

# RX 1608 INSTALLATION INSTRUCTIONS

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# **RX 1608 MULTIPLE ACCESS CONTROL/COMMUNICATOR**

## **GENERAL DESCRIPTION:**

The RX 1608 is a multiple zone security system with 8 programmable zones which may be armed and disarmed by up to 16, individually identifiable, 4 digit user access codes. One additional zone is programmable as a "silent alarm" or "key switch control" for arming and disarming. Two additional zones may be activated from the keypad. A unique feature of the unit is the ability to determine many aspects of the operation by programming at the keypad including the assignment of the user's identity (or a key switch) to control only specific zones.

The system includes a telephone line monitor, remote arming option and communicator (auto-dialer) to allow reporting of information to a Monitoring Station in addition to the Local Audible Alarm.

Operation of the unit is via one or more attractive, four wire, remote keypads. Quick entry into special modes such as "home" (PART), "away" (ARM), or "bypassing" of zones which cannot be secured, are easily done at the keypad. A "night" (NITE) configuration allows quick arming of zones that may be different than those used during the day. A keypad activated output is available to control lights, doors, etc.

The "End User" will also appreciate the unique Intruder Warning safety feature and alarm memory display of this system.

System status and zone annunciation are indicated on 16 colour coded Light Emitting Diodes (LEDS) at each keypad; each keypad contains courtesy lights, and an audible device for entry and exit sounds. The flip down door protects keys and LEDS while allowing essential indicators to be seen.

## **FEATURES:**

- \* All zones fully programmable:  
12 Modes x 16 Types.
- \* Chime Enable/Disable.
- \* Restricted Access (Multi-split Arming/Disarming).
- \* Arming/Disarming of all or any zones by various user codes.
- \* Bypassing of all or any zones by various user codes.
- \* Adding/Changing/Deleting user codes by various user codes.
- \* Programming Authority assignable to various user codes.
- \* Remote Arming via touch-tone telephone.
- \* Key-switch user may control one or more zones.
- \* Downloading from panel to panel (no computer necessary).
- \* Communicator Enable/Disable.
- \* Audible walk-test mode.
- \* Selection of power-up mode (Armed/Partial Armed/Disarmed).
- \* All functions keypad programmable.
- \* EEPROM will retain programmed data, even with total power loss.
- \* Alarm memory.
- \* Intruder warning.
- \* Fail-safe Arming.
- \* Power-up settle time.
- \* Delay signal transmission (programmable).
- \* Delay alarm (programmable).
- \* Telephone line monitoring (loop or ground start).
- \* Programmable auto report.
- \* Audible trouble warning.
- \* Multiple exit modes (programmable).
- \* All HEX keys on keypad.

## **FULL COMMUNICATIONS:**

- \* 113 channel communicator.
- \* Keypad Police, Emergency, Test, and Duress codes.
- \* Open, Close, Partial Open, Partial Close, Bypass, and Remote Arm codes.
- \* Auto Report code.
- \* Memory code.
- \* User codes and bypassed zone codes.
- \* Key-switch user or Zone 9 code.
- \* Non-emergency calls to alternate telephone number (logging).
- \* Anti-jam sequence.
- \* Full line seizure.

## SPECIFICATIONS

### PANEL

- \* VOLTAGE : 16 VAC.
- \* BATTERY : 12 volt battery required for standby (typical 2 - 6AH).
- \* ZONES : 8 zones, N.O. or N.C. All end of line resistors.
- \* PROTECTION : Multi-level lightning and transient protected.
- \* OUTPUTS : Transistor output, programmable, 12V, 30 MA.  
: Separate Siren/Bell relay output 12V, 3 AMP.  
: Aux output 12VDC, 800 MA max.  
: Communicator output with phone line seizure.  
: Panel armed transistor output 12V, 30 MA.
- \* CONNECTIONS: : All connections are screw terminal.
- \* ENCLOSURE : 18 GA steel 25 cm W x 33 cm H x 9 cm D (10" W x 13" H x 3.5" D).
- \* OPERATING TEMPERATURE : 0 to 50 C (32 to 120 F).
- \* TRANSFORMER REQUIREMENTS : CSA (Canada)/UL (USA) 20 to 40 VA depending on auxiliary, charge, and keypad load.  
(VA = .03 X LOAD mA + 14)

### KEYPAD

- \* Four wire with screw terminals (please follow instructions).
- \* Protective door (removable).
- \* 12 VDC, 75 MA max.
- \* Keypad Enclosure : ABS plastic  
: 15.7 cm W x 12.5 cm H x 2.5 cm D (6.2" W x 4.9" H x 1" D).

### ORDERING INFORMATION

MODEL	DESCRIPTION
RX 1608	Control Panel plus Keypad
RX 1608KP	Remote Keypad
FC 2864	Field Copier (optional)

## PANEL CIRCUIT BOARD DESCRIPTION

**LIGHTNING AND STATIC PROTECTION:** The RX 1608 circuit board contains field proven “FLASH GAP” TRANSIENT and R.F. protection on AC, TELCO, and ZONE INPUTS; a back-up “WATCH-DOG” circuit ensures that any software problems as a result of interference are corrected within a few seconds.

In conjunction with the protection provided on the circuit board, it is **VERY IMPORTANT TO GROUND PANEL PROPERLY**; otherwise, voltages may arc between the circuit board and metal enclosure during storms, or static discharge may occur when moving jumpers on the board.

ALWAYS connect a good electrical ground to the enclosure grounding point and then to one COM Terminal using number 14 gauge wire bundled with the AC or Telco Lines. This will also provide a safe enclosure if a short occurs between primary and secondary windings of the AC transformer. Knotting AC and Telco Lines every 0.5 meter on route to the panel will also protect against transients.

**EOL ZONE CIRCUITS:** The 8 zone circuits each require an End Of Line Resistor. This should be mounted at the last detection device to provide the best security.

**FUSE:** The 5 AMP fuse protects the unit from overloads on the ALM and AUX + 12V terminals. The keypad supply is current limited separately for temporary overload protection.

**JUMPERS:** There are two jumpers on the circuit board.

E2 – Allows programming when both pins are jumpered.

N/G – Allows selection of Loop (N) or Ground Start (G) telephone lines.

### TERMINAL CONNECTIONS:

16 VAC	: Use a 16 Volt transformer wire or plug in type. It MUST be connected to a non-switched circuit (fuse only) after all other connections have been made.
LOOP L1-L8	: End of Line supervised using 2.2 K OHM resistors included. : Accepts normally Open, Closed or Form C contacts.
AUX + 12V	: Auxiliary Power Supply output to power motion detectors, etc.
TELEPHONE	: T, R, TP, RP Connected through CA38A (RJ31X) Jack to telephone. Note: If monitoring is not used connect T to AUX + 12V and R to COM.
SZ (SEIZE)	: This output is switched low (–) when telephone line seizure occurs.
ALM (ALARM)	: This output relay switched to + 12 Volts for ALARM TIME when an alarm takes place.
WRN (WARNING)	: This output is switched low (–) during TOGGLE OUTPUT function or Ground Start dialing.
ARM	: This output is switched low (–) when armed or part armed.
BATTERY +/–	: Connect to 12V Battery. If necessary to adjust charging voltage, see wiring diagram for location of adjustment. (Typical 13.9V)
COM	: All COM terminals are connected on the circuit board to the battery negative (–) lead. One COM terminal must be connected to the chassis and a good electrical or telephone earth ground.
KEYPAD CONNECTIONS	: + 12 V KP: + 12 V supply voltage for keypad (overload protected). : KEY/KD input from keypad. : STAT/CD output to keypad. : COM ground for keypad.

## DOC NOTICE

**NOTICE:** The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an approved method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified jack-plug-cord ensemble (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Existing telecommunications company requirements do not permit their equipment to be connected to customer-provided jacks except where specified by individual telecommunications company tariffs.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designed by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

**CAUTION:** Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

## PANEL INSTALLATION

### WARNING:

- \* **DO NOT POWER UP WITH PROGRAM JUMPER (E2) INSTALLED.**
- \* **NEVER REMOVE POWER WITH PROGRAM JUMPER (E2) INSTALLED.**
- \* **THE PANEL WILL AUTO-ARM 2 MINUTES AFTER A POWER SUPPLY IS CONNECTED. DURING THE 2 MINUTES, ALL ZONES APPEAR BYPASSED IF YOU PRESS THE BYPASS KEY. WHEN THE UNIT AUTO-ARMS, ENTER CODE 1234 TO DISARM BEFORE ATTEMPTING TO PROGRAM.**

**STEP 1** : Select a location where the RX 1608 Control Panel is to be mounted.

**STEP 2** : Drill appropriate holes and mount enclosure.

**STEP 3** : Insert circuit board as follows:  
CIRCUIT BOARDS ARE HELD IN PLACE BY THE SPECIAL MOUNTING CLIPS PROVIDED. THE MOUNTING CLIPS SHOULD BE INSTALLED FIRST.

- \* Use the circuit board to determine where the mounting clips are required (clip locations line up with the 5/32" diameter holes in the circuit board).
- \* Squeeze the mounting clips and install, feet first, into the square holes on the enclosure — push down until it locks. (Use a screwdriver to spread and lock the feet.)
- \* Place the circuit board over the mounting clip posts. Push down until it locks.

TO REMOVE THE CIRCUIT BOARD, SIMULTANEOUSLY PULL BACK THE LOCKING LEVER AND LIFT THE BOARD. TO REMOVE CLIP — SQUEEZE FEET AND PULL.

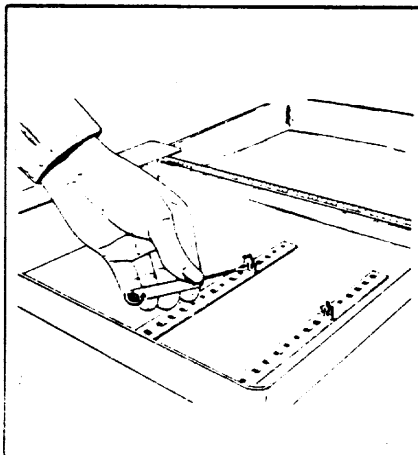
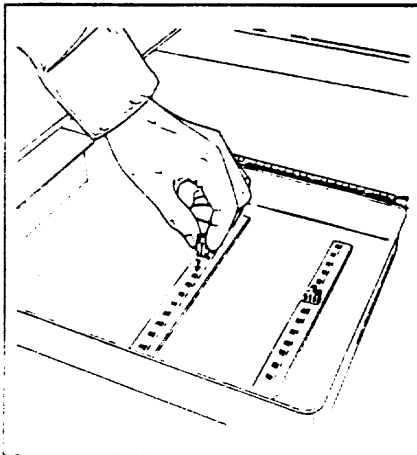
**STEP 4** : Connect all loop(s), keypad(s), phone line, siren(s), and auxiliary supplies first. Do not forget to use End Of Line resistors on loops. JUMPER UNUSED ZONES WITH RESISTORS.

**STEP 5** : Connect one COM point to enclosure grounding terminal.

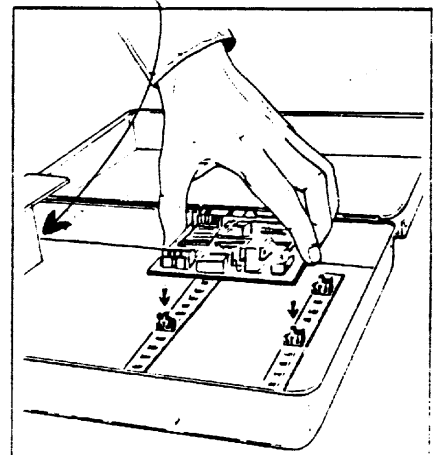
**STEP 6** : Connect the enclosure grounding terminal to a good earth ground.

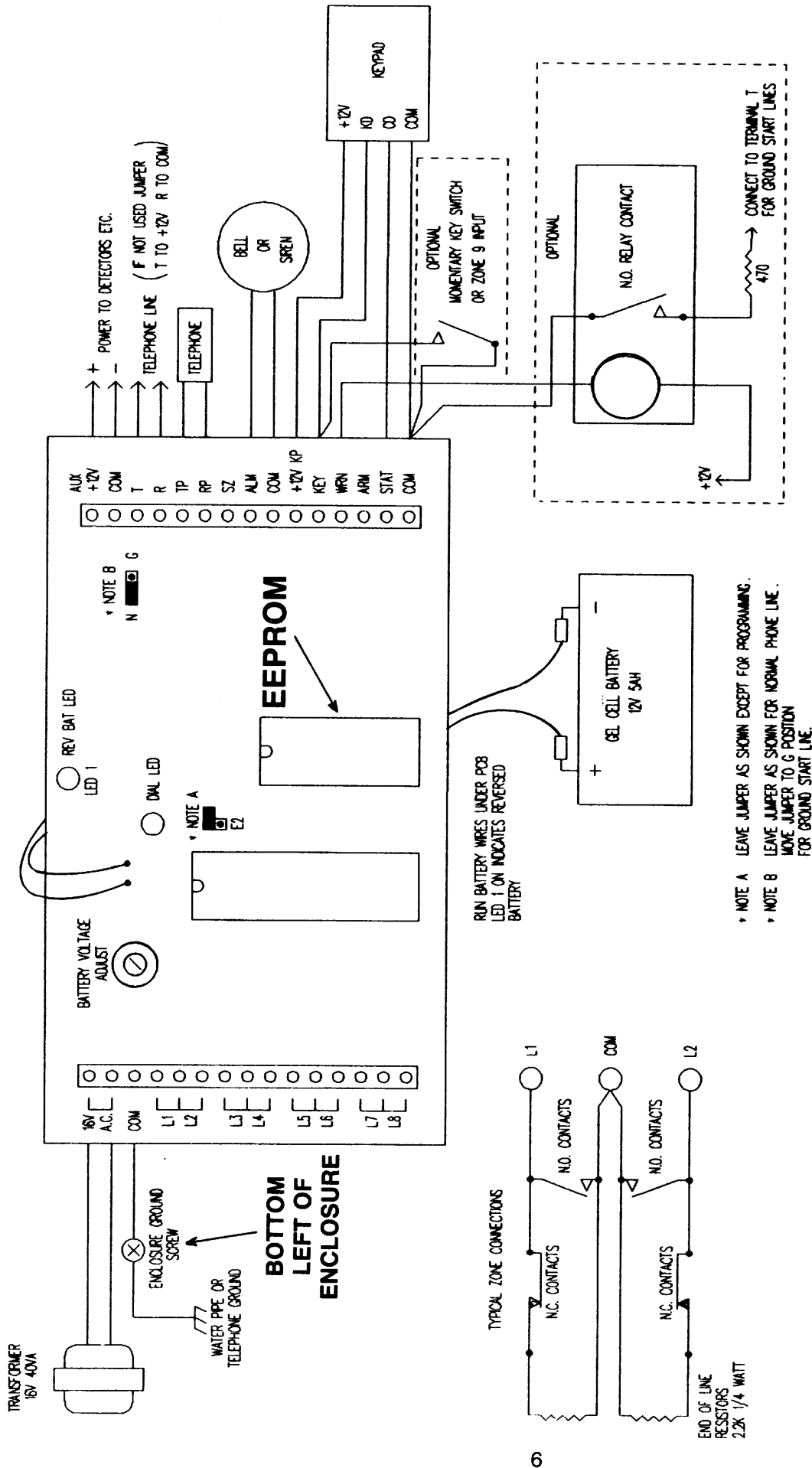
**STEP 7** : Connect 16 VAC terminals to a non-switched 16 Volt AC supply. (Fused circuit only.)

**STEP 8** : Connect battery leads. IF BATTERY CONNECTION IS REVERSED, LED 1 ON THE CIRCUIT BOARD WILL LIGHT.



ENCLOSURE GROUND SCREW





1608 INSTALLATION WIRING DIAGRAM

## KEYPAD INSTALLATION

- STEP 1** : Remove back plate using a flat head screwdriver as shown in Figure 1.  
Place the screwdriver between the front and back plate, about 1/2 inch from the edge. By sliding the screwdriver in and pushing down the back plate slides out.
- STEP 2** : On the back plate there are 3 mounting holes as shown in Figure 2.
- STEP 3** : There are 4 points of access for the cable as shown in Figure 2.
- STEP 4** : Feed the quad through one of these access points.
- STEP 5** : The cable is connected to the keypad via the 4 screw terminals on the circuit board.
- STEP 6** : Release the screw and insert the cable through the access hole in the circuit board as shown in Figure 3.
- STEP 7** : Tighten all screws and mount keypad in back plate.
- STEP 8** : Fill out the label provided and attach it to the inside of the door.
- STEP 9** : Cut trace as shown in Figure 4 to silence buzzer (OPTIONAL).



# KEYPAD INSTALLATION DIAGRAM

FIGURE 1.

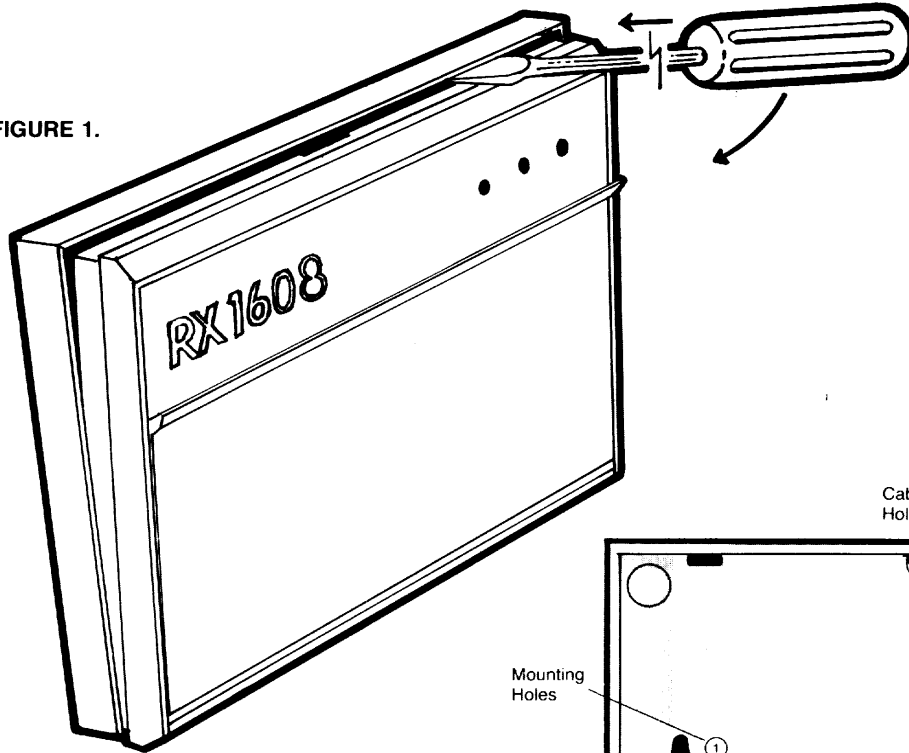


FIGURE 2.

**Note:** Strip cable sheath back at least 4 inches.

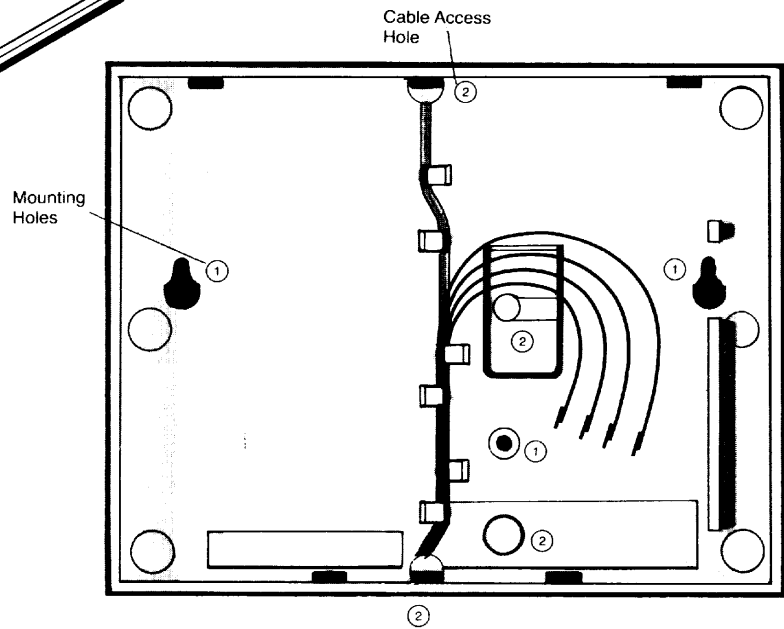


FIGURE 3.

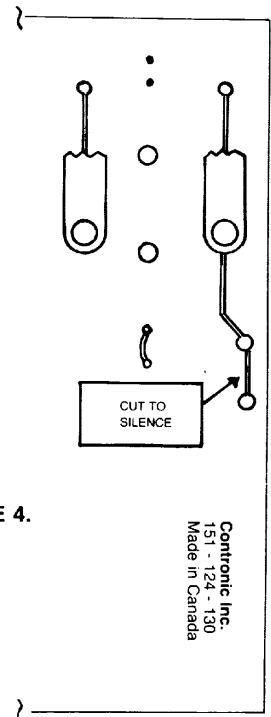
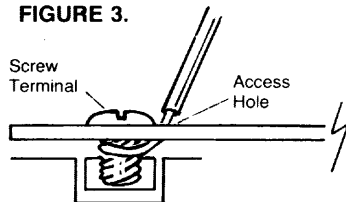


FIGURE 4.

Contronic Inc.  
151 - 124 - 130  
Made in Canada

## KEYPAD DESCRIPTION

The numeric key buttons; 0-9 are enclosed in a high-lighted area of the keypad, and are used to enter the various 4-digit user codes. Key buttons A-F, located around the outer border of the keypad, are used for functions such as ADDRESS, BYPASS, PROGRAM and ADD/DELETE.

Additional keypad functions such as POLICE, EMERG, DURESS, CHIME ENABLE/DISABLE, and QUICK may be programmed.

The keypad contains an audible device to annunciate conditions. Two COURTESY LEDS illuminate the buttons whenever the keypad sounder is activated. All sounds may be silenced by cutting a circuit board trace; the COURTESY LEDS will always light.

### INDICATORS:

THE INDICATOR DISPLAY CONTAINS 16 LEDS; 8 FOR FUNCTIONS AND 8 FOR ZONES. DURING PROGRAMMING, THE ZONE LEDS ARE ALSO USED TO SHOW THE DATA CONTENTS AT AN ADDRESS.

- ARMED** : When lit with all zone LEDS off, indicates that the system is fully armed. During a Partial Arm action, the Armed LED and Part LED will light simultaneously for 3 seconds and show zones currently armed.
- PART** : When lit, indicates that only some of the zones are armed.
- TELCO** : When lit, indicates a defective Telco line connection or a failure of any communication sequence. Also the Telco LED will light until satisfactory completion of a TEST report, if programmed.
- MEMORY** : When lit, indicates that the zone displayed is the one which caused the alarm condition. The Memory LED is also used in conjunction with the Trouble LED to indicate that the program jumper (E2) is installed.
- BYPASS** : When LED is lit steadily, one or more zones are bypassed in an armed area. When flashing, one or more zones are bypassed in a disarmed area.
- TROUBLE** : When lit, indicates one of the following:  
\* An open fuse/low battery condition.  
\* A warning that a user code is being overwritten.  
\* If flashing, with Memory LED lit, the program jumper is installed.
- ADDRESS** : When lit, indicates the system is waiting for a 4 digit address to be entered (PROGRAM operation).
- DATA** : When lit, indicates that the system is displaying or waiting for data to be entered. The Data LED is used during ADD/DELETE, BYPASS, and PROGRAM operations.
- ZONES** : When lit, indicate that the corresponding circuit is currently violated (not secure). If the Memory LED is lit, the zone that caused the alarm is shown.
- HEX DATA** : In the Programming Mode, when the Data LED is lit, the zones show Binary Coded HEX. The LED display pattern to interpret First and Second Data Digits is printed on the back page of this instruction booklet.

## SYSTEM OPERATION

REFER TO USERS MANUAL FOR SYSTEM OPERATION.

### OPERATING NOTES

- USER CODES:** Access to the panel functions is via a 4 digit code assigned to each user. The codes use digits 0 through 9. The USER I.D. is selected with any of the 16 keys (0-F). If the Duress feature is being used, do not use digit 9 as the last digit of any code.  
**USER F CAN ONLY BE CHANGED BY ITSELF. DO NOT DELETE IT!**  
Factory units are shipped with code 1234 (user 1) and 1608 (user F). Adding/Changing/Deleting Access Codes is accomplished by following the Add/Delete sequence in the User's Manual.  
If you follow this procedure **WITH** the program jumper installed, the code(s) will be restored in the event of a total power loss or Watch-Dog restart (default code).  
Following the procedure **WITHOUT** the program jumper installed, allows code(s) to be Added/Changed/Deleted temporarily without affecting the default value.
- INTRUDER WARNING:** This feature will give four bursts on the siren/bell when the siren/bell time has expired and an ENTRY/EXIT loop is violated. INTRUDER WARNING is designed to give the end user some preliminary WARNING that an alarm has occurred and an INTRUDER may still be in the premises.
- RESTRICTED ACCESS:** RESTRICTED ACCESS is the phrase used to describe the versatile feature of splitting one control panel into **1 TO 8 INDEPENDENTLY CONTROLLED ZONES ALLOWING CONTROL OF CERTAIN AREAS BY CERTAIN USERS**. Many interesting and profitable applications can be achieved with RESTRICTED ACCESS. To further explore the flexibility of this feature we suggest you contact your distributor or CONTRONIC INC.
- GROUND START:** In applications where Ground Start is required, the TOGGLE OUTPUT Function (see 1F50) requires Special Data (05). The WRN terminal provides a low (–) output to operate an external relay for the duration of the programmed pause or until Dial Tone is received. [0] – [Quick] is not available with Ground Start.
- COMMUNICATOR SEQUENCE:** If the communicator is not properly acknowledged by the monitor station, the Telco LED will light and the dialer will attempt another series of calls after about 20 minutes. During communication sequences some low priority functions will be ignored (CHIME, TEST, etc.), but Arming and Disarming will always be allowed.

## PROGRAMMING THE RX 1608

The RX 1608 comes with a factory program which can be changed at your discretion. The factory program is not a default program. What you program with the jumper in place is retained in the EEPROM. The only way to change the program is to enable programming (see below). If you only wish to view data, follow the steps under VIEWING DATA.

ALWAYS FILL OUT THE PROGRAMMING SHEETS BEFORE ACTUALLY PROGRAMMING THE UNIT.

### Programming Procedure:

- STEP 1** : Ensure circuit board program jumper is NOT in place (REMOVE).
- STEP 2** : Power up panel.
- STEP 3** : Place program jumper across the 2 pins (PROGRAM POSITION). IF YOU ARE PROGRAMMING A UNIT ALREADY POWERED AND DISARMED, GO TO STEP 6.
- STEP 4** : Allow 2 minute power-up phase. During this 2 minute period re-check program sheets and then position yourself at keypad.
- STEP 5** : At the conclusion of the power-up period, the panel will arm. Disarm the panel using code 1234.
- STEP 6** : If the program jumper is correctly installed, Memory will light and Trouble will flash on the keypad.
- STEP 7** : Press PROGRAM [E] key, followed by VALID Programming Access Code (Factory code 1608). The Address LED lights.

The unit will remain in the program mode as long as valid key presses are entered. If no keys are pressed for 60 seconds, the unit will return to step 6.

- STEP 8** : Key in desired address (must be 4 digits). The Data LED lights, unless the address is unauthorized. (see IFFF) EXAMPLE: ADDRESS 1F14 (POWER-UP STATUS)  
PRESS [1], PRESS [F], PRESS [1], PRESS [4].

If data currently exists at this address, it will be displayed on the ZONE LEDS. To understand how data is displayed, see the LED pattern chart A on the back page of these instructions.

- STEP 9** : Enter the new data from the program sheet (always 2 digits). IF YOU MAKE A MISTAKE, PRESS [D] UNTIL MEMORY AND TROUBLE LEDS DISPLAY, THEN GO TO STEP 7.
- STEP 10** : Press PROGRAM [E]; data is now programmed. The ZONE LED'S will display the new data.
- STEP 11** : **CHOOSE ONE OF THE FOLLOWING:**

- \* To go to the next sequential address, press BYPASS [B]. The Data LED must remain lit. Go to STEP 9.
- \* To program a different ADDRESS, press ADDRESS [A]. The Address LED lights. Go to STEP 8.
- \* To DEPART from programming, press [D].

IF YOU MAKE A MISTAKE IN YOUR CHOICE, PRESS [D] KEY UNTIL MEMORY & TROUBLE LEDS DISPLAY (MAY TAKE 3 PRESSES). GO TO STEP 7.

## VIEWING DATA

**STEP 1** : Ensure the program jumper is NOT installed.

**STEP 2** : Press PROGRAM [E] key, followed by a VALID Programming Access Code (Factory Code 1608). The Address LED lights.

The unit remains in the program mode as long as valid key presses are entered. If no keys are pressed for 60 seconds, the unit will return to normal panel operation.

**STEP 3** : Key in the desired address (must be 4 digits). The Data LED lights, unless the address is unauthorized (see 1FFF).

Data currently at this address is displayed on the ZONE LEDS. To understand how data is displayed, see the LED pattern chart A on the back page of these instructions.

**STEP 4** : **CHOOSE ONE OF THE FOLLOWING:**

\* To go to the NEXT sequential address, press BYPASS [B].

The Data LED remains lit and the key sound indicates the next address data is displayed.

\* To display a different ADDRESS, press ADDRESS [A]. The Address LED lights. Go to STEP 3.

\* To DEPART from viewing and return to normal panel operation, press [D].

## **PROGRAMMING TABLES**

The following information allows you to program unique data into your panel. Each section consists of Address and Data with a description of what the data means; always program 2 digits (X and Y) of data. If the system is monitored, check the required format with the monitoring station (see 1FED). Monitor data is programmed starting at 1FA0.

Whether your system is a local alarm only or monitored, the following must be programmed:

Addresses 1F60 to 1F97 (Access Table)  
Addresses 1FF0 to 1FF7 (Zone Definition)

## POWER UP STATUS

This section determines the power up status of the panel. Upon return of power, after complete battery discharge, define which zones (if any) will arm after a 2 minute delay period. This will prevent false alarms from smoke, PIR or other detectors requiring a settling time on power up.

Write a 1 (yes) under each zone to be armed. Always write 1 under 24 hour zones. Write 0 (NO) under zones to be disarmed. Convert the 1/0 pattern to Data using the HEX chart C on the back page of these instructions.

ADDRESS	DATA		X					Y			
	X	Y	8	7	6	5		4	3	2	1
1F14	:	:	:								

Write 1/0 pattern  
Convert to program data

1F15 : : : This address is relative to 1F14. Choose which LED will light at the conclusion of the 2 minute power-up period.

DATA	
X	Y
:0:1:	Armed LED
:0:2:	Part LED
:0:0:	NONE (DISARMED)

## CONVENIENCE FUNCTIONS

This section allows the enabling or disabling of special keypad convenience functions.

DATA	
X	Y
:E:E:	TO ENABLE.
:0:0:	TO DISABLE.

ADDRESS	DATA	
	X	Y
1F50	:	:
1F51	:	:
1F52	:	:
1F53	:	:
1F58	:	:
1F59	:	:
1F5C	:	:

TOGGLE OUTPUT: If enabled, this provides a 2 second output from the WRN terminal on the circuit board when [0] then [QUICK] are pressed on the keypad. This feature can be used to open a garage door etc.

ARM-QUICK: If enabled, you can quickly arm selected zones by pressing [ARM] then [QUICK]. The zones controlled are the same as those controlled by user 1 (1F61); an access code does NOT HAVE TO BE ADDED to use this feature.

PART-QUICK: If enabled, you can quickly arm selected zones by pressing [PART] then [QUICK]. The zones controlled are the same as those controlled by user 2 (1F62); an access code does NOT HAVE TO BE ADDED to use this feature.

NITE-QUICK: If enabled, you can quickly arm selected zones by pressing [NITE] then [QUICK]. The zones controlled are the same as those controlled by user 3 (1F63); an access code does NOT HAVE TO BE ADDED to use this feature. NITE QUICK does not provide exit time or tone. Entry delay is not affected.

DOWNLOADING: Please consult factory for information on downloading.

TEST-QUICK: If enabled, this allows you to test the system. To test the siren or bell, press [TEST] then [QUICK] (½ second siren or bell). To individually test the zones: Bypass the zone(s) you wish to test, press [TEST] then [QUICK], then violate the zone(s). You will get a ½ second siren or bell for each violation. To communicate TEST to central station, see 1FA8.

CHIME FUNCTION: If enabled, this allows any user to turn ALL zone chimes on or off at their discretion. To operate, press CHIME [C]. When Chime sounds, zones will chime. When chime does not sound, zones will not chime.

## ZONES CONTROLLED BY USER

This section describes how to define and program the zones which a user arms and disarms. Upon programming, the ZONE(S) controlled by that user will light for easy confirmation of your selection.

### SHARED ZONE(S):

A zone should only appear under one user. If it is necessary to allow another user to control (share) a zone, note the following operation: If a shared zone is armed and any sharing user enters a valid 4 digit access code, the shared zone will always disarm; therefore, a sharing user may have to disarm before he can arm his area.

Write a 1 (YES) under each zone to be controlled by that user. Write a 0 (NO) under the zones NOT to be controlled by that user. Always place a 1 under 24 hour zones for ONE user and Quick arming function, if used; this allows the keypad to show ARMED, and 24 hour zones to display during part armed conditions.

Convert the 1/0 pattern to Data using the HEX chart C on the back page or below.

**EXAMPLE:** USER 1 access code will arm and disarm zones 1, 2, 5 and 8.  
ARM-QUICK will arm the same zones (see 1F51).

ADDRESS	DATA		X				Y			
	X	Y	8	7	6	5	4	3	2	1
1F61	:	9:3:	1	0	0	1	0	0	1	1

Write 1/0 pattern  
 Convert to program data

ADDRESS	DATA		X				Y				
	X	Y	8	7	6	5	4	3	2	1	
1F60	:-:-:-										CONTROLLED BY USER 0
1F61	:-:-:-										CONTROLLED BY USER 1 (ARM-QUICK)
1F62	:-:-:-										CONTROLLED BY USER 2 (PART-QUICK)
1F63	:-:-:-										CONTROLLED BY USER 3 (NITE-QUICK)
1F64	:-:-:-										CONTROLLED BY USER 4
1F65	:-:-:-										CONTROLLED BY USER 5
1F66	:-:-:-										CONTROLLED BY USER 6
1F67	:-:-:-										CONTROLLED BY USER 7
1F68	:-:-:-										CONTROLLED BY USER 8
1F69	:-:-:-										CONTROLLED BY USER 9
1F6A	:-:-:-										CONTROLLED BY USER A
1F6B	:-:-:-										CONTROLLED BY USER B
1F6C	:-:-:-										CONTROLLED BY USER C
1F6D	:-:-:-										CONTROLLED BY USER D
1F6E	:-:-:-										CONTROLLED BY USER E
1F6F	:-:-:-										CONTROLLED BY USER F

### HEX CHART "C"

PATTERN	DIGIT
0000	0
0001	1
0010	2
0011	3
0100	4
0101	5
0110	6
0111	7
1000	8
1001	9
1010	A
1011	B
1100	C
1101	D
1110	E
1111	F

**NOTE:** This pattern is the same as the LED pattern A with 1 indicating a LED lit.



## ZONES BYPASSABLE BY USER

This section describes how to define and program the zones which a user may bypass. During a TROUBLE condition, any valid user may bypass any zone. Upon programming, the ZONE(S) bypassable by that user will light for easy confirmation of your selection.

Write a 1 (YES) under each zone to be bypassed by that user. Write a 0 (NO) under the zones NOT to be bypassed by that user. Convert the 1/0 pattern to Data using the HEX chart C on the back page and below.

**EXAMPLE:** USER 1 access code may bypass zones 2 and 7.

ADDRESS	DATA	X				Y			
	X Y	8	7	6	5	4	3	2	1
1F72	:4:2:	0	1	0	0	0	0	1	0

Write 1/0 pattern  
 Convert to program data

ADDRESS	DATA	X				Y				
	X Y	8	7	6	5	4	3	2	1	
1F70	:—:—:									BYPASSABLE BY USER 0
1F71	:—:—:									BYPASSABLE BY USER 1
1F72	:—:—:									BYPASSABLE BY USER 2
1F73	:—:—:									BYPASSABLE BY USER 3
1F74	:—:—:									BYPASSABLE BY USER 4
1F75	:—:—:									BYPASSABLE BY USER 5
1F76	:—:—:									BYPASSABLE BY USER 6
1F77	:—:—:									BYPASSABLE BY USER 7
1F78	:—:—:									BYPASSABLE BY USER 8
1F79	:—:—:									BYPASSABLE BY USER 9
1F7A	:—:—:									BYPASSABLE BY USER A
1F7B	:—:—:									BYPASSABLE BY USER B
1F7C	:—:—:									BYPASSABLE BY USER C
1F7D	:—:—:									BYPASSABLE BY USER D
1F7E	:—:—:									BYPASSABLE BY USER E
1F7F	:—:—:									BYPASSABLE BY USER F

### HEX CHART "C"

PATTERN	DIGIT
0000	0
0001	1
0010	2
0011	3
0100	4
0101	5
0110	6
0111	7
1000	8
1001	9
1010	A
1011	B
1100	C
1101	D
1110	E
1111	F

**NOTE:** This pattern is the same as the LED pattern A with 1 indicating a LED lit.

## ALLOWING USERS TO ADD/CHANGE/DELETE ACCESS CODES

ADDRESS	DATA X Y		DATA X Y	
1F80	: _ : _ :	USER 0		
1F81	: _ : _ :	USER 1		
1F82	: _ : _ :	USER 2	: E : E :	Allows user to modify access codes.
1F83	: _ : _ :	USER 3		
1F84	: _ : _ :	USER 4		
1F85	: _ : _ :	USER 5	: 0 : 0 :	NOT Allowed.
1F86	: _ : _ :	USER 6		
1F87	: _ : _ :	USER 7		
1F88	: _ : _ :	USER 8		
1F89	: _ : _ :	USER 9		
1F8A	: _ : _ :	USER A		
1F8B	: _ : _ :	USER B		
1F8C	: _ : _ :	USER C		
1F8D	: _ : _ :	USER D		
1F8E	: _ : _ :	USER E		
1F8F	: <u>E</u> : <u>E</u> :	USER F		(CANNOT BE DENIED REGARDLESS OF PROGRAMMING)

NOTE: See User's Manual for instructions on how to Add/Change/Delete User Codes.

## ALLOWING USERS TO PROGRAM DATA

ADDRESS	DATA X Y		DATA X Y	
1F90	: _ : _ :	USER 0		
1F91	: _ : _ :	USER 1		
1F92	: _ : _ :	USER 2	: E : E :	Allows user to program.
1F93	: _ : _ :	USER 3		
1F94	: _ : _ :	USER 4	: 0 : 0 :	NOT Allowed.
1F95	: _ : _ :	USER 5		
1F96	: _ : _ :	USER 6		
1F97	: _ : _ :	USER 7		
1F98	: _ : _ :	USER 8		
1F99	: _ : _ :	USER 9		
1F9A	: _ : _ :	USER A		
1F9B	: _ : _ :	USER B		
1F9C	: _ : _ :	USER C		
1F9D	: _ : _ :	USER D		
1F9E	: _ : _ :	USER E		
1F9F	: <u>E</u> : <u>E</u> :	USER F		(CANNOT BE DENIED REGARDLESS OF PROGRAMMING)

## CUSTOMER ACCOUNT CODE REPORT

This section allows you to program a 3 or 4 digit account code. Check with your monitoring station regarding format (see 1FED).

### ADDRESS DATA

	X	Y		
1FA0	:0:	:	1st digit of account	To print a 0 in the account code at the station, program an A in that location. If using 3 digit code program 00 in address 1FA3.
1FA1	:0:	:	2nd digit of account	
1FA2	:0:	:	3rd digit of account	
1FA3	:0:	:	4th digit of account	
1FA4	:0:0:		MUST BE 00	

## SPECIAL ALARM AND STATUS REPORT CODES

These codes may be used with a monitored system. Never use X = 0 if you wish to report.

FOR 2 DIGIT FORMATS:	X = 1ST DIGIT,	Y = 2ND DIGIT.
FOR SINGLE LINE 3-1 FORMAT:	X = CODE,	Y = 0.
FOR NO REPORT:	X = 0,	Y = 0.

### ADDRESS DATA

	X	Y	
1FA5	:	:	POLICE KEYS CODE: Simultaneous pressing of buttons 4 and 5 results in a report of this code. The action may be audible or silent (see 1FFC).
1FA6	:	:	EMERG KEYS CODE: Simultaneous pressing of buttons 7 and 8 results in a report of this code. This action is always pulsed audible.
1FA7	:	:	DURESS SIGNAL CODE: This code will report upon arm or disarm under a duress situation by using a special Duress User Code. A Duress User Code is any User's 4 digit access code with the last digit increased by 1 (1234 entered as 1235).
1FA8	:	:	TEST CODE: This code will report when the TEST-QUICK function is enabled and utilized (see 1F59).
1FA9	:	:	AUTO-REPORT CODE: This code will report once every 24 hours during a continuous armed period. The time is re-started when the panel is armed.

**NOTE:**

OPEN, PART OPEN, CLOSE, PART CLOSE, MEMORY CODES: Automatically report the USER IDENTITY NUMBER so the Y digit is always 0. USER 0 will report as a single line if 3-1 format is selected (see 1FED). If no user code is to be reported, please call CONTRONIC INC. for modification.

**ADDRESS DATA  
X Y**

1FAA	:	:	0:	OPEN CODE: This code will report upon complete disarm (by user #) of the system (Armed and Part LED off).
1FAB	:	:	0:	PART OPEN CODE: This code will report upon the disarming (by user #) of some zone(s) in the system (Part LED remains lit).
1FAC	:	:	0:	MEMORY CODE: This code will report when a valid user code is entered after an alarm has occurred. This code is useful on systems without opening/closing codes to report the return of a USER.
1FAD	:	:	0:	CLOSE CODE: This code will report upon complete arming (by user #) of the system (Armed LED only remains lit).
1FAE	:	:	0:	PART CLOSE CODE: This code will report upon arming (by user #) of some zone(s) in the system (Part LED remains lit).
1FAF	:	:	0:	BYPASS CODE: This code will report upon arming or part arming when one or more zones under a user's control have been bypassed. If no CLOSE or PART CLOSE exists (00), the BYPASS CODE will first report with the USER I.D. Bypassed zone(s) will automatically report with the BYPASS CODE.

## TELEPHONE NUMBERS FOR REPORTS

This section describes the programming of the monitoring station telephone number(s). If no second number is programmed, all codes will report to the first telephone number. If the second number is programmed, then the codes will report as follows:

- TO NUMBER 1: ZONE (ALARMS & RESTORES), POLICE, EMERG, DURESS, AUTO REPORTS, TROUBLE.  
 TO NUMBER 2: OPEN, PART OPEN, CLOSE, PART CLOSE, MEMORY, TEST, REMOTE ARM (MAY BE USED TO LOG STATUS CALLS).

X = INTER-DIGIT PAUSE TIME (0-9). Use D to detect Dial Tone or 4 to wait for Dial Tone on any digit. Some exchanges or long distance may require a 2 before each dialed digit for reliable dialing; otherwise, use 0.

Y = DIALED TELEPHONE DIGIT (1-9). To dial "O", enter A to send 10 pulses.

**ALWAYS ENTER 00 AT THE ADDRESS AFTER THE LAST NUMBER DIALED.**

### ADDRESS DATA X Y

1FB0	:_:_:	TELEPHONE NO. 1,	Pause and Digit 1
1FB1	:_:_:	TELEPHONE NO. 1,	Pause and Digit 2
1FB2	:_:_:	TELEPHONE NO. 1,	Pause and Digit 3
1FB3	:_:_:	TELEPHONE NO. 1,	Pause and Digit 4
1FB4	:_:_:	TELEPHONE NO. 1,	Pause and Digit 5
1FB5	:_:_:	TELEPHONE NO. 1,	Pause and Digit 6
1FB6	:_:_:	TELEPHONE NO. 1,	Pause and Digit 7
1FB7	:_:_:	TELEPHONE NO. 1,	Pause and Digit 8
1FB8	:_:_:	TELEPHONE NO. 1,	Pause and Digit 9
1FB9	:_:_:	TELEPHONE NO. 1,	Pause and Digit 10
1FBA	:_:_:	TELEPHONE NO. 1,	Pause and Digit 11
1FBB	:_:_:	TELEPHONE NO. 1,	Pause and Digit 12
1FBC	:_:_:	TELEPHONE NO. 1,	Pause and Digit 13
1FBD	:_:_:	TELEPHONE NO. 1,	Pause and Digit 14
1FBE	:_:_:	TELEPHONE NO. 1,	Pause and Digit 15
1FBF	:0:0:	MUST BE 00	

1FC0	:_:_:	TELEPHONE NO. 2,	Pause and Digit 1
1FC1	:_:_:	TELEPHONE NO. 2,	Pause and Digit 2
1FC2	:_:_:	TELEPHONE NO. 2,	Pause and Digit 3
1FC3	:_:_:	TELEPHONE NO. 2,	Pause and Digit 4
1FC4	:_:_:	TELEPHONE NO. 2,	Pause and Digit 5
1FC5	:_:_:	TELEPHONE NO. 2,	Pause and Digit 6
1FC6	:_:_:	TELEPHONE NO. 2,	Pause and Digit 7
1FC7	:_:_:	TELEPHONE NO. 2,	Pause and Digit 8
1FC8	:_:_:	TELEPHONE NO. 2,	Pause and Digit 9
1FC9	:_:_:	TELEPHONE NO. 2,	Pause and Digit 10
1FCA	:_:_:	TELEPHONE NO. 2,	Pause and Digit 11
1FCB	:_:_:	TELEPHONE NO. 2,	Pause and Digit 12
1FCC	:_:_:	TELEPHONE NO. 2,	Pause and Digit 13
1FCD	:_:_:	TELEPHONE NO. 2,	Pause and Digit 14
1FCE	:_:_:	TELEPHONE NO. 2,	Pause and Digit 15
1FCF	:0:0:	MUST BE 00	

## ZONE AND TROUBLE REPORT CODES

These codes may be used with a monitoring system. Never use X = 0 if you wish to report.

FOR 2 DIGIT FORMATS:	X = 1ST DIGIT,	Y = 2ND DIGIT.
FOR SINGLE LINE 3-1 FORMAT:	X = CODE,	Y = 0.
FOR NO REPORT:	X = 0,	Y = 0.

ALARM CODES report when the zone is violated while armed except those specified as 24 hour which always report when violated (see 1FF0).

RESTORE CODES report depending on the DEFINITION programmed, when they return to normal after being in an alarm state (see 1FF0).

ADDRESS	DATA
	X Y

1FD0	: _ : _ :	ZONE 1	ALARM CODE
1FD1	: _ : _ :	ZONE 2	ALARM CODE
1FD2	: _ : _ :	ZONE 3	ALARM CODE
1FD3	: _ : _ :	ZONE 4	ALARM CODE
1FD4	: _ : _ :	ZONE 5	ALARM CODE
1FD5	: _ : _ :	ZONE 6	ALARM CODE
1FD6	: _ : _ :	ZONE 7	ALARM CODE
1FD7	: _ : _ :	ZONE 8	ALARM CODE

1FD8	: _ : _ :	ZONE 1	RESTORE ALARM
1FD9	: _ : _ :	ZONE 2	RESTORE ALARM
1FDA	: _ : _ :	ZONE 3	RESTORE ALARM
1FDB	: _ : _ :	ZONE 4	RESTORE ALARM
1FDC	: _ : _ :	ZONE 5	RESTORE ALARM
1FDD	: _ : _ :	ZONE 6	RESTORE ALARM
1FDE	: _ : _ :	ZONE 7	RESTORE ALARM
1FDF	: _ : _ :	ZONE 8	RESTORE ALARM

1FE0	: : :	FUSE/BAT'RY ALARM CODE: This code will report when the fuse blows or if the battery voltage becomes low during an AC power failure.
1FE1	: : :	F/B RESTORE CODE: This code will report when the fuse or battery problem has been corrected.
1FE2	: : :	ZONE 9 ALARM CODE: This code will report whenever the circuit board KEY input is momentarily switched to COM. There is no restore code for this input; it cannot be used if a KEY SWITCH USER is assigned (see 1FF8). Zone 9 is always silent and has no indicator.

## TELCO MODE

This section covers data related to the telephone line connection.

### DATA

#### X Y

: E : E : DIAL PULSE ENABLE.  
 : D : E : DTMF PULSE.  
 : 0 : 0 : DISABLE

### ADDRESS DATA

#### X Y

1FEC : : : DIALER ENABLE: This data determines whether or not you want the dialer to actually communicate. You can program all desired communication codes in other addresses and have the dialer disabled, then enable dialer at a later date.  
 EE = DIAL PULSE ENABLE, DE = DTMF PULSE, 00 = DISABLE.

1FED : : : RECEIVER FORMAT: This data tells the dialer what format is required by the monitoring station. 3-1 is always extended (2 digits) except for USER 0 and any **REPORT** codes programmed with Y = 0 (see SAMPLES).

### DATA

#### X Y

#### FORMAT REQUIRED

: 4 : F : 4-2 4 DIGIT ACCOUNT + 2 DIGIT CODES  
 : 3 : F : 3-1 FAST 3 DIGIT ACCOUNT + 1 OR 2 DIGIT CODES  
 : 3 : 5 : 3-1 SLOW 3 DIGIT ACCOUNT + 1 OR 2 DIGIT CODES

**COMMUNICATION FORMAT SAMPLES:** IF YOU NEED ADDITIONAL INFORMATION, CONTACT CONTRONIC INC.

**NOTE:** ACCOUNT NO. 123(4)

CLOSED CODE: CO

OPENED CODE: DO

BYPASS CODE: BO

	3-1	4-2
CLOSED, USER 0	123 C	1234 C0
CLOSED, USER 4	123 C	1234 C4
	CCC 4	
ALARM, CODE = 30	123 3	1234 30
ALARM, CODE = 36	123 3	1234 36
	333 6	
BYPASS, ZONE 2,6	123 B	1234 B2
This data follows	BBB 2	1234 B6
CLOSE-USER or	123 B	
BYPASS-USER data.	BBB 6	

## ADDRESS DATA

X Y

1FEE : : : TELCO ALARM ENABLE: This data does not affect the Telco light indicator operation. If enabled and the telephone line is cut, the following occurs:  
\* A local alarm if the system is armed and the exit time is complete.  
\* A chime if part-armed at the time line fails.

### DATA

X Y

:E:E: ENABLE.

:0:0: DISABLE

1FEF : : : REMOTE ARM ENABLE: This feature cannot be used with answering machines. If enabled, the remote arm lets you arm via an off-premise touch tone phone. To arm via the telephone: dial the phone number the RX 1608 is connected to; the RX 1608 will answer after approximately 20 rings and emit a tone. Press [7] on the phone immediately and maintain for 5 seconds. Release the button, the RX 1608 will answer with a warble tone and arm all zones currently not in violation (FORCE ARM). If a monitor report is selected, it will also occur upon panel power-up or WATCH-DOG reset.  
TO ENABLE WITHOUT A MONITOR STATION REPORT:

X = A, Y = 0

TO ENABLE WITH 2 DIGIT MONITOR REPORT:

X = 1ST DIGIT, Y = 2ND DIGIT.

TO DISABLE: X = 0, Y = 0.

## REMOTE ARMING TIPS:

IF YOU HAVE PROBLEMS REMOTE ARMING TRY THE FOLLOWING:

\* Ground the panel.

AND

\* Connect a resistor from terminal TP to COM. Value is not critical (22K to 1 MEGOHM, ½ WATT).

OR

\* Remove the above resistor and connect a 0.01 microfarad, minimum 150 volt capacitor from terminal TP to COM and another from terminal RP to COM.

AND

\* Make sure the telephone exchange does not automatically stop ringing before the panel answers. If you need a smaller ring count contact CONTRONIC INC.

\* If the panel seizes the line during telephone conversations for no apparent reason, this is probably due to the off-hook voltage at the phone being very close to the line monitor threshold or 60 Hz "hum". To raise the voltage, connect a resistor in series with the phone at terminal TP or RP (50 to 100 OHM, ½ WATT); 60 Hz interference must be traced to its source by the phone company. Make sure the phone still works!



## ZONE DEFINITIONS

This section describes the selection and programming of the attributes for each of the 8 zones. X defines the Response, Local Alarm, and Restore conditions; Y defines the security level of the zone.

### RESTORE REPORT AFTER ALARM TIME

X	=	0	Slow (200 mS), Audible Alarm
		1	Slow, Silent
		2	Fast (50 mS), Audible
		3	Fast, Silent
		4	Slow, Pulsed (1 second)
		5	DO NOT USE
		6	Fast, Pulsed
		7	DO NOT USE

### RESTORE REPORT FOLLOWS ZONE

8	Slow (200 mS), Audible Alarm
9	Slow, Silent
A	Fast (50 mS), Audible
B	Fast, Silent
C	Slow, Pulsed (1 second)
D	DO NOT USE
E	Fast, Pulsed
F	DO NOT USE

Y	=	NORMAL	CHIME	DELAY-DIAL	DELAY-ALARM
		0	4	—	C
		1	5	9	D
		2	6	A	E
		3	7	B	F

**Example:** A Slow, Audible, Entry/Exit with CHIME is 04 with restore after alarm time.

**ENTRY/EXIT:** Become INTRUDER WARNING ZONES after an alarm but still report ALARM and RESTORE codes. (see OPERATION)

**CHIME:** Pulses the keypad sounder for 5 seconds each time the zone is violated. To disable chime, bypass zone(s) or use CHIME button (see 1F5C).

**DELAY-DIAL:** Allows 45 seconds to cancel an alarm report; otherwise, the dialer will communicate the ZONE ALARM CODE (see 1FD0).

**DELAY-ALARM:** Allows ONE communication attempt before the audible alarm occurs to ensure communication before alerting intruders.

**INTERIOR:** Allows violation during entry and exit times without causing alarm.

### ADDRESS DATA X Y

1FF0	: _ : _ :	ZONE 1 DEFINITION
1FF1	: _ : _ :	ZONE 2 DEFINITION
1FF2	: _ : _ :	ZONE 3 DEFINITION
1FF3	: _ : _ :	ZONE 4 DEFINITION
1FF4	: _ : _ :	ZONE 5 DEFINITION
1FF5	: _ : _ :	ZONE 6 DEFINITION
1FF6	: _ : _ :	ZONE 7 DEFINITION
1FF7	: _ : _ :	ZONE 8 DEFINITION

## PANEL MODE

ADDRESS	DATA X Y	
1FF8	: : :	<p>KEY SWITCH USER ENABLE: This data allows the circuit board KEY input to be used with a momentary switch to the COM terminal to arm or disarm zones.</p> <p>TO ENABLE: X = E, Y = USER I.D.</p> <p>TO DISABLE: X = 0, Y = 0</p> <p>Example: Define User 8 as the key-switch user (E8); whenever the key-switch is used it will arm or disarm the zones controlled by USER 8.</p>
1FF9	: : :	<p>FAIL-SAFE ALARM WARNING ENABLE: If enabled, the unit sounds a ½ second alarm warning when the user attempts to arm the system with one or more zones violated. If disabled, the user will get a chime at the keypad when attempting to arm the system with a violated zone(s).</p>
<p style="text-align: center;"><b>DATA</b> <b>X Y</b></p> <p style="text-align: center;">: E : E : ENABLE.</p> <p style="text-align: center;">: 0 : 0 : DISABLE</p>		
1FFA	: : :	<p>EXIT MODE: At this address you have several choices as to how the system will operate during exit time. Program the data required according to the following chart.</p>
	<p><b>DATA</b> <b>X Y</b></p>	<p><b>EXIT TIMING/KEYPAD SOUNDER</b></p>
	: 0 : 1 :	<p>Pulsed Sounder terminates 10 seconds after Exit loop restores.</p> <p>Closing reports when Arm or Part LED lights.</p>
	: 0 : 2 :	<p>Silent with time terminating 10 seconds after Exit loop restores.</p> <p>As above.</p>
	: 0 : 4 :	<p>Pulsed Sounder starts only when monitor station answers. (Allow 2 min. Exit time)</p> <p>As above.</p>
	: 1 : 1 :	<p>Pulsed Sounder for duration of Exit time.</p> <p>Closing reports only when/if Exit time completes.</p>
	: 1 : 2 :	<p>Silent for duration of Exit time.</p> <p>As above.</p>
<b>Note:</b>	: 1 : 1 : and : 1 : 2 :	allows user to arm then disarm the system within the exit time without causing a monitor station report.
1FFB	: : :	<p>ALARM TIME: To be programmed in HEX using the Decimal to HEX chart B on the back page of these instructions. It is recommended that alarm time be at least 2 minutes (02).</p>
1FFC	: : :	<p>POLICE AUDIBLE ENABLE: This address defines whether the POLICE keys will be silent or audible.</p>
	<p><b>DATA</b> <b>X Y</b></p>	<p>: 0 : 0 : POLICE KEYS SILENT</p> <p>: E : E : POLICE KEYS AUDIBLE</p>

ADDRESS	DATA		
	X	Y	
1FFD	:0	:0	<b>DO NOT USE.</b>
1FFE	:0	:0	<b>DO NOT USE.</b>
1FFF	:	:	<p><b>RANGE LOCK:</b> The data in this address should always be 54 to program the COMMUNICATION AND ACCESS TABLES. Data 50 will restrict ALL programming with the exception of ENTRY/EXIT times.</p> <p>54 = ACCESS TO PROGRAMMING.</p> <p>50 = PROGRAMMING LOCKED. ENTRY/EXIT TIMES ONLY.</p>
2000	:	:	<p><b>ENTRY TIME:</b> To be programmed in HEX using the Decimal to HEX chart B on the back page of these instructions. <b>DO NOT PROGRAM 00.</b></p> <p>ENTRY TIME can be programmed without the program jumper in place. ENTRY TIME is always in temporary memory, and whenever AC and DC power is lost ENTRY TIME will go back to the factory default of 30 seconds.</p>
2001	:	:	<p><b>EXIT TIME:</b> To be programmed in HEX using the Decimal to HEX chart B on the back of page of these instructions. <b>DO NOT PROGRAM 00.</b></p> <p>EXIT TIME can be programmed without the program jumper in place. EXIT TIME is always in temporary memory, and whenever AC and DC power is lost, EXIT TIME will go back to the factory default of 60 seconds.</p>

# FACTORY ACCESS TABLE - 00 EXCEPT AS SHOWN

USER	CODE	CONVENIENCE				ZONES CONTROLLED								ZONES BYPASSABLE				ADD/DELETE		PROGRAM	
		ADRS. DATA		(X)		(Y)		ADRS. DATA (XY)		(X)		(Y)		ADRS. DATA (XY)		ADRS. DATA		ADRS. DATA		ADRS. DATA	
0	— — — —	1F50	E E	— — — —	— — — —	— — — —	— — — —	1F60	— —	— — — —	— — — —	— — — —	— — — —	1F70	— —	1F80	— —	1F90	— —		
1	1 2 3 4	1F51	E E	1 1 1 1	— — — —	1 1 1 1	— — — —	1F61	F F	1 1 1 1	— — — —	1 1 1 1	— — — —	1F71	F F	1F81	E E	1F91	E E		
2	— — — —	1F52	— —	— — — —	— — — —	— — — —	— — — —	1F62	— —	— — — —	— — — —	— — — —	— — — —	1F72	— —	1F82	— —	1F92	— —		
3	— — — —	1F53	— —	— — — —	— — — —	— — — —	— — — —	1F63	— —	— — — —	— — — —	— — — —	— — — —	1F73	— —	1F83	— —	1F93	— —		
4	— — — —	1F54	— —	— — — —	— — — —	— — — —	— — — —	1F64	— —	— — — —	— — — —	— — — —	— — — —	1F74	— —	1F84	— —	1F94	— —		
5	— — — —	1F55	— —	— — — —	— — — —	— — — —	— — — —	1F65	— —	— — — —	— — — —	— — — —	— — — —	1F75	— —	1F85	— —	1F95	— —		
6	— — — —	1F56	— —	— — — —	— — — —	— — — —	— — — —	1F66	— —	— — — —	— — — —	— — — —	— — — —	1F76	— —	1F86	— —	1F96	— —		
7	— — — —	1F57	— —	— — — —	— — — —	— — — —	— — — —	1F67	— —	— — — —	— — — —	— — — —	— — — —	1F77	— —	1F87	— —	1F97	— —		
8	— — — —	1F58	— —	— — — —	— — — —	— — — —	— — — —	1F68	— —	— — — —	— — — —	— — — —	— — — —	1F78	— —	1F88	— —	1F98	— —		
9	— — — —	1F59	E E	— — — —	— — — —	— — — —	— — — —	1F69	— —	— — — —	— — — —	— — — —	— — — —	1F79	— —	1F89	— —	1F99	— —		
A	— — — —	1F5A	— —	— — — —	— — — —	— — — —	— — — —	1F6A	— —	— — — —	— — — —	— — — —	— — — —	1F7A	— —	1F8A	— —	1F9A	— —		
B	— — — —	1F5B	— —	— — — —	— — — —	— — — —	— — — —	1F6B	— —	— — — —	— — — —	— — — —	— — — —	1F7B	— —	1F8B	— —	1F9B	— —		
C	— — — —	1F5C	E E	— — — —	— — — —	— — — —	— — — —	1F6C	— —	— — — —	— — — —	— — — —	— — — —	1F7C	— —	1F8C	— —	1F9C	— —		
D	— — — —	1F5D	— —	— — — —	— — — —	— — — —	— — — —	1F6D	— —	— — — —	— — — —	— — — —	— — — —	1F7D	— —	1F8D	— —	1F9D	— —		
E	— — — —	1F5E	— —	— — — —	— — — —	— — — —	— — — —	1F6E	— —	— — — —	— — — —	— — — —	— — — —	1F7E	— —	1F8E	— —	1F9E	— —		
F	1 6 0 8	1F5F	— —	— — — —	— — — —	— — — —	— — — —	1F6F	— —	— — — —	— — — —	— — — —	— — — —	1F7F	— —	1F8F	E E	1F9F	E E		
		If allowed enter EE		Place a 1 under each zone to be controlled by that user. Place a 0 under the zones not to be controlled by that user. Always place a 1 under 24 Hour Zones for 1 user. — Convert pattern using HEX CHART and write 2 digits under X and Y data.						Place a 1 under each zone to be bypassed by that user. Place a 0 under the zones not to be bypassed by that user. — Convert pattern using HEX CHART and write 2 digits under X and Y data.						If allowed enter EE		If allowed enter EE			
		If not, enter 00														If not, enter 00		If not, enter 00			

HEX CHART	PATTERN	DIGIT
0000	— 0	
0001	— 1	
0010	— 2	
0011	— 3	
0100	— 4	
0101	— 5	
0110	— 6	
0111	— 7	
1000	— 8	
1001	— 9	
1010	— A	
1011	— B	
1100	— C	
1101	— D	
1110	— E	
1111	— F	

# FACTORY COMMUNICATION and PANEL MODE TABLE - 00 EXCEPT AS SHOWN

ADDRESS DATA (X) (Y)

POWER UP ZONES ON: 8 7 6 5 4 3 2 1  
1 1 1 1 1 1 1 1

(X) (Y)

POWER UP INDICATOR: Armed = 01, Part = 02, Disarmed = 00

1F15 0 1

ADDRESS DATA

ADDRESS DATA

ADDRESS DATA

1FA0	0	Account digit 1	1FB0	1	Phone 1 Pause : Digit 1	1FC0	1	Phone 2 Pause : Digit 1
1	0	2	1	2	2	2	2	2
2	0	3	2	3	3	3	3	3
3	0	4	3	4	4	4	4	4
4	0	NOT USED	4	5	5	5	5	5
5	0	Police Key Code	5	6	6	6	6	6
6	0	Emerg Key Code	6	7	7	7	7	7
7	0	Duress Code	7	8	8	8	8	8
8	0	Test Code	8	9	9	9	9	9
9	0	Auto-Report Code	9	10	10	10	10	10
A	0	Open Code	A	11	11	A	11	11
B	0	Part Open Code	B	12	12	B	12	12
C	0	Memory Code	C	13	13	C	13	13
D	0	Closed Code	D	14	14	D	14	14
E	0	Part Closed Code	E	15	15	E	15	15
F	0	Bypass Code	F	0	NOT USED	F	0	NOT USED

1FD0	Zone 1 ALARM Code	1FE0	Fuse/Bat'y ALARM	1FF0	0	0	Zone 1 MODE : TYPE
1	2	1	F/B RESTORE	1	0	1	2
2	3	2	Zone 9 Code	2	0	1	3
3	4	3		3	0	1	4
4	5	4		4	0	1	5
5	6	5		5	0	1	6
6	7	6		6	0	1	7
7	8	7		7	0	1	8
8	Zone 1 RESTORE	8		8	E	E	Key-Switch User
9	2	9		9	1	2	Fail Safe Warning
A	3	A		A	0	2	Exit Mode
B	4	B	Dialer Enable	B			Alarm Time HEX
C	5	C	Receiver Format	C			Police Key Audible
D	6	D	Telco Alarm	D			
E	7	E	Remote Arm	E			
F	8	F		F	5	4	Range Lock

2000 1 E Entry Time HEX  
2001 3 C Exit Time HEX

Place a 1 under each zone to be armed.  
Always place a 1 under 24 Hour zones.  
Convert pattern using HEX CHART and write 2 digits under X and Y data.

HEX CHART

PATTERN	DIGIT
0000	0
0001	1
0010	2
0011	3
0100	4
0101	5
0110	6
0111	7
1000	8
1001	9
1010	A
1011	B
1100	C
1101	D
1110	E
1111	F

# ACCESS TABLE

USER	CODE	CONVENIENCE		ZONES CONTROLLED								ZONES BYPASSABLE								ADD/DELETE		PROGRAM	
		ADRS.	DATA	(X)	(Y)	1	2	3	4	(X)	(Y)	1	2	3	4	5	6	7	8	ADRS.	DATA	ADRS.	DATA
0A.* P.A. N.A.*	0	1F50	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F80	0 0	1F90	---
	1	1F51	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F81	0 0	1F91	---
	2	1F52	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F82	0 0	1F92	---
	3	1F53	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F83	0 0	1F93	---
	4	1F54	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F84	0 0	1F94	---
	5	1F55	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F85	0 0	1F95	---
	6	1F56	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F86	0 0	1F96	---
	7	1F57	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F87	0 0	1F97	---
	8	1F58	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F88	0 0	1F98	---
	9	1F59	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F89	0 0	1F99	---
	A	1F5A	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F8A	0 0	1F9A	---
	B	1F5B	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F8B	0 0	1F9B	---
	C	1F5C	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F8C	0 0	1F9C	---
	D	1F5D	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F8D	0 0	1F9D	---
	E	1F5E	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F8E	0 0	1F9E	---
	F	1F5F	0 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1F8F	0 0	1F9F	---
HEX CHART PATTERN DIGIT		If allowed enter EE If not, enter 00		Place a 1 under each zone to be controlled by that user. Place a 0 under the zones not to be controlled by that user. Always place a 1 under 24 Hour Zones for 1 user. — Convert pattern using HEX CHART and write 2 digits under X and Y data.								Place a 1 under each zone to be bypassed by that user. Place a 0 under the zones not to be bypassed by that user. — Convert pattern using HEX CHART and write 2 digits under X and Y data.								If allowed enter EE If not, enter 00		If allowed enter EE If not, enter 00	
0000 — 0																							
0001 — 1																							
0010 — 2																							
0011 — 3																							
0100 — 4																							
0101 — 5																							
0110 — 6																							
0111 — 7																							
1000 — 8																							
1001 — 9																							
1010 — A																							
1011 — B																							
1100 — C																							
1101 — D																							
1110 — E																							
1111 — F																							

POWER UP ZONES ON: (X) (Y)

	8	7	6	5	4	3	2	1	

(X) (Y)

1F14

POWER UP INDICATOR: Armed = 01, Part = 02, Disarmed = 00

	8	7	6	5	4	3	2	1	

(X) (Y)

1F15

POWER UP INDICATOR: Armed = 01, Part = 02, Disarmed = 00

Place a 1 under each zone to be enabled  
Always place a 1 under 24 Hour zones.  
Convert pattern using HEX CHART and write 2 digits under X and Y data.

HEX CHART	PATTERN	DIGIT
0000	—	0
0001	—	1
0010	—	2
0011	—	3
0100	—	4
0101	—	5
0110	—	6
0111	—	7
1000	—	8
1001	—	9
1010	—	A
1011	—	B
1100	—	C
1101	—	D
1110	—	E
1111	—	F

ADDRESS	DATA	ADDRESS	DATA	ADDRESS	DATA	
1FA0	0	Account digit 1	1FB0	Phone 1 Pause : Digit 1	1FC0	Phone 2 Pause : Digit 1
1	0	2	1	2	1	2
2	0	3	2	3	2	3
3	0	4	3	4	3	4
4	X	NOT USED	4	5	4	5
5		Police Key Code	5	6	5	6
6		Emerg Key Code	6	7	6	7
7		Duress Code	7	8	7	8
8		Test Code	8	9	8	9
9		Auto-Report Code	9	10	9	10
A	0	Open Code	A	11	A	11
B	0	Part Open Code	B	12	B	12
C	0	Memory Code	C	13	C	13
D	0	Closed Code	D	14	D	14
E	0	Part Closed Code	E	15	E	15
F	0	Bypass Code	F	NOT USED	F	NOT USED

Zone 1 ALARM Code	Zone 1 RESTORE	Fuse/Bat'y ALARM F/B RESTORE Zone 9 Code	Zone 1 MODE TYPE
2	2		4
3	3		2
4	4		3
5	5		4
6	6		5
7	7		6
8	8		7
			8
			Key-Switch User
			Fail Safe Warning
			Exit Mode
			Alarm Time HEX
			Police Key Audible
			Range Lock
			Entry Time HEX
			Exit Time HEX

## DATA CONVERSION REFERENCE

### ZONE LED PATTERN DURING DATA DISPLAY "A"

ZONE	2ND DIGIT (Y)															
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1		*		*		*		*		*		*		*		*
2			*	*		*	*				*	*			*	*
3					*	*	*	*					*	*	*	*
4									*	*	*	*	*	*	*	*

ZONE	1ST DIGIT (X)															
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
5		*		*		*		*		*		*		*		*
6			*	*		*	*				*	*			*	*
7					*	*	*	*					*	*	*	*
8									*	*	*	*	*	*	*	*

Example: How to read data using the Zone LEDs.  
\* indicates LED lit.

ZONE			
1	*		2nd DIGIT = B
2	*		
3			
4	*		
5	*		1ST DIGIT = 9
6			
7			
8	*		

The data shown is 9B

### DECIMAL TO HEX CHART "B"

DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX
00	00	32	20	64	40	96	60	128	80	160	A0	192	C0	224	E0
01	01	33	21	65	41	97	61	129	81	161	A1	193	C1	225	E1
02	02	34	22	66	42	98	62	130	82	162	A2	194	C2	226	E2
03	03	35	23	67	43	99	63	131	83	163	A3	195	C3	227	E3
04	04	36	24	68	44	100	64	132	84	164	A4	196	C4	228	E4
05	05	37	25	69	45	101	65	133	85	165	A5	197	C5	229	E5
06	06	38	26	70	46	102	66	134	86	166	A6	198	C6	230	E6
07	07	39	27	71	47	103	67	135	87	167	A7	199	C7	231	E7
08	08	40	28	72	48	104	68	136	88	168	A8	200	C8	232	E8
09	09	41	29	73	49	105	69	137	89	169	A9	201	C9	233	E9
10	0A	42	2A	74	4A	106	6A	138	8A	170	AA	202	CA	234	EA
11	0B	43	2B	75	4B	107	6B	139	8B	171	AB	203	CB	235	EB
12	0C	44	2C	76	4C	108	6C	140	8C	172	AC	204	CC	236	EC
13	0D	45	2D	77	4D	109	6D	141	8D	173	AD	205	CD	237	ED
14	0E	46	2E	78	4E	110	6E	142	8E	174	AE	206	CE	238	EE
15	0F	47	2F	79	4F	111	6F	143	8F	175	AF	207	CF	239	EF
16	10	48	30	80	50	112	70	144	90	176	80	208	D0	240	F0
17	11	49	31	81	51	113	71	145	91	177	81	209	D1	241	F1
18	12	50	32	82	52	114	72	146	92	178	82	210	D2	242	F2
19	13	51	33	83	53	115	73	147	93	179	83	211	D3	243	F3
20	14	52	34	84	54	116	74	148	94	180	84	212	D4	244	F4
21	15	53	35	85	55	117	75	149	95	181	85	213	D5	245	F5
22	16	54	36	86	56	118	76	150	96	182	86	214	D6	246	F6
23	17	55	37	87	57	119	77	151	97	183	87	215	D7	247	F7
24	18	56	38	88	58	120	78	152	98	184	88	216	D8	248	F8
25	19	57	39	89	59	121	79	153	99	185	89	217	D9	249	F9
26	1A	58	3A	90	5A	122	7A	154	9A	186	8A	218	DA	250	FA
27	1B	59	3B	91	5B	123	7B	155	9B	187	8B	219	DB	251	FB
28	1C	60	3C	92	5C	124	7C	156	9C	188	8B	220	DC	252	FC
29	1D	61	3D	93	5D	125	7D	157	9D	189	8D	221	DD	253	FD
30	1E	62	3E	94	5E	126	7E	158	9E	190	8E	222	DE	254	FE
31	1F	63	3F	95	5F	127	7F	159	9F	191	8F	223	DF	255	FF

### HEX CHART "C"

PATTERN	DIGIT
0000	0
0001	1
0010	2
0011	3
0100	4
0101	5
0110	6
0111	7
1000	8
1001	9
1010	A
1011	B
1100	C
1101	D
1110	E
1111	F

**NOTE:** This pattern is the same as the LED pattern A with 1 indicating a LED lit.