3000]) must be entered before programming can resume.

The next step is to enter a 2 digit section entry for any of the commands described in the following pages. Note that while the keypad is waiting for the section entry the armed light is on steady. As soon as the 2 digits are entered for the section the keypad will beep 3 times, the arm light will go out and the ready light will go on. The keypad is then ready to accept data entry for the selected section.

A complete description of each programming section will be given in the remaining pages of this section. A programming work sheet summarizing all programming commands is provided in the next section of the manual. Fill out the work sheet and use it as a guide when programming.

As the required data for a programming section is entered, the binary value of the last data entry is displayed on zone lights 1-4. Most sections contain several groups of two digit entries. The keypad beeps twice and the armed light flashes after each group of two digits is entered. When the required data is completely entered for the section being programmed, the keypad will beep five times and the armed light will come back on to indicate that the expected data has been entered and another section can be selected for programming. After completing one section, it is not necessary to re-enter the [*] [8] [installers' code] portion of the command. Just enter the number of another programming section. When programming a section, it is possible to exit by pressing [#]. Only the data entered before pressing [#] will be changed in the EEPROM. Practice entering data in several sections until you become familiar with the programming commands.

Certain programming entries may require "HEX" data. That is the numbers 0 through 9 and the letters A through F (in "HEX" numbering the letters A...F represent the numbers 10...15). Where commands require "HEX" data A-F, first press [*]. The keys 1-6 now assume the hex values A-F and the ready light begins to flash. Key 1=A. Key 2=B. Key 3=C. Key 4=D. Key 5=E. Key 6=F. Pressing the [*] again stops the ready light from flashing and the keys assume the normal values for the numbers from 1-9. The most common mistake in entering "HEX" data is forgetting to press [*] again after entering the "HEX" digit to return to normal number entry.

The data for sections 18,19,20,21,29,30,31,32,47 and 49 are entered using the keypad zone lights to indicate which functions are active and the number keys to turn functions on and off. When the section number is entered, the zone lights 1...8 will display which functions are currently on. Pressing the number key corresponding to the zone light alternately turns the function on and off. All functions can be turned off by entering [0]. When the correct selections have been made press [#] to record them in memory and to go on to program the next section.

PROGRAM DATA REVIEW

Enter the section you wish to review by entering the 2 digit section number. 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. NOTE: Only sections [01 thru [17], [22] thru [28] and [33], [46], [48] can be reviewed using the above method. Sections [18] to [21], [29] to [32], [47] and [49] cannot be reviewed.

[00] BINARY PROGRAMMING

This section is normally used upon instruction from factory technical personnel for specialized programming not covered by the standard programming instructions. Binary programming expects a 3 digit decimal address followed by a 2 digit HEX value for data. After entering the 2 digit HEX data the address is incremented to the next address. Exit binary programming by pressing [#]. Press [#] again to return keypad to normal arm/disarm condition.

[01] 1st PHONE NUMBER (Communicator)

This is the 1st telephone to which the communicator will dial. See Section "[33] TRANSMISSION TO 1ST OR 2ND TELEPHONE NUMBER OPTIONS". After entering the Section number [01], enter the communicator telephone number the way you would dial it on a 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 "HEX D" between the digits in the phone number where it is required. To do this press [*] to change to HEX entry, press [4] which now represents "HEX D" and press [*] again to return to normal number entry. Instead of a second dial tone search; a pause of 4 or 8 seconds can be inserted between digits in the telephone number by entering "HEX C" or "HEX E". The total number of digits including dial tone searches and pauses must not exceed 16. Remember to press [#] after entering the last digit of the phone number. Press [02] to program the next section, enter another section number or press [#] a second time to return to the arm/disarm mode. To perform control functions requiring an "*" (asterix) to be dialed enter a "HEX B" within the number.

[02] 1st ACCOUNT CODE (Communicator)

The 1st account code is always transmitted to the 1st phone number to identify the alarm customer. After entering the Section number [02], enter a 4 digit number. If "HEX" digits A to F are required; enter [*], [1]...[6] and [*] again to return keys to normal decimal entry. Where a zero digit in the account code is required use "HEX A" ([*][1][*]) to transmit 10 pulses. The receiver at the monitoring station interprets 10 pulses for a digit as a zero. If a three digit code is required, as in 3/1 formats, enter [0] as the last digit. [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 Section [01] 1st PHONE NUMBER for programming instructions.

[04] 2nd ACCOUNT CODE (Communicator)

The 2nd account code is always transmitted to the 2nd phone number. See Section [02] 1st ACCOUNT CODE for programming instructions.

[05]...[15] REPORTING CODE EXPLANATION

Sections [05] to [15] 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 in these sections no transmission will be sent when an event (i.e. alarm, restoral, opening/closing, trouble etc.) takes place. To prevent a transmission from being sent for any event in the following sections leave it unprogrammed or enter [00] as the reporting code.

Eight reporting codes are programmed in each section. Once the section code is entered, the keypad expects 8 two digit numbers to be entered for the 8 reporting codes in that section. The keypad beeps twice and the armed light flashes after each 2 digit number is entered. After the 8th code is entered, programming of the current section is complete. The keypad will beep 5 times, the "READY" light will go off and the "ARM" light will go on. The keypad is then ready to accept the next section number for programming.

When changing the reporting codes in a section, only code entries up to the one which is being changed need be entered. Press [#] to exit from the programming sequence. Only codes up to the last one entered will be changed.

[05] ALARM REPORTING CODES Zones 1 TO 8 (Communicator)

Once the Section code [05] is entered, the keypad expects 8 two digit numbers to be entered as the reporting codes for zones 1 to 8 (restorals in Section [07]). These codes are used by the communicator when there has been an alarm on zones 1 to 8. Listed below are several programming examples and the resulting transmission using different formats for the reporting codes. Obtaining different formats requires entering data correctly in the account code ([02] or [04]) Section, reporting codes ([05] to [15]) Section and communication format ([27]) Section.

3/1 FORMAT...SINGLE LINE OR NON-EXTENDED REPORTING

Required: -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 [27]

-single digit alarm reporting code in Section [05]

i.e. enter [30] for single digit code 3 (0 is null digit i.e. no pulses transmitted)

Transmission sent:

- 123 3

4/2 FORMAT...SINGLE LINE REPORTING

Required: -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 [21]

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

Required: -3 digit account code in Sections [02] or [04]

i.e. enter [1230] for account code 123

-Format code [8],[9],[A],[B],[C] depending on receiver type in Section [21]

-two digit alarm reporting code in Section [05]

i.e. enter [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 to disable that reporting code.

[06] ALARM REPORTING CODES ZONES 9 TO 16 (Communicator)

These reporting codes are used by the communicator to transmit a zone alarm for zones 9 to 16. Use instructions in Section [05] as a guide for programming.

[07] RESTORAL REPORTING CODES ZONES 1 TO 8 (Communicator)

These reporting codes are used by the communicator to transmit a zone restoral for zones 1 to 8. Use instructions in Section [05] as a guide for programming.

[08] RESTORAL REPORTING CODES ZONES 9 TO 16 (Communicator)

These reporting codes are used by the communicator to transmit a zone restoral for zones 9 to 16. Use instructions in Section [05] as a guide for programming.

[09] UTILITY ALARM REPORTING CODES (Communicator)

These reporting codes are used by the communicator to transmit the following conditions. Use instructions in Section [05] as a guide for programming.

- FIRE ZONE
- AUXILIARY INPUT ZONE
- BATTERY TROUBLE
- AC FAILURE TROUBLE
- FOIL ZONE(S) TROUBLE
- BELL CIRCUIT TROUBLE
- FIRE ZONE TROUBLE
- AUX POWER SUPPLY TROUBLE

See "TERMINAL CONNECTIONS" section of manual for a description of the operation of the FIRE ZONE and the AUXILIARY INPUT ZONE. Section [28] contains options for AUXILIARY INPUT ZONE. The BATTERY TROUBLE reporting code will be sent when the battery voltage drops below 11.5 volts. This reporting code will also be sent because of a battery fuse failure. The battery is tested under load every 10 seconds. Only one transmission will be sent during an arm or disarm period to prevent multiple transmissions from a weak battery. The AC FAILURE TROUBLE reporting code will be sent after the delay time programmed in Section [22]. This prevents transmissions during temporary power failures. AUXILIARY POWER SUPPLY TROUBLE reporting code is sent when the auxiliary power supply fuse is blown. The BELL CIRCUIT TROUBLE reporting code is sent when the bell circuit is open or the fuse is blown. The FIRE ZONE TROUBLE code is sent when the fire zone becomes open circuit (E.O.L. resistor is disconnected). The FOIL ZONE TROUBLE code is sent when any zone defined as a foil loop (see Section [16],[17]) goes open when the system is disarmed. See [*][2] TROUBLE COMMAND for additional description of trouble codes and transmissions.

[10] UTILITY RESTORAL REPORTING CODES (Communicator)

These reporting codes are used by the communicator to transmit the following list of restoral conditions which correspond to alarm conditions in Section [09]. Use instructions in Section [05] as a guide for programming.

- FIRE ZONE
- AUXILIARY INPUT ZONE
- BATTERY TROUBLE
- AC TROUBLE
- FOIL ZONE(S) TROUBLE
- BELL CIRCUIT TROUBLE
- FIRE ZONE TROUBLE
- AUX POWER SUPPLY TROUBLE

[11] REPORTING CODES FOR CLOSING (ARMING) VIA USER CODES 1 TO 8

The reporting codes in Sections [11] to [14] are used to identify "OPENINGS AND CLOSINGS" (disarming and arming of the system) by user access code.

After entering the Section code [11], enter 8 two digit reporting codes. The 8 reporting codes correspond to the first 8 user access codes which are programmed using the [*][5] command. When the system is armed using one of the user access codes, the corresponding reporting code is transmitted.

When transmitting in any of the extended formats, (see examples in Section [05]), closing codes would be programmed as follows. [C1],[C2],[C3],[C4],[C5],[C6],[C7],[C8].....

Where the first digit "HEX C" is one which is used to represent a closing signal (this could be another number depending on what is used at the monitoring station) the 2nd digit represents the user access code which was used to arm the system.

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.

Remember that the 1st user access code is the master code and that the 16th code is the temporary or maid's code. The 16th user code can be converted to a normal code using one of the options of the system definition code in Section [18].

When the system has been armed using "QUICK ARM" [*][0] or "AUTO ARM" (see [*][6] keypad commands), the 1st reporting code (reporting code for master code) will be transmitted. The master code is required to enable or disable these functions.

When the system is armed with one or more zones by-passed (see [*][1] command for zone by-passing), the monitoring station can be notified by programming the PARTIAL ARM reporting in Section [15]. Note that the PARTIAL CLOSING code is sent in tandem with the regular closing code to identify it as a partial closing condition.

[12] REPORTING CODES FOR CLOSING (ARMING) VIA USER CODES 9 TO 16

See Section [11] for further information.

[13] REPORTING CODES FOR OPENINGS (DISARMING) VIA USER CODES 1 TO 8

The 8 reporting codes correspond to the first 8 user access codes which are programmed using the [*][5] command. When the system is disarmed using one of the user access codes, the corresponding reporting code in this section is transmitted.

See Section [11] for an example of "OPENING AND CLOSING" reporting code programming.

[14] REPORTING CODES FOR OPENINGS (DISARMING) VIA USER CODES 9 TO 16

See Section [13] for further information.

[15] REPORTING CODES FOR MISCELLANEOUS FUNCTIONS

The reporting codes programmed in this section include the PARTIAL CLOSING code described in Section [11], ALARM and RESTORAL codes for the keypad zones and the PERIODIC TEST reporting code (every 1 to 99 days). The PERIODIC TEST cycle time is set in Section [22] and reporting time of day is set in Section [23].

The reporting codes are programmed in the following order.

PARTIAL CLOSING

KEYPAD PANIC ALARM [P]

KEYPAD FIRE ALARM [F]

KEYPAD EMERGENCY ALARM [A]

KEYPAD PANIC RESTORAL [P]

KEYPAD FIRE RESTORAL [F]

KEYPAD EMERGENCY RESTORAL [A]

PERIODIC TEST TRANSMISSION

[16] ZONE DEFINITION FOR ZONES 1 TO 8 (Control Panel)

As in the reporting codes, once this section number is entered 8 two digit numbers are required. Each 2 digit number entered describes how a zone will operate. The 8 two digit numbers entered correspond to zone definitions for zones 1 to 8.

The first digit entered determines whether the zone will be audible or silent and whether it will have a fast or slow response time (loop response time may be altered in Section [22]). The second digit determines the zone type (i.e. delay, instant, interior, or 24 hour zone).

1st DIGIT	2nd DIGIT	FACTORY PROGRAMMED (DEFAULT)	ZONE
0= SLOW, AUDIBLE	0= DELAY	0 0	1
# 1= SLOW, SILENT	1= INSTANT	0 1	2
2= FAST, AUDIBLE	2= INTERIOR	0 1	3
# 3= FAST, SILENT	3= INTERIOR..HOME/AWAY	0 1	4
	4= 24 HR..BELL	0 1	5
* The maximum delays allowed for U.L. installations are: Entry delay = 45 sec. Exit delay = 60*	5= 24 HR..BELL/BUZZER	0 1	6
# Not allowed for U.L. Local installations	# 6= 24 HR..BUZZER	0 1	7
	* 7= DOUBLE DELAY	0 1	8
	* 8= 4 X DELAY		
	9= FOIL		

All of the zone types, except the 24 hour loops and foil loop, have an exit delay (see Section [22] for setting exit and entry delay times). All zones with an exit delay may be tripped during the exit delay without creating an alarm.

If you are not familiar with the different loop types, test them to see how they function. To avoid confusion, be sure the exit time has expired before creating alarms (READY light will go out when exit time has expired). Set short exit and entry times for testing.

The type [0] DELAY loop is used for the exit/entry door. It has an exit delay and an entry delay. The exit delay starts as soon as the panel is armed. The loop may be opened and closed during the exit delay without creating an alarm. After the exit delay has expired, an open on the loop will cause the entry delay time to start. During the entry time the keypad buzzers will sound steady. If the panel is disarmed before the entry time expires no alarm will be generated. Type [7] and [8] DELAY loops are used where a longer entry delay time is required such as with a garage door. With these two loop types the exit delay is the same as the type [0] delay. However, the entry delay times are either 2 or 4 times as long (set the exit delay time for the maximum required).

The type [1] INSTANT loop is normally used for door and window contacts. This loop has a normal exit delay but will generate an alarm immediately when opened after the exit delay.

The type [2] INTERIOR and type [3] INTERIOR WITH HOME-AWAY loops are used with interior motion detectors. Both loops have standard exit delays. They also have entry delays provided that a delay loop has been tripped first. If the building is entered without coming through the normal delay entrance and a type [2] or [3] loop is tripped, an immediate alarm will be generated. The type [3] loop is by-passed if the system is armed using the [*][9] command (at home arming) or if a DELAY zone is not tripped during the exit delay.

The type [4], [5] and [6] 24 HOUR loops provide different audible variations. 24 Hour loops are always active and create an alarm whether or not the panel is armed. Type [4] always rings the bell or siren. Type [5] rings the bell or siren at night and the keypad buzzer during the day. Type [6] always sounds the keypad buzzer.

The type [9] FOIL LOOP is a variation of a 24 hour circuit. It operates as a type [5] loop by ringing the bell or siren at night and the keypad buzzer during the day (2 beeps every 10 seconds; pressing any key silences keypad buzzer). However, a trouble transmission (programmed in section [10]) is sent when the system is disarmed rather than an alarm transmission (programmed in section [05]).

[17] ZONE DEFINITION FOR ZONES 9 TO 16 (Control Panel)

1st DIGIT	2nd DIGIT	FACTORY PROGRAMMED (DEFAULT)	ZONE
0 = SLOW, AUDIBLE	0 = DELAY	0 1	9
# 1 = SLOW, SILENT	1 = INSTANT	0 1	10
NOTE.....	2 = INTERIOR	0 1	11
ZONES 9 - 16 CANNOT BE PROGRAMMED FOR FAST RESPONSE - DO NOT USE FAST RESPONSE DEVICES ON THESE LOOPS.	3 = INTERIOR/HOME AWAY	0 1	12
(eg. vibration det.)	4 = 24 HR..BELL	0 1	13
	5 = 24 HR..BELL/BUZZER	0 1	14
	# 6 = 24 HR..BUZZER	0 1	15
	7 = DOUBLE DELAY	0 1	16
	* 8 = 4 X DELAY		
	* 9 = FOIL		

* The maximum delays allowed for U.L. installations are: Entry delay = 45 sec.
Exit delay = 60"

Not allowed for U.L. Local installations

[18] 1ST SYSTEM OPTION CODE

The 1st system option code is set using the zone lights to indicate which options in the following list are active. Once Section [18] is entered the 8 zone lights will indicate which options are active. Press a key to turn an option on or off. Press [0] to turn all options off.

- [1] LIGHT OFF = COMMUNICATIONS ENABLED
LIGHT ON = COMMUNICATIONS DISABLED
- [2] LIGHT OFF = RESTORALS ON DISARMING
LIGHT ON = RESTORALS ON BELL TIMEOUT
- [3] LIGHT OFF = NO ALARM DISPLAY WHILE PANEL ARMED
LIGHT ON = ALARM DISPLAY WHILE PANEL ARMED
- [4] LIGHT OFF = PULSE OR ROTARY DIALING
LIGHT ON = DTMF OR TOUCH TONE DIALING
- [5] LIGHT OFF = ZONES 1 TO 16 END-OF-LINE-RESISTOR SUPERVISED
LIGHT ON = ZONES 1 TO 16 NORMALLY CLOSED LOW LOOPS
- [6] LIGHT OFF = KEYPAD PANIC [P] IS SILENT
LIGHT ON = KEYPAD PANIC [P] IS AUDIBLE
- [7] LIGHT OFF = CALL 1ST PHONE WITH BACKUP TO 2ND PHONE (SECTION [33])
LIGHT ON = BECOMES 1ST PHONE NUMBER ONLY
- [8] LIGHT OFF = 16TH CODE BECOMES NORMAL USER ACCESS CODE
LIGHT ON = 16TH CODE IS MAID'S CODE (ONE TIME USE CODES)
(User access codes are programmed with [*][5] command)

[19] 2ND SYSTEM OPTION CODE

Use same method of programming as used in section [18].

- [1] LIGHT OFF = SENDS NORMAL OPENING
LIGHT ON = SENDS OPENING AFTER ALARM
- [2] LIGHT OFF = MASTER CODE CHANGEABLE
LIGHT ON = MASTER CODE NOT CHANGEABLE
- [3] LIGHT OFF = BELL SQUAWK DISABLED
LIGHT ON = BELL SQUAWK ENABLED
(1 burst on ARM/2 bursts on DISARM)

- [4] LIGHT OFF = PC16OUT MODULE DISABLED
LIGHT ON = PC16OUT MODULE ENABLED
- [5] LIGHT OFF = TLM NORMAL (SEE [7] BELOW)
LIGHT ON = TLM TROUBLE ONLY (TLM = TELEPHONE LINE MONITORING)
- [6] LIGHT OFF = ACCEPTS 2300Hz (STANDARD) HANDSHAKE
LIGHT ON = ACCEPTS 1400Hz HANDSHAKE FOR RADIONICS FORMATS
#3, 4, B AND C IN SECTION [27]
- [7] LIGHT OFF = TLM ENABLED
LIGHT ON = DISABLE TELEPHONE LINE MONITORING (TLM)
- [8] LIGHT OFF = NO ACCESS CODE REQUIRED FOR ZONE BYPASSING
LIGHT ON = USE [*]+[1]+[USER CODE] FOR ZONE BYPASSING (SHUNTING)

[20] ZONES 1 TO 8 BYPASS MASK (Control Panel)

Use the same method of programming as used in section [18]. Using this section it is possible to control which zones the user is able to bypass using the [*][1] command. If the zone light is on the zone can be bypassed. If the zone light is off that zone cannot be bypassed.

[21] ZONES 9 TO 16 BYPASS MASK (Control Panel)

Use same method of programming as used in section [20]. Note: Zone lights 1 to 8 represent zones 9 to 16 in this section, to allow single digit entry.

[22] SYSTEM TIMES (Control Panel and Communicator)

Once the section number is entered 6 two digit numbers are expected to be entered. The valid range for entries in this section is 01 to 99. Hex values are not allowed. The times are entered in the following order:

- ENTRY DELAY TIME (IN SECONDS)
- EXIT DELAY TIME (IN SECONDS)
- BELL CUT OFF TIME (IN MINUTES)
- DELAY BEFORE AC FAILURE TROUBLE REPORTING (IN MINUTES)
- SLOW LOOP RESPONSE TIME (IN 10 msec INCREMENTS) — Default loop response — 500 msec.
- TEST TRANSMISSION CYCLE TIME (IN DAYS)

Up to a 99 minute delay may be programmed before the AC FAILURE reporting code is transmitted. The reporting code for AC FAILURE TROUBLE is programmed in sections [9] and [10].

The loop response time is the length of time that an alarm condition must be present on a loop before it is detected. Certain vibration detectors, shock sensors and glass break detectors require a fast response loop in order to operate. The loops to which these types of detectors are connected should be programmed as fast response loops. All other loops should be programmed as slow response loops. Loops are defined as either fast or slow response time in Section [16]. The fast response time is fixed at 10 milliseconds. The SLOW LOOP RESPONSE TIME is programmable in increments of 10 milliseconds. The normal entry would be 50 for a 500 msec slow response time. NOTE: ZONES 9 TO 16 CAN BE PROGRAMMED FOR SLOW LOOP RESPONSE ONLY.

The test transmission is sent to the monitoring station on a regular basis to confirm that the communication link to the system is intact. The TEST TRANSMISSION CYCLE TIME is how often (in days) the test transmission is sent. The reporting code for the test transmission is programmed in Section [15]. The time of day that the test transmission is sent is programmed in Section [23].

[23] SYSTEM CLOCK TIMES

After the Section number [23] is entered 3 four digit numbers are expected. These numbers are the following system times.

AUTOMATIC ARMING TIME OF DAY (HH:MM)
TEST TRANSMISSION TIME OF DAY (HH:MM)

Times are entered using the "24 hour clock" (military time). Valid entries are 00 to 23 for HH (i.e. hours) and 00 to 59 for MM (i.e. minutes). NOTE: IF INVALID TIMES ARE ENTERED FUNCTIONS WILL NOT WORK. The automatic arm function is enabled and disabled using the [*][6][MASTER CODE] USER PROGRAMMING COMMAND.

[24] NEW INSTALLER'S CODE

[25] NEW MASTER CODE (1ST USER ACCESS CODE)

[26] DOWNLOADING ACCESS CODE

Enter a new 4 digit code in each of the sections above once the section number has been entered. Only use digits 0 to 9 as code numbers. Do not press the [*] or [#] keys. If an error is made in entering a code, continue to enter the four digits then enter the section number again and re-enter the correct code. Do not press the [*] or [#] while entering these codes. Do not make any of the three codes the same.

[27] COMMUNICATOR FORMAT OPTIONS

This section sets the type of format which will be sent to each of the two telephone numbers programmed in Sections [1] and [3]. Enter one HEX digit (i.e. when entering HEX "A" press [*][1][*]) for each. The number entered for each phone number is determined by the requirements of the receiver being called. Enter the format number for the "1st TELEPHONE NUMBER" first. It is necessary to program both format numbers for each telephone number even if the first phone number is the only one being used. Options are as follows.

- [0] SILENT KNIGHT/ADEMCO SLOW, 10 BPS (1400HZ HANDSHAKE) 3/1, 3/2 AND 4/1, 4/2 NON EXTENDED FORMAT
- [1] SESCOA, FRANKLIN, DCI, VERTEX, 20 BPS (2300HZ HANDSHAKE) 3/1, 3/2 AND 4/1, 4/2 NON EXTENDED FORMAT
- [2] SILENT KNIGHT FAST, 20 BPS (1400HZ HANDSHAKE) 3/1, 3/2 AND 4/1, 4/2 NON EXTENDED FORMAT
- [3] RADIONICS, (2300/1400HZ HANDSHAKE) 3/1, 4/2 NON EXTENDED FORMAT
- [4] RADIONICS, (2300/1400HZ HANDSHAKE) 3/1, 4/2 NON EXTENDED WITH PARITY FORMAT
- [5] SESCOA SUPER SPEED
- [6] NOT USED
- [7] NOT USED
- [8] SILENT KNIGHT/ADEMCO SLOW, 10 BPS (1400HZ HANDSHAKE) 3/1 EXTENDED FORMAT
- [9] SESCOA, FRANKLIN, DCI, VERTEX, 20 BPS (2300HZ HANDSHAKE) 3/1 EXTENDED FORMAT
- [A] SILENT KNIGHT FAST, 20 BPS (1400HZ HANDSHAKE) 3/1 EXTENDED FORMAT
- [B] RADIONICS, (2300/1400HZ HANDSHAKE) 3/1 EXTENDED FORMAT
- [C] RADIONICS, (2300/1400HZ HANDSHAKE) 3/1 EXTENDED WITH PARITY FORMAT
- [D] SESCOA SUPER SPEED (WITH IDENTIFIED OPENINGS/CLOSINGS)
- [E] NOT USED
- [F] NOT USED

10 BPS AND 20 BPS FORMATS

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

20 BPS is the standard fast format used on DCI, Franklin, Sescoa and Vertex receivers. DATA=1800HZ.
KISSOFF=2300HZ SPEED=20 BAUD.

RADIONICS FORMAT

For conventional 3/1 Radionics 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 have been provided to help in configuring the PC3000 for Radionics format.

1. The customer account code must be only 3 digits with a zero making up the 4th digit (i.e. program 1230 for account code 123).
2. The zone alarm reporting codes must all be single digit numerical codes with no extended 2nd round being sent. The zero in the 2nd digit of the reporting code tells the PC3000 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
MISC	"D"	EXAMPLE "D1" = PARTIAL CLOSING

SESCOA SUPER SPEED FORMAT

The SESCOA super speed format must be programmed exactly as follows to function correctly.

- 1- The account code must be four decimal digits in length in the range of 0001 to 3374.
- 2- The reporting codes must be 2 digits in length and programmed as follows.

ZONE 1 TO 8 ALARMS (SECTION [05]) A1 TO A8 (SECTION [06]) A9, 1A, 11 TO 16

ZONE 1 TO 8 RESTORALS (SECTION [07]) A1 TO A8 (SECTION [08]) A9, 1A, 11 TO 16

ALL OPENING CODES (section [10])	BA
ALL CLOSING CODES (section [09])	CA
PARTIAL CLOSING (section [11])	C1
LOW BATTERY (section [07])	EI
BATTERY RESTORALS (section [08])	EI
AC FAILURE	EI
AC RESTORAL	EI
BELL CCT. TROUBLE	FI
BELL CCT. RESTORAL	FI
TROUBLES (section [07])	A0
MISC ALARMS (section [11])	(A1 TO 99)
TEST CODE (section [11])	1C OR DC

[28] PROGRAMMABLE INPUT AND OUTPUT OPTIONS

Both the Auxiliary Input Zone and the Programmable Output have options which are programmed in this section. After the section number [28] is entered, enter 2 HEX digits from the following lists to program them.

AUXILIARY INPUT ZONE (1st digit)

- [0] PRINTER ATTACHED TO PANEL (see note 1)
- [1] SILENT 24 HR INPUT
- [2] AUDIBLE 24 HR INPUT
- [3] MOMENTARY ARMING INPUT
- [4] FORCED ANSWER WITH PLS MODULE

See Auxiliary Input Terminal in the TERMINAL CONNECTIONS section on page 7 for details on the Auxiliary Input. When option [3] is selected, a momentary key closure between the Auxiliary Input and the Positive Auxiliary Power Supply will alternately arm and disarm the system. The reporting codes for the Auxiliary Input (Section [9] and [10]) can be used as opening and closing codes for key arming.

PROGRAMMABLE OUTPUT (2nd digit)

- [1] GROUND START PULSE
- [2] UTILITY OUTPUT ([*],[7]) NO ACCESS CODE
- [3] UTILITY OUTPUT ([*],[7]) ANY ACCESS CODE
- [4] UTILITY OUTPUT ([*],[7]) GROUP A ACCESS CODE
- [5] UTILITY OUTPUT ([*],[7]) GROUP B ACCESS CODE
- [6] KEYPAD BUZZER FOLLOW MODE
- [7] SYSTEM STATUS (ARM/DISARM) OUTPUT
- [8] STROBE OUTPUT (LATCHED ALARM OUTPUT)
- [9] FAILURE TO COMMUNICATE OUTPUT
- [A] NOT USED
- [B] NOT USED
- [C] PRINTER ATTACHED TO PANEL (See note 1)

NOTE (1): IF A PRINTER IS ATTACHED TO THE PANEL, BOTH [0] FOR THE 1ST DIGIT AND [C] FOR THE 2ND DIGIT MUST BE ENTERED.

See Programmable Output Terminal in the TERMINAL CONNECTIONS section on page 7 for details on connecting the "PGM OUT" terminal. Option [1] provides a 2 second ground start pulse before dialing begins to obtain the dial tone on ground start telephone equipment.

Options [2] to [5] change the "PGM OUT" terminal to different options used with the keypad UTILITY OUTPUT [*][7] command. See Utility Output command in the KEYPAD COMMAND section.

With option [6] the "PGM OUT" terminal switches to ground as long as the keypad buzzer is on.

With option [7] the "PGM OUT" terminal switches to ground when the panel is armed. The switch is open when the panel is disarmed.

With option [8] the "PGM OUT" terminal switches to ground after an alarm and remains switched on until the system is disarmed.

With option [9] the "PGM OUT" terminal switches to ground if the system fails to communicate with the monitoring station after 8 attempts. The output stays switched to ground until a successful communication takes place or until trouble #5 is cleared from the keypad. This option may be used to tie two systems together. One system can then be made to report a communication failure for the other.

[29][30][31][32] - SPLIT ARMING (NOTE: Split-Arming is not allowed for U.L. installations.)

SPLIT ARMING is a feature of the PC3000 that permits a single control panel to act as two independent alarm systems each with its own opening and closing schedules, zone assignments and authorized users.

The allowable zone and access code assignments to system (A) or system (B) are described below. Typically, zones and access codes are assigned to either group (A) or group (B) but the PC3000 can be programmed for zones and access codes that are common to both group (A) and group (B).

NOTE: ZONES 9 THRU 16 AND USER CODES 9 THRU 16 ARE PERMANENTLY ASSIGNED TO GROUP (A). ONLY ZONES 1 THRU 8 AND USER CODES 1 THRU 8 CAN BE ASSIGNED TO EITHER GROUP (A) OR GROUP (B).

NOTE: When the system is configured for Split Arming the Bypass light will not indicate Bypassed "Home-Away" zones. On "Split-Armed" systems, zones configured as "Home-Away" should be on side 'A' only.

SPLIT SYSTEM ALLOWABLE ZONE AND ACCESS CODE ASSIGNMENTS			
[29] GROUP (A) ZONE ASSIGNMENT	[30] GROUP (B) ZONE ASSIGNMENT	[31] GROUP (A) ACCESS CODE ASSIGNMENT	[32] GROUP (B) ACCESS CODE ASSIGNMENT
	(ZONE)		(CODE)
-	<---(1)-->	-	<---(1)-->
-	<---(2)-->	-	<---(2)-->
-	<---(3)-->	-	<---(3)-->
-	<---(4)-->	-	<---(4)-->
-	<---(5)-->	-	<---(5)-->
-	<---(6)-->	-	<---(6)-->
-	<---(7)-->	-	<---(7)-->
-	<---(8)-->	-	<---(8)-->
9	X	9	X
10	X	10	X
11	X	11	X
12	X	12	X
13	X	13	X
14	X	14	X
15	X	15	X
16	X	16	X
	ZONES 9 - 16 CANNOT BE ASSIGNED TO GROUP (B)		CODES 9 - 16 CANNOT BE ASSIGNED TO GROUP (B)

COMMON ZONES:

If a zone (1 thru 8 only) is assigned to both group (A) and group (B) then both group (A) and group (B) must be armed for that zone to be armed.

COMMON ACCESS CODE:

If an access code (1 thru 8 only) is assigned to group (A) and group (B) then that access code will arm and disarm the entire panel.

ARMED STATUS INDICATIONS:

When the panel is established as a split system, and ONE side only [group (A) or (B)] is armed, the "armed" indicator will flash and the zone indicators for the group that has been armed will flash.

If both group (A) and group (B) are armed the "armed" indicator will be on steadily and the zone lights will be OFF.

ZONE SHUNTING ACCESS CODE:

When the system is established for split arming, user zone shunting should be set so that shunting requires the use of a user access code. (see Section [19])

UNASSIGNED ZONES:

If any of zones 1 to 8 are not assigned to either group (A) or group (B) then a transmission will not be sent and there will be no panel response if those unassigned zones are activated.

Zones 9 through 16 are permanently assigned to group (A)

UNASSIGNED ACCESS CODES:

If any of access codes 1 to 8 are not assigned to either group (A) or group (B) then a transmission will not be sent and there will be no panel response if those unassigned access codes are entered.

An access code not assigned to either group (A) or group (B) will still work with the [*][7] keypad command but cannot report an opening or closing signal. (eg. code could be assigned to operate a door strike only)

Access codes 9 through 16 are permanently assigned to group (A)

COMMUNICATOR:

When the PC3000 is set up for "split arming" and both Group "A" and Group "B" systems are reporting to the same telephone number Group "A" burglar alarms and restorals are programmed as [1] in Section [33] to call the 1st phone number only. The number seven light in Section 18 must be turned "ON".

Group "B" burglar alarms and restorals are programmed with a [2] in Section [33] to call the 2nd phone number only. It is necessary to program both the 1st and 2nd phone number locations with the same telephone number.

[33] COMMUNICATOR CALL DIRECTION OPTIONS

Programming this section tells the dialer whether to send transmissions to the 1st or 2nd telephone number.

There are three classes of dialer call direction options.

- [0] No transmission for this group
- [1] Call 1st phone number with back up to 2nd number
- [2] Call 2nd phone number only
- [3] Always call both phone numbers

Option [1] becomes "Call 1st number only" when item [7] in Section [18] is turned on (LIGHT ON).

After entering the section number, enter [1], [2] or [3] for each of the following reporting code groups in the order given (total of six digits).

ZONES GROUP A ALARMS AND RESTORALS
ZONES GROUP B ALARMS AND RESTORALS
ACCESS CODES GROUP A OPENINGS AND CLOSINGS
ACCESS CODES GROUP B OPENINGS AND CLOSINGS
PRIORITY ALARMS AND RESTORALS
MAINTENANCE ALARMS AND RESTORALS

Where all reporting codes are to be sent to one telephone number, enter [1] for all of the above classes.

[34] RESET EEPROM MEMORY TO FACTORY DEFAULTS

This Section is used to reset the EEPROM memory to the original factory default values. As soon as [34] is entered the EEPROM is reset and the program is restarted as though power had just been applied.

[35] THRU [45] RESERVED FOR FUTURE USE

[46] DOWNLOADING CALLBACK TELEPHONE NUMBER

This is the telephone number that the panel would use to call the downloading computer if the CALLBACK feature (Section [47]) is enabled.

[47] MODEM CONFIGURATION

This section is used to enable the Downloading function. If Downloading is enabled then the Downloading access code must be entered, (Section [26]) and the Panel Identification Code must be entered. (Section [48].) If Callback is enabled then the Callback telephone number must be entered. (Section [46].)

- [1] LIGHT OFF = 0
LIGHT ON = 1
- [2] LIGHT OFF = 0
LIGHT ON = 2
- [3] LIGHT OFF = 0
LIGHT ON = 4
- [4] LIGHT OFF = 0
LIGHT ON = 8
- [5] LIGHT OFF = DOWNLOADING IS DISABLED
LIGHT ON = DOWNLOADING IS ENABLED
- [6] LIGHT OFF = USER INITIATED CALLUP DISABLED
LIGHT ON = USER INITIATED CALLUP ENABLED
- [7] LIGHT OFF = FUNCTION DISABLED
LIGHT ON = ANSWERING MACHINE DEFEAT ENABLED
- [8] LIGHT OFF = CALLBACK FOR DOWNLOADING ACCESS DISABLED
LIGHT ON = CALLBACK FOR DOWNLOADING ACCESS ENABLED

This section is used to set the number of rings that the panel must see before it will answer a call from the downloading computer.

The number of rings is the sum of the BINARY digits as represented by lights 1 through 4.

e.g. light 1 = off = 0 SEE
 light 2 = on = 2 TABLE
 light 3 = off = 0 BELOW
 light 4 = on = 8
 SUM..... = 10 rings

NUMBER OF RINGS

ZONE LIGHT
 ZONE LIGHT
 ZONE LIGHT
 ZONE LIGHT

	1	2	3	4	5	6	7	8	9	10	11	12
1	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
2	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF
3	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON
4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON

FACTORY DEFAULT SETTING

DOWNLOADING AND ANSWERING MACHINE

The PC3000 software provides a means to handle Downloading when an Answering machine is also connected to the telephone line. In section [47], if zone light 7 is OFF, it is assumed that there is no answering machine connected to the telephone line and the panel will capture the line after the set number of rings.

If zone light 7 is OFF and an answering machine is connected and it is set to answer before the panel, the panel will be unable to receive a call from a Downloading Computer. If the panel is set to answer before the answering machine, the answering machine will be unable to receive incoming messages.

If zone light 7 is ON, the panel will look at the line after the set number of rings or after the call has been answered by lifting a local handset or after an answering machine has answered. The panel looks at the line for a very short period, 0.6 sec., to determine if a downloading computer is calling. If it is a Downloading Computer, the panel captures the line and communicates with the computer. If it is NOT a Downloading Computer, the line is released and the incoming call continues as normal.

Some answering machines are equipped with a Call in Progress Control function. (CPC) If your answering machine has this function and it is connected on the same line as the panel, the CPC function should be disabled. A switch is usually provided to disable the CPC. If the CPC is not disabled, the answering machine will be disabled the first time the control panel looks at the line to see if a Downloading Computer is calling.

Some answering machines are equipped with a remote tone receiver which is used to retrieve messages and have them playback to the caller. The caller should wait for the panel to sample the line before activating the remote tone device. If the remote tone is generated while the panel is sampling the line, the panel may hold the line thus denying the caller access to the answering machine. The caller should wait 10 seconds after the telephone has been answered.

Once the panel is connected to a Downloading Computer, no [*] functions can be performed. If the [*] key is pressed while the panel is connected to a Downloading computer, the keypad buzzer will sound one long tone to indicate an error.

[48] PANEL IDENTIFICATION CODE

[49] PRINTER CONFIGURATION

- [1] LIGHT OFF = NOT 110 BAUD
LIGHT ON = 110 BAUD SELECTED
- [2] LIGHT OFF = NOT 300 BAUD
LIGHT ON = 300 BAUD SELECTED
- [3] LIGHT OFF = NOT 1200 BAUD
LIGHT ON = 1200 BAUD SELECTED
- [4] LIGHT OFF = NOT 2400 BAUD
LIGHT ON = 2400 BAUD SELECTED
- [5] LIGHT OFF = PRINTER & NORMAL COMMUNICATIONS
LIGHT ON = PRINTER ONLY
- [6] LIGHT OFF = PRINTER & NORMAL COMMUNICATIONS
LIGHT ON = see NOTE (1) below
- [7] LIGHT OFF = PRINTER YELLOW TO PIN 11, SRTS
LIGHT ON = PRINTER YELLOW TO PIN 4, RTS OR TO PIN 20, DTR
- [8] LIGHT OFF = TEST TRANSMISSION
LIGHT ON = PERIODIC DOWNLOADING

NOTE (1): IF ZONE LIGHT 6 IS ON AND ZONE LIGHT 5 IS OFF:

All items whose reporting codes are programmed for telephone #1 will be communicated to the monitoring station AND printed on the printer.

All items whose reporting codes are programmed for telephone #2 will NOT be communicated to the monitoring station but will be printed on the printer.

IF ZONE LIGHT 5 AND 6 ARE OFF:

All items whose reporting codes are programmed for telephone #1 or telephone #2 will be printed on the printer and communicated to the monitoring station.

IF ZONE LIGHT 5 IS ON:

All items whose reporting codes are programmed for telephone #1 or telephone #2 will be printed on the printer but will not be communicated to the monitoring station. In this case it is assumed that telephone lines are not connected. DO NOT disable the communicator. The 1st System Option Code, zone light [1] must be ON. To avoid TLM trouble, program 2nd System Option Code light [7] to be ON.

[50] EEPROM COPY COMMAND

NOTE: TO REDUCE PROGRAMMING TIME AND ERRORS, IT IS RECOMMENDED THAT THE EEPROM COPY FEATURE BE USED WHEREVER POSSIBLE.

This command is used to duplicate the EEPROM memory chip (small 8 pin chip located to the left of the large 40 pin microprocessor chip). Using this command it is possible to make a master EEPROM chip. This master chip may be copied into unprogrammed panels to eliminate most of the programming. Once the master chip is copied into a panel, any changes may still be made using the normal programming commands.

All programmed codes except user access codes and transmission format is copied.

Follow these steps in using this command:

To make a master chip:

1. Use the normal programming method to program into the EEPROM all the information required in the masterchip. The point of making a master chip is to eliminate the repetitive programming for each new installation. Therefore all the information which does not normally change from one installation to the next should be entered in the master.
2. Turn off the power to the panel and remove the EEPROM. It contains all the required information.
3. Once the desired master chip is created, make several copies of it using the instructions below. Additional blank EEPROMS can be obtained from your DSC distributor. (Part # PC3000EE)

To copy a master chip into an unprogrammed panel:

1. Remove the EEPROM chip from the panel with the power off.
2. Insert the master chip. Be careful to insert the EEPROM with the pin 1 identification dot to the lower left. If the chip is inserted incorrectly and the power is applied, the chip will be destroyed instantly.
3. Power up the panel and enter [*],[8],[INSTALLER CODE],[50].
4. All zone lights will go on when the master is loaded into the panel.
5. With power still on, remove the master EEPROM and insert the blank EEPROM back into the panel. Insert in correct direction.
6. With the blank EEPROM inserted press any key. Zone lights will flash for a few seconds while EEPROM is being programmed. If the lights slow down or freeze at a certain point during this programming cycle, the EEPROM is defective. If this happens start from step 1. with a different EEPROM.
7. When the programming is complete the panel will reset and go back to the arm/ disarm state. Enter the programming command again to complete any remaining programming.

HARDWARE RESET OF EEPROM TO FACTORY DEFAULTS

If the Installers code is lost through inadvertent reprogramming, the only means of getting back into the system is via a hardware reset.

Follow the sequence outlined below to get back to factory default conditions.

1. Power unit down by removing both AC and battery power.
2. Using a short jumper, short pins marked "EEPROM RESET" together.
3. Power PC3000 up.
4. Wait for 10 seconds then remove shorting jumper.
5. The system will have reloaded the EEPROM with the factory default codes.

PROGRAMMING WORK SHEET

NOTE: IN SECTIONS [01] THRU [15]
DO NOT ENTER ANY DATA IN
SECTIONS THAT ARE NOT USED.

[01] 1ST PHONE NUMBER

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

[02] 1ST CUSTOMER ACCOUNT CODE

--	--	--	--

(for 3 digit code enter [0] for last digit)
(enter [*1*] (HEX A) for digit 0 in account code)

[03] 2ND PHONE NUMBER

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

[04] 2ND CUSTOMER ACCOUNT CODE

--	--	--	--

[05] ZONES 1 TO 8 ALARM REPORTING CODES

ZONE 1 ALARM	<table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>																
ZONE 2 ALARM																	
ZONE 3 ALARM																	
ZONE 4 ALARM																	
ZONE 5 ALARM																	
ZONE 6 ALARM																	
ZONE 7 ALARM																	
ZONE 8 ALARM																	

(for single digit reporting codes
enter [0] as 2nd digit)
(enter [*1*] (HEX A) to transmit a 0
a 0 digit is 10 pulses)

[06] ZONES 9 TO 16 ALARM REPORTING CODES

ZONE 9 ALARM	<table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>																
ZONE 10 ALARM																	
ZONE 11 ALARM																	
ZONE 12 ALARM																	
ZONE 13 ALARM																	
ZONE 14 ALARM																	
ZONE 15 ALARM																	
ZONE 16 ALARM																	

(for single digit reporting codes
enter [0] as 2nd digit)
(enter [*1*] (HEX A) to transmit a 0
a 0 digit is 10 pulses)

[07] ZONES 1 TO 8 RESTORAL REPORTING CODES

ZONE 1 ALARM	<table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>																
ZONE 2 ALARM																	
ZONE 3 ALARM																	
ZONE 4 ALARM																	
ZONE 5 ALARM																	
ZONE 6 ALARM																	
ZONE 7 ALARM																	
ZONE 8 ALARM																	

[08] ZONES 9 TO 16 RESTORAL REPORTING CODES

ZONE 9 ALARM
 ZONE 10 ALARM
 ZONE 11 ALARM
 ZONE 12 ALARM
 ZONE 13 ALARM
 ZONE 14 ALARM
 ZONE 15 ALARM
 ZONE 16 ALARM

[09] UTILITY ALARM REPORTING CODES

FIRE ZONE*
 AUXILIARY INPUT ZONE*
 BATTERY TROUBLE**
 AC FAILURE TROUBLE**
 FOIL ZONE(S) TROUBLE**
 BELL CIRCUIT TROUBLE**
 FIRE ZONE TROUBLE**
 AUX POWER SUPPLY TROUBLE**

* Priority alarms/restoral
 ** Maintenance alarms/restoral
 see section [33]

[10] UTILITY RESTORAL REPORTING CODES

FIRE ZONE*
 AUXILIARY INPUT ZONE*
 BATTERY TROUBLE**
 AC FAILURE TROUBLE**
 FOIL ZONE(S) TROUBLE**
 BELL CIRCUIT TROUBLE**
 FIRE ZONE TROUBLE**
 AUX POWER SUPPLY TROUBLE**

* Priority alarms/restoral
 ** Maintenance alarms/restoral
 see section [33]

[11] CLOSING (ARMING) REPORTING CODES FOR ACCESS CODES 1 TO 8

ACCESS CODE 1
 ACCESS CODE 2
 ACCESS CODE 3
 ACCESS CODE 4
 ACCESS CODE 5
 ACCESS CODE 6
 ACCESS CODE 7
 ACCESS CODE 8

[12] CLOSING (ARMING) REPORTING CODES FOR ACCESS CODES 9 TO 16

ACCESS CODE 9
 ACCESS CODE 10
 ACCESS CODE 11
 ACCESS CODE 12
 ACCESS CODE 13
 ACCESS CODE 14
 ACCESS CODE 15
 ACCESS CODE 16

[13] OPENING (DISARMING) REPORTING CODES FOR ACCESS CODES 1 TO 8

ACCESS CODE 1
 ACCESS CODE 2
 ACCESS CODE 3
 ACCESS CODE 4
 ACCESS CODE 5
 ACCESS CODE 6
 ACCESS CODE 7
 ACCESS CODE 8

[14] OPENING (DISARMING) REPORTING CODES FOR ACCESS CODES 9 TO 16

ACCESS CODE 9
 ACCESS CODE 10
 ACCESS CODE 11
 ACCESS CODE 12
 ACCESS CODE 13
 ACCESS CODE 14
 ACCESS CODE 15
 ACCESS CODE 16

[15] MISCELLANEOUS FUNCTIONS REPORTING CODES

PARTIAL CLOSING***
 KEYPAD PANIC ALARM [P]*
 KEYPAD FIRE ALARM [F]*
 KEYPAD EMERGENCY ALARM [A]*
 KEYPAD PANIC RESTORAL [P]*
 KEYPAD FIRE RESTORAL [F]*
 KEYPAD EMERGENCY RESTORAL [A]*
 PERIODIC TEST TRANSMISSION**

- * Priority alarms/restoral
- ** Maintenance alarms/restoral
see section [33]
- ***Transmission reports with section
[11] & [14] (openings closings)

NOTE: When defining zones, assign delay zones first to zones 1,2,3.... then assign the other types to the remaining zones in any order desired.

[16] ZONE DEFINITIONS FOR ZONES 1 TO 8

ZONE 1	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 2	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 3	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 4	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 5	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 6	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 7	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 8	<input type="checkbox"/>	<input type="checkbox"/>

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

* The maximum delays allowed for U.L. installations are: Entry delay = 45 sec.
 Exit delay = 60"
 # Not allowed for U.L. Local installations

2ND DIGIT
 0= DELAY
 1= INSTANT
 2= INTERIOR
 3= INTERIOR... HOME/AWAY
 4= 24HR...BELL
 5= 24HR...BELL/BUZZER
 6= 24HR...BUZZER
 7= DOUBLE DELAY
 8= 4x DELAY
 9= FOIL

FACTORY PROGRAMMED (DEFAULT)

0	0
0	1
0	1
0	1
0	1
0	1
0	1
0	1

[17] ZONE DEFINITIONS FOR ZONES 9 TO 16

ZONE 9	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 10	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 11	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 12	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 13	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 14	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 15	<input type="checkbox"/>	<input type="checkbox"/>
ZONE 16	<input type="checkbox"/>	<input type="checkbox"/>

1ST DIGIT
 0= SLOW,AUDIBLE
 1= SLOW, SILENT
 NOTE.....
 ZONES 9 - 16 CANNOT BE PROGRAMMED FOR FAST RESPONSE - DO NOT USE FAST RESPONSE DEVICES ON THESE LOOPS.
 (eg. Vibration Detectors)

2ND DIGIT
 0= DELAY
 1= INSTANT
 2= INTERIOR
 3= INTERIOR... HOME/AWAY
 4= 24HR...BELL
 5= 24HR...BELL/BUZZER
 6= 24HR...BUZZER
 7= DOUBLE DELAY
 8= 4x DELAY
 9= FOIL

0	1
0	1
0	1
0	1
0	1
0	1
0	1
0	1

[18] 1ST SYSTEM OPTION CODE

ZONE LIGHT 1	<input type="checkbox"/>
ZONE LIGHT 2	<input type="checkbox"/>
ZONE LIGHT 3	<input type="checkbox"/>
ZONE LIGHT 4	<input type="checkbox"/>
ZONE LIGHT 5	<input type="checkbox"/>
ZONE LIGHT 6	<input type="checkbox"/>
ZONE LIGHT 7	<input type="checkbox"/>
ZONE LIGHT 8	<input type="checkbox"/>

ZONE LIGHT ON	ZONE LIGHT OFF
COMMUNICATION DISABLED	COMMUNICATION ENABLED
RESTORALS ON BELL TIMEOUT	RESTORALS ON DISARMING
ALARM DISPLAY WHILE ARMED	NO ALARM DISPLAY/ARMED
DTMF DIALING	PULSE DIALING
N/C LOOPS	EOL RESISTORS LOOPS
KEYPAD [P]ANIC AUDIBLE	SILENT
CALL 1ST PHONE ONLY	BACK UP TO 2ND PHONE
16TH CODE = MAID'S CODE	NORMAL CODE

OFF
OFF
OFF
OFF
OFF
OFF
OFF
OFF

[19] 2ND SYSTEM OPTION CODE

ZONE LIGHT 1	<input type="checkbox"/>
ZONE LIGHT 2	<input type="checkbox"/>
ZONE LIGHT 3	<input type="checkbox"/>
ZONE LIGHT 4	<input type="checkbox"/>
ZONE LIGHT 5	<input type="checkbox"/>
ZONE LIGHT 6	<input type="checkbox"/>
ZONE LIGHT 7	<input type="checkbox"/>
ZONE LIGHT 8	<input type="checkbox"/>

ZONE LIGHT ON	ZONE LIGHT OFF
SEND OPENING AFTER ALARM	SEND OPENING NORMALLY
MASTER CODE NOT CHANGEABLE	MASTER CODE CHANGEABLE
BELL SQUAWK ENABLED (1)	BELL SQUAWK DISABLED
PC16 OUT ENABLED	PC16 OUT DISABLED
TLM TROUBLE ONLY	NORMAL
1400Hz RADIONICS	2300Hz RADIONICS
TLM DISABLED (2)	TLM ENABLED
USER CODE REQ'D FOR SHUNT	USER CODE NOT REQ'D

OFF
OFF
OFF
OFF
OFF
OFF
OFF
OFF

(1) WITH BELL SQUAWK ENABLED – the siren/bell will sound one short burst on arming and two short bursts on disarming.
 (2) If this equipment is not connected to a telephone line then TLM should be disabled

FACTORY PROGRAMMED (DEFAULT)

[20] ZONES 1 TO 8 BY-PASS (SHUNT) MASK

ZONE LIGHT 1	<input type="checkbox"/>
ZONE LIGHT 2	<input type="checkbox"/>
ZONE LIGHT 3	<input type="checkbox"/>
ZONE LIGHT 4	<input type="checkbox"/>
ZONE LIGHT 5	<input type="checkbox"/>
ZONE LIGHT 6	<input type="checkbox"/>
ZONE LIGHT 7	<input type="checkbox"/>
ZONE LIGHT 8	<input type="checkbox"/>

NOTE.....
IF ZONE LIGHT IS ON,
THE ZONE CAN BE BY-PASSED
USING THE [*][1] COMMAND)

ON
ON
ON
ON
ON
ON
ON
ON

[21] ZONES 9 TO 16 BY-PASS (SHUNT) MASK

ZONE LIGHT 1	<input type="checkbox"/>
ZONE LIGHT 2	<input type="checkbox"/>
ZONE LIGHT 3	<input type="checkbox"/>
ZONE LIGHT 4	<input type="checkbox"/>
ZONE LIGHT 5	<input type="checkbox"/>
ZONE LIGHT 6	<input type="checkbox"/>
ZONE LIGHT 7	<input type="checkbox"/>
ZONE LIGHT 8	<input type="checkbox"/>

NOTE.....
IF ZONE LIGHT IS ON,
THE ZONE CAN BE BY-PASSED
USING THE [*][1] COMMAND

ON
ON
ON
ON
ON
ON
ON
ON

[22] SYSTEM TIMES

ENTRY DELAY TIME (IN SECONDS)	<input type="text"/>
EXIT DELAY TIME (IN SECONDS)	<input type="text"/>
BELL CUT-OFF TIME (IN MINUTES)	<input type="text"/>
AC FAILURE TRANSMISSION DELAY (IN MINUTES)	<input type="text"/>
NORMAL LOOP RESPONSE TIME (X 10 MSEC)	<input type="text"/>
TEST TRANSMISSION CYCLE TIME (IN DAYS)	<input type="text"/>

<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

VALID ENTRIES ARE: 01 TO 99

* DO NOT ENTER "OO" - IT IS NOT A VALID ENTRY

3	0
4	5
0	4
3	0
5	0
3	0

[23] SYSTEM CLOCK TIMES

AUTOMATIC ARMING TIME OF DAY	<input type="text"/>
TEST TRANSMISSION TIME OF DAY	<input type="text"/>

ENTER 4 DIGITS 00 TO 23 HOURS 00 TO 59 MIN.

IF NOT USED LEAVE AT THE FACTORY DEFAULT SETTINGS.

9	9	9	9
9	9	9	9
9	9	9	9

[24] NEW INSTALLER'S CODE

[25] NEW MASTER CODE

[26] DOWNLOADING ACCESS CODE

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

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

3	0	0	0
1	2	3	4
3	0	3	0

[27] COMMUNICATOR FORMAT OPTIONS

1ST TELEPHONE NUMBER	<input type="text"/>
2ND TELEPHONE NUMBER	<input type="text"/>

IT IS NECESSARY TO PROGRAM FORMAT FOR BOTH NUMBERS.

1
1

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

- [0] SILENT KNIGHT/ADEMCO SLOW, 10 BPS (1400HZ HANDSHAKE) 3/1, 3/2 AND 4/1, 4/2 NON EXTENDED FORMAT
- [1] SESCOA, FRANKLIN, DCI, VERTEX, 20 BPS (2300HZ HANDSHAKE) 3/1, 3/2 AND 4/1, 4/2 NON EXTENDED FORMAT
- [2] SILENT KNIGHT FAST, 20 BPS (1400HZ HANDSHAKE) 3/1, 3/2 AND 4/1, 4/2 NON EXTENDED FORMAT
- [3] RADIONICS, (2300/1400HZ* HANDSHAKE) 3/1, 4/2 NON EXTENDED FORMAT
- [4] RADIONICS, (2300/1400HZ* HANDSHAKE) 3/1, 4/2 NON EXTENDED WITH PARITY FORMAT
- [5] SESCOA SUPER SPEED

- [6] NOT USED
- [7] NOT USED
- [8] SILENT KNIGHT/ADEMCO SLOW, 10 BPS (1400HZ HANDSHAKE) 3/1 EXTENDED FORMAT
- [9] SESCOA, FRANKLIN, DCI, VERTEX, 20 BPS (2300HZ HANDSHAKE) 3/1 EXTENDED FORMAT
- [A] SILENT KNIGHT FAST, 20 BPS (1400HZ HANDSHAKE) 3/1 EXTENDED FORMAT
- [B] RADIONICS, (2300/1400HZ* HANDSHAKE) 3/1 EXTENDED FORMAT
- [C] RADIONICS, (2300/1400HZ* HANDSHAKE) 3/1 EXTENDED WITH PARITY FORMAT
- [D] SESCOA SUPER SPEED (WITH IDENTIFIED OPENINGS/CLOSINGS/PARTIAL CLOSINGS)
- [E] NOT USED
- [F] NOT USED

*SEE SECTION [19] FOR RADIONICS HANDSHAKE OPTION

FACTORY
PROGRAMMED
(DEFAULT)

[28] PROGRAMMABLE INPUT AND OUTPUT OPTIONS

AUXILIARY INPUT ZONE ENTER 0, 1, 2 OR 3 FOR OPTIONS BELOW 0,1,2 OR 3 2

[0] PRINTER ATTACHED ARE THE ONLY
 [1] SILENT 24 HOUR INPUT VALID ENTRIES
 [2] AUDIBLE 24 HOUR INPUT
 [3] MOMENTARY KEY ARMING

PROGRAMMABLE OUTPUT ENTER 1 TO 9 FOR OPTIONS BELOW 1 THRU 9 & C ARE THE ONLY VALID ENTRIES 2

[1] GROUND START PULSE
 [2] UTILITY OUTPUT NO ACCESS CODE
 [3] UTILITY OUTPUT ANY ACCESS CODE
 [4] UTILITY OUTPUT GROUP A ACCESS CODE
 [5] UTILITY OUTPUT GROUP B ACCESS CODE
 [6] KEYPAD BUZZER FOLLOW MODE
 [7] SYSTEM STATUS (ARM/DISARM) OUTPUT
 [8] STROBE OUTPUT (LATCHED ALARM OUTPUT)
 [9] FAILURE TO COMMUNICATE OUTPUT
 [C] PRINTER ATTACHED

NOTE (1): IF A PRINTER IS ATTACHED TO THE PANEL, BOTH [0] FOR THE 1ST DIGIT AND [C] FOR THE 2ND DIGIT MUST BE ENTERED.

NOTE: SECTIONS [29]...[33] ARE USED FOR SPLIT ARMING, OR SPLIT REPORTING ONLY.

[29] ZONE GROUP A ASSIGNMENT

ZONE LIGHT 1	<input type="checkbox"/>	IF ZONE LIGHT IS ON THAT ZONE IS	<input type="checkbox"/>
ZONE LIGHT 2	<input type="checkbox"/>	ASSIGNED TO GROUP A	<input type="checkbox"/>
ZONE LIGHT 3	<input type="checkbox"/>		<input type="checkbox"/>
ZONE LIGHT 4	<input type="checkbox"/>	NOTE: IF ZONE IS NOT ASSIGNED TO GROUP A OR B	<input type="checkbox"/>
ZONE LIGHT 5	<input type="checkbox"/>	NO TRANSMISSION WILL BE SENT.	<input type="checkbox"/>
ZONE LIGHT 6	<input type="checkbox"/>		<input type="checkbox"/>
ZONE LIGHT 7	<input type="checkbox"/>	ZONES 9 TO 16 ARE PERMANENTLY ASSIGNED TO	<input type="checkbox"/>
ZONE LIGHT 8	<input type="checkbox"/>	GROUP A.	<input type="checkbox"/>

[30] ZONE GROUP B ASSIGNMENT

ZONE LIGHT 1	<input type="checkbox"/>	IF ZONE LIGHT IS ON THAT ZONE IS	<input type="checkbox"/>
ZONE LIGHT 2	<input type="checkbox"/>	ASSIGNED TO GROUP B	<input type="checkbox"/>
ZONE LIGHT 3	<input type="checkbox"/>		<input type="checkbox"/>
ZONE LIGHT 4	<input type="checkbox"/>		<input type="checkbox"/>
ZONE LIGHT 5	<input type="checkbox"/>		<input type="checkbox"/>
ZONE LIGHT 6	<input type="checkbox"/>		<input type="checkbox"/>
ZONE LIGHT 7	<input type="checkbox"/>		<input type="checkbox"/>
ZONE LIGHT 8	<input type="checkbox"/>		<input type="checkbox"/>

FACTORY
PROGRAMMED
(DEFAULT)

[31] ACCESS CODE GROUP A ASSIGNMENT

ZONE LIGHT 1	<input type="checkbox"/>
ZONE LIGHT 2	<input type="checkbox"/>
ZONE LIGHT 3	<input type="checkbox"/>
ZONE LIGHT 4	<input type="checkbox"/>
ZONE LIGHT 5	<input type="checkbox"/>
ZONE LIGHT 6	<input type="checkbox"/>
ZONE LIGHT 7	<input type="checkbox"/>
ZONE LIGHT 8	<input type="checkbox"/>

IF ZONE LIGHT IS ON, THAT ACCESS CODE IS ASSIGNED TO GROUP A
NOTE:
ACCESS CODES 9 THRU 16 ARE PERMANENTLY ASSIGNED TO GROUP A
IF AN ACCESS CODE IS NOT ASSIGNED TO GROUP A OR B, OPENING AND CLOSING SIGNALS WILL NOT BE SENT FOR THAT CODE.

ON
 ON
 ON
 ON
 ON
 ON
 ON
 ON

[32] ACCESS CODE GROUP B ASSIGNMENT

ZONE LIGHT 1	<input type="checkbox"/>
ZONE LIGHT 2	<input type="checkbox"/>
ZONE LIGHT 3	<input type="checkbox"/>
ZONE LIGHT 4	<input type="checkbox"/>
ZONE LIGHT 5	<input type="checkbox"/>
ZONE LIGHT 6	<input type="checkbox"/>
ZONE LIGHT 7	<input type="checkbox"/>
ZONE LIGHT 8	<input type="checkbox"/>

IF ZONE LIGHT IS ON, THAT ACCESS CODE IS ASSIGNED TO GROUP B

ON
 ON
 ON
 ON
 ON
 ON
 ON
 ON

[33] COMMUNICATOR CALL DIRECTION OPTIONS

ZONES GROUP A ALARMS AND RESTORALS	<input type="checkbox"/>
ZONES GROUP B ALARMS AND RESTORALS	<input type="checkbox"/>
ACCESS CODES GROUP A OPENINGS AND CLOSINGS	<input type="checkbox"/>
ACCESS CODES GROUP B OPENINGS AND CLOSINGS	<input type="checkbox"/>
PRIORITY ALARMS AND RESTORALS	<input type="checkbox"/>
MAINTENANCE ALARMS AND RESTORALS	<input type="checkbox"/>

1
 1
 1
 1
 1
 1

ENTER:

- [0] No transmissions for this group
- [1] Call 1st phone number back up to 2nd (becomes 1st number only when section [18] item [7] is on)
- [2] Call 2nd phone number only
- [3] Always call both phone numbers

[34] RESET EEPROM MEMORY TO FACTORY DEFAULTS

[35] THROUGH [45] RESERVED FOR FUTURE USE

[46] DOWNLOADING CALLBACK TELEPHONE NUMBER

This telephone number is used by the panel to call the downloading computer at the Downloading computer's request for access.

CALL BACK TELEPHONE NUMBER

Enter [0] for digit '0' in the phone number
Enter [+4+] for hex 'D' for additional dial tone detection between phone number digits as in local PBX systems
ENTER [#] TO END THE TELEPHONE NUMBER ENTRY

[47] MODEM CONFIGURATION

This section is used to set up the panel for downloading functions. The following table shows the ON/OFF patterns of zone lights 1 through 4 which are used to set the number of RINGS before the panel will answer a call from the downloading computer. The default setting is 12.

NUMBER OF RINGS	FACTORY DEFAULT SETTING											
	1	2	3	4	5	6	7	8	9	10	11	12
ZONE LIGHT 1	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
ZONE LIGHT 2	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF
ZONE LIGHT 3	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON
ZONE LIGHT 4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON

	ZONE LIGHT ON	ZONE LIGHT OFF	FACTORY DEFAULT
ZONE LIGHT 1	SET LIGHT PATTERNS FOR NUMBER OF RINGS AS DESCRIBED IN THE ABOVE TABLE. MIN. NUMBER = 1 MAX. NUMBER = 15 (ALL LIGHTS ON) ** AT LEAST ONE LIGHT MUST BE ON **		OFF
ZONE LIGHT 2			OFF
ZONE LIGHT 3			ON
ZONE LIGHT 4			ON
ZONE LIGHT 5	DOWNLOADING ENABLED	DOWNLOADING DISABLED	OFF
ZONE LIGHT 6	USER INITIATED CALL UP	NO USER INITIATED CALL UP	OFF
ZONE LIGHT 7	ANSWERING MACHINE CONNECTED	NO ANSWERING MACHINE (1)	OFF
ZONE LIGHT 8	CALL BACK ENABLED	CALL BACK DISABLED	OFF

(1) If an answering machine is connected and zone light 7 is OFF, the panel will prevent messages from being received. If zone light 7 is ON, the panel will look at the line to see if a Downloading computer is calling and if it is not a Computer, the panel returns the line to the answering machine.

[48] PANEL IDENTIFICATION CODE FACTORY DEFAULT
(Enter 4 digits from 0 to 9. DO NOT ENTER [*] or [#].)

[49] PRINTER CONFIGURATION

	ZONE LIGHT ON	ZONE LIGHT OFF	FACTORY DEFAULT
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	2400 BAUD	NOT 2400 BAUD	ON
ZONE LIGHT 5	PRINTER ONLY	PRINTER & NORM. COMMUNICATION	OFF
ZONE LIGHT 6	SEE NOTE (1) BELOW	PRINTER & NORM. COMMUNICATION	OFF
ZONE LIGHT 7	(RTS, PIN A) (DTR, PIN 20)	(SRTS, PIN 11)	OFF
ZONE LIGHT 8	PERIODIC DOWNLOAD	TEST TRANSMISSION	OFF

NOTE (1): IF ZONE LIGHT 6 IS ON AND ZONE LIGHT 5 IS OFF:

All items whose reporting codes are programmed for telephone #1 will be communicated to the monitoring station AND printed on the printer.

All items whose reporting codes are programmed for telephone #2 will NOT be communicated to the monitoring station but will be printed on the printer.

IF ZONE LIGHT 5 AND 6 ARE OFF:

All items whose reporting codes are programmed for telephone #1 or telephone #2 will be printed on the printer and communicated to the monitoring station.

IF ZONE LIGHT 5 IS ON:

All items whose reporting codes are programmed for telephone #1 or telephone #2 will be printed on the printer but will not be communicated to the monitoring station. In this case it is assumed that telephone lines are not connected. DO NOT disable the communicator. The 1st System Option Code, zone light [1] must be ON. To avoid TLM trouble, program 2nd System Option Code light [7] to be ON.

Only one zone light of zones 1, 2, 3, and 4 may be ON for correct baud rate section.

[50] EEPROM COPY FUNCTION

The EEPROM COPY FUNCTION will copy the following sections only.

- [05] Zone 1 to 8 alarm reporting codes
- [06] Zone 9 to 16 alarm reporting codes
- [07] Zones 1 to 8 restoral codes
- [08] Zones 9 to 16 restoral codes
- [09] Utility Alarm Codes
- [10] Utility restoral codes
- [11] Closing (arming) reporting codes for access codes 1 to 8
- [12] Closing (arming) reporting codes for access codes 9 to 16
- [13] Opening (disarming) reporting codes for access codes 1 to 8
- [14] Opening (disarming) reporting codes for access codes 9 to 16
- [15] Miscellaneous function reporting codes
- [18] 1st system option codes
- [19] 2nd system option codes
- [22] System times
- [24] New installer's code
- [27] Communicator format options
- [46] Downloading callback telephone number

PRINTER SETUP

The PC3000 with ver. 7.0 or higher software is capable of outputting data to a local printer. The printer must be capable of serial communication (RS-232). The Brother model M-1109 is recommended.

PROGRAMMING FOR THE PRINTER

Enter the Installer's programming section. [*]+[8]+[INSTALLER'S CODE]

Edit the following sections:

SECTION	PRINTER ONLY	MINITORED & PRINTER
[01]	DO NOT PROGRAM	1ST PHONE NUMBER
[02]	1ST CUSTOMER ACCOUNT CODE	1ST CUSTOMER ACCOUNT CODE
[03]	DO NOT PROGRAM	2ND PHONE NUMBER. If this number is left unprogrammed and Section [49] zone light 6 is ON, this channel will only print on the printer.
[04]	DO NOT PROGRAM	2ND CUSTOMER ACCOUNT CODE
[05] TO [15]	PROGRAM ALL SECTIONS WHICH YOU WOULD LIKE PRINTED OUT	PROGRAM ALL SECTIONS THAT ARE TO BE MONITORED
[16] TO [18]	PROGRAM NORMALLY	PROGRAM NORMALLY
[19]	LIGHT 4 MUST BE OFF	LIGHT 4 MUST BE OFF
[20] TO [27]	PROGRAM NORMALLY	PROGRAM NORMALLY
[28]	PROGRAM "0" (section [28]) PROGRAM "C" (section [28])	PROGRAM "0" (section [28]) PROGRAM "C" (section [28])
[29] TO [32]	PROGRAM NORMALLY	PROGRAM NORMALLY
[33]	DIRECT ALL TO 1ST TELEPHONE NUMBER	PROGRAM NORMALLY
[49]	PROGRAM AS REQUIRED	PROGRAM AS REQUIRED

NOTE: TIME MUST BE SET USING [*], [6], [MASTER CODE], [1]

Exit the programming section normally and power down the system (AC & battery) to hook up the printer. Using a DB-25 connector for the printer, connect the cable as shown in Fig. 1 and connect the other end of the cable to the PC3000 as shown in Fig. 2 below. The maximum cable length is 6 feet. Configure the printer as follows:

- 1) Serial interface
- 2) Baud rate - 2400 (other baud rates may be used but be sure to match the printer baud rate and the panel output baud rate. (See Section [49])
- 3) Parity = none
- 4) Character length = 8 bits
- 5) Auto linefeed = OFF
- 6) American/Canadian character set

Plug the printer into an AC outlet and power up the panel. Make sure the printer is "on-line". Enter the User Function command - [*][6][master code] and input the current time and date. See Section [*][6][MASTER CODE][1]

TYPICAL PRINTOUTS

TIME 17:31
 DATE 04\01\88
 STATION 02
 ACCOUNT NUMBER 4567

CLOSING ACCESS 1

TIME 17:32
 DATE 04\01\88
 STATION 01
 ACCOUNT NUMBER 1234

ALARM ZONE 9

TIME 17:33
 DATE 04\01\88
 STATION 01
 ACCOUNT NUMBER 1234

RESTORE ZONE 9

TIME 17:33
 DATE 04\01\88
 STATION 02
 ACCOUNT NUMBER 4567

OPENING ACCESS 1

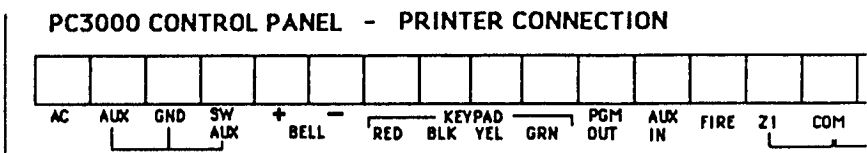


Fig. 2

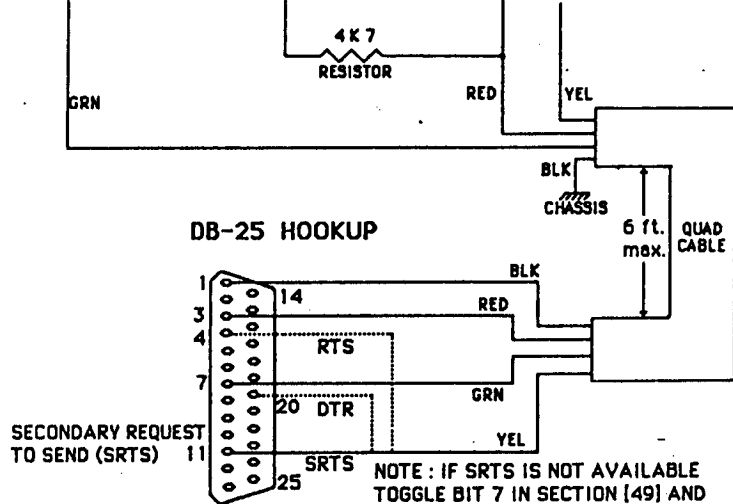


Fig. 1

NOTE: IF SRTS IS NOT AVAILABLE
 TOGGLE BIT 7 IN SECTION [49] AND
 ATTACH YELLOW TO 4 (RTS) OR TO
 20(DTR)

FCC COMPLIANCE STATEMENT

This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for class "B" device in accordance with the specifications in Subpart "J" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in any residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Relocate the alarm control with respect to the receiver.
- Move the alarm control away from the receiver.
- Connect the alarm control into a different outlet so that alarm control and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC helpful:

"How to Identify and Resolve Radio/Television Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock # 004-000-00345-4.

IMPORTANT INFORMATION

Notification to Telephone Company

Upon request, the customer shall notify the telephone company of the particular line to which the connection will be made, and provide FCC registration number and the ringer equivalence of the protective circuit.

FCC Registration Number: F534J3-72668-AL-E

Ringer Equivalence Number: 0.0B

Malfunction of the Equipment

In the event that the PC3000 should fail to operate properly, the customer shall disconnect the equipment from the telephone line to determine if it is the customer's equipment which is not working properly, or if the problem is with the telephone company network. If the problem is with the PC3000, the customer shall discontinue use until it is repaired.

Telephone Connection Requirements

Except for the telephone company provided ringers, all connections to the telephone network shall be made through standard plugs and telephone company provided jacks, or equivalent, in such a manner as to allow for easy, immediate disconnection of the terminal equipment. Standard jacks shall be so arranged that, if the plug connected thereto is withdrawn, no interference to the operation of the equipment at the customer's premises which remains connected to the telephone network shall occur by reason of such withdrawal.

Incidence of Harm

Should terminal equipment or protective circuitry cause harm to the telephone network, the telephone company shall, where practicable, notify the customer that temporary disconnection of service may be required; however, where prior notice is not practicable, the telephone company may temporarily discontinue service if such action is deemed reasonable in the circumstances. In the case of such temporary discontinuance, the telephone company shall promptly notify the customer and will be given the opportunity to correct the situation. The customer also has the right to bring a complaint to the FCC if he feels the disconnection is not warranted.

Change in Telephone Company Equipment of Facilities

The Telephone Company may make changes in its communications facilities, equipment, operations or procedures, where such actions is reasonably required and proper in its business. Should any such changes render the customer's terminal equipment incompatible with the telephone company facilities the customer shall be given adequate notice to the effect the modifications to maintain uninterrupted service.

General

This equipment should not be used on coin telephone lines. Connection to party line service is subject to state tariffs.

Ringer Equivalence Number (REN)

The REN is useful to determine the quantity of devices that you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5). To be certain of the number of devices that you may connect to your line, you may want to contact your local telephone company.

EQUIPMENT MAINTENANCE FACILITY

Digital Security Controls Ltd.

160 Washburn St.

Lockport, NY 14094

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 or liabilities 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 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.

PC3000 - SOFTWARE UPDATE

VER 7.4 FEB. 15/90



1. STATUS CONFIRMATION

Once Downloading is complete and the panel/computer connection is broken, the panel will call the monitoring station and report the "Arm/Disarm" status of the panel if the status of the panel changed during the Downloading operation either via the downloading or by the user. The panel will send the Master Code and if programmed to do so, an Opening or Closing report.

2. DOWNLOAD ABORT (F,E,P KEYS)

If the panel is programmed with communications enabled, section [18] zone light 1 OFF, pressing any one of the F, E or P keys will terminate the Downloading operation and transmit the F, E or P key function to the monitoring station.

3. USER OPERATION DURING DOWNLOAD

When the panel is engaged in Downloading, there is no audible or visual indication at the panel that Downloading is underway. If the user attempts to perform a User Command function, the keypad buzzer will emit a long tone as soon as the [*] key is pressed. This will not interrupt the Downloading. The tone is sounded to tell the user that [*] commands cannot be used until Downloading is finished.

The panel can be Armed or Disarmed during the Downloading operation and the status change will be reported as described in section 1. above.

4. PERIODIC DOWNLOAD OR TEST TRANSMISSION

In section [49] light 8 is used to select between "Periodic Downloading" or "Periodic Test Transmission".

Light OFF = Periodic Test Transmission.....factory default
Light ON = Periodic Download

The cycle time, in days, for the periodic test transmission or periodic downloading is set in section [22]. The default time is 30 days.

The time of day for the periodic test transmission or periodic downloading is set in section [23]. The default time is "9999" which is an invalid time.

5. AC FAIL.....TIME BEFORE REPORTING

The default time before reporting AC failure is changed from 1 minute to 30 minutes.

6. FIRE TROUBLE LIGHT

The "Trouble" light will come on for an Open on the Fire Loop regardless of whether the panel is Armed or Disarmed.

7. SPLIT ARMING & HOME-AWAY ZONES

If the panel is programmed as a split system and interior Home-Away zones are present, the Bypass light will not come on when the system is armed.

NOTE : For systems configured for "Split-Arming", Home-Away zones must be on side 'A' only.

8. DOWNLOADING - USER CALLUP

The panel must be in the "Ready" mode to enter the "User Callup" command.

The User Callup Command is [*]+[6]+[Master Code]+[9]

When this command is entered, the system immediately returns to the "Ready" mode. There is no need to press the [#] key to exit the user function.

9. PRINTER CONNECTION

In section [49], light 7 is used to select the type of printer "ready" signal.

Light OFF = SRTS (yellow wire to pin 11)
Light ON = DTR (yellow wire to pin 20)
or RTS (yellow wire to pin 4)

See the printer connection diagram on page 44 of the installation manual.

SRTS = Secondary Request To send
DTR = Data Transmit Ready
RTS = Request To Send

These outputs from the printer tell the panel when the printer is ready to receive data from the panel. The panel will wait for a "ready" signal from the printer before sending data to be printed. Consult your printer manual for the type of output on your printer and wire the DB-25 connector accordingly..



DIGITAL SECURITY CONTROLS LTD.

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