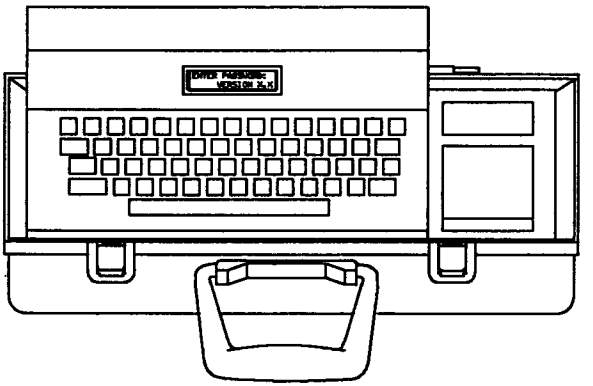
DATA TERMINAL

MODEL P-9



USER INSTRUCTIONS
AND
REFERENCE GUIDE

Linear
A NORTEK COMPANY
2055 Corte Del Nogal
Carlsbad, CA 92009
(619) 438-7000 • (800) 421-1587
CA (800) 321-1845 • FAX (619) 438-7043
Customer/Technical Service: (800) 392-0123

FCC NOTICE

WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause radio and television interference. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on while the radio or television is on, the user is encouraged to try to correct the interference by one or more of the following measures:

Re-orient the radio or television receiving antenna.

Relocate the P-9 Data Terminal with respect to the receiver.

Move the P-9 Data Terminal away from the receiver.

Plug the P-9 Data Terminal into a different electrical outlet such that the P-9 and receiver are on different branch 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 Federal Communications Commission, helpful:

"How to Identify and Resolve Radio-TV Interference Problems."

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

WRITER'S NOTE:

This publication could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. Linear may make improvements and/or changes in the product(s) and/or firmware described in this publication at any time.

FOR TECHNICAL ASSISTANCE CALL:
Linear Technical Services: 1-800-392-0123

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SECTION 1

INTRODUCTION

1.0 INTRODUCTION

The Linear/SESCOA P-9 Data Terminal is a powerful multi-purpose unit designed for use with the 1900 Smart Control/Communicator and the 1700 series of Slave Communicators. The P-9 provides more than just the ability to program these communicators — It also allows the user to either control, or just read the status of, certain communicator functions. (For example: the 1900 Smart Control/Communicator can be armed or disarmed from a remote location.)

This manual explains how to use the Linear/SESCOA P-9 Data Terminal. It covers the P-9 hardware and explains how to use the P-9 to get the most out of either a 1700 or 1900 Digital Communicator. For most applications, it will not be necessary to read the entire manual, since some sections are applicable only to a particular model of communicator.

The P-9 is a fairly complex and versatile piece of equipment. If you have trouble figuring out what to do next, or get stuck and frustrated, call the SESCOA technical services department at **1-800-421-1587 or in CA 1-800-321-1845** for assistance.

1.1 HOW TO USE THIS MANUAL

This section (Section 1) introduces this manual and the P-9 itself. You should read this section to familiarize yourself with the organization of this manual.

Section 2 covers installation. It describes how to connect a printer, another P-9, or a Host Computer to the P-9 to take advantage of some of the many capabilities built into the unit.

Section 3 contains information relating to the basic operation of the P-9: among other things, it introduces the keyboard and its special keys. First-time users should become familiar with this section before turning on the P-9.

Section 4 takes you through the power up sequence: entering the password and operator access level code. It also covers the initial entry of these operator codes. Experienced users may want to start here.

Section 5 introduces the P-9 Master Menu. All of the functions of the P-9 are accessed through this menu.

Section 6, "CONFIGURATION", sets up the P-9 to work with your printer and Host Computer, selects dialing formats and command mode operation, and allows changes to be made to the operator access level codes.

Section 7 introduces the File Maintenance utilities. The P-9's eight Masterfiles are used to create and maintain the program files used by the 1700 and 1900 communicators. The utilities also allow the P-9 to copy, delete, or print these files, or transfer them to another P-9 or to a Host Computer.

Section 8 contains all of the commands that are used when communicating with the 1700 or 1900 communicators. The commands in this section are used in both the local and remote communications modes: any differences are mentioned in the special notes heading at the bottom of each command.

Section 9 shows authorized users how to print or display the communicator access codes stored in the P-9.

Section 10 is a Programming Guide for the 1700 family of slave communicators, while Section 11 covers the 1900 Control/Communicator. Each section presents, in order, all of the programmable options, the range of valid responses accepted by the P-9, and any information which can be used in developing a program which best meets the requirements of each installation.

1.2 HARDWARE DESCRIPTION

A block diagram of the P-9 Data Terminal is shown below.

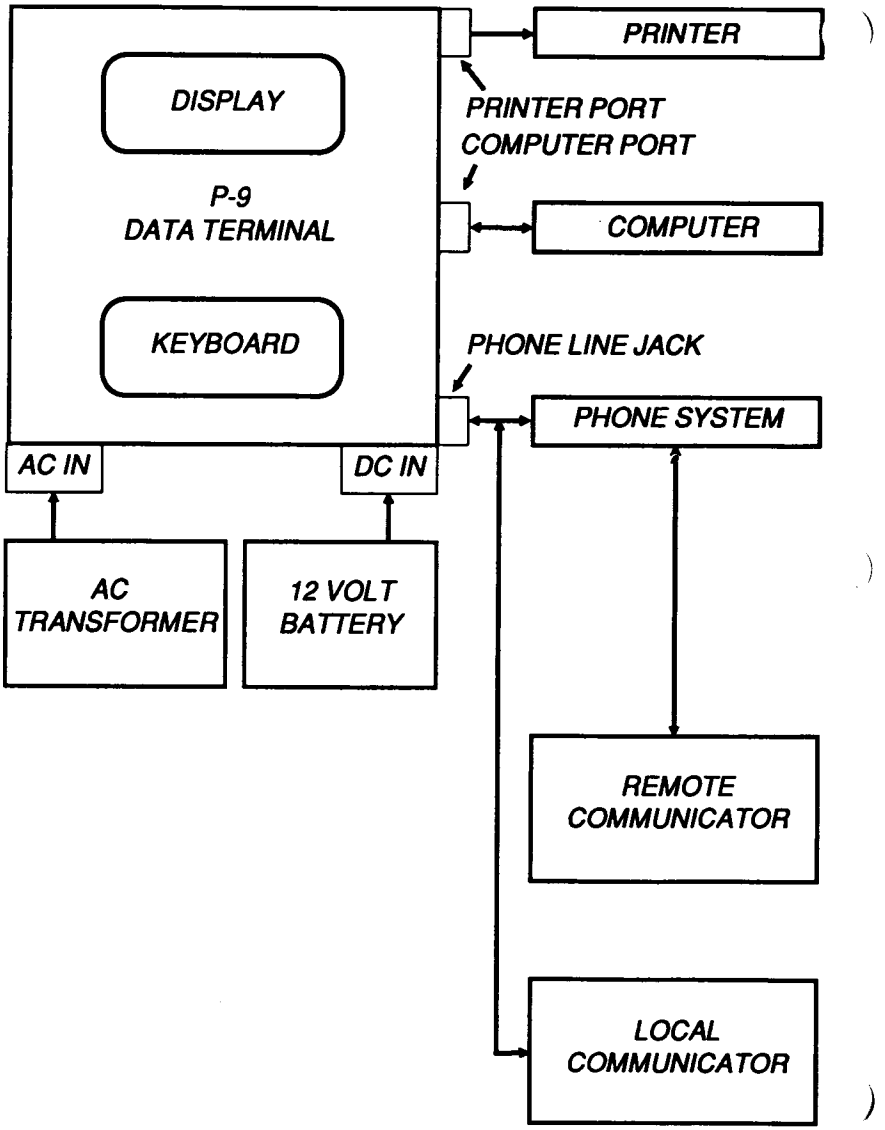

Figure 1-1. P-9 Data Terminal Block Diagram

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1.2.1 CONTROLS AND CONNECTIONS

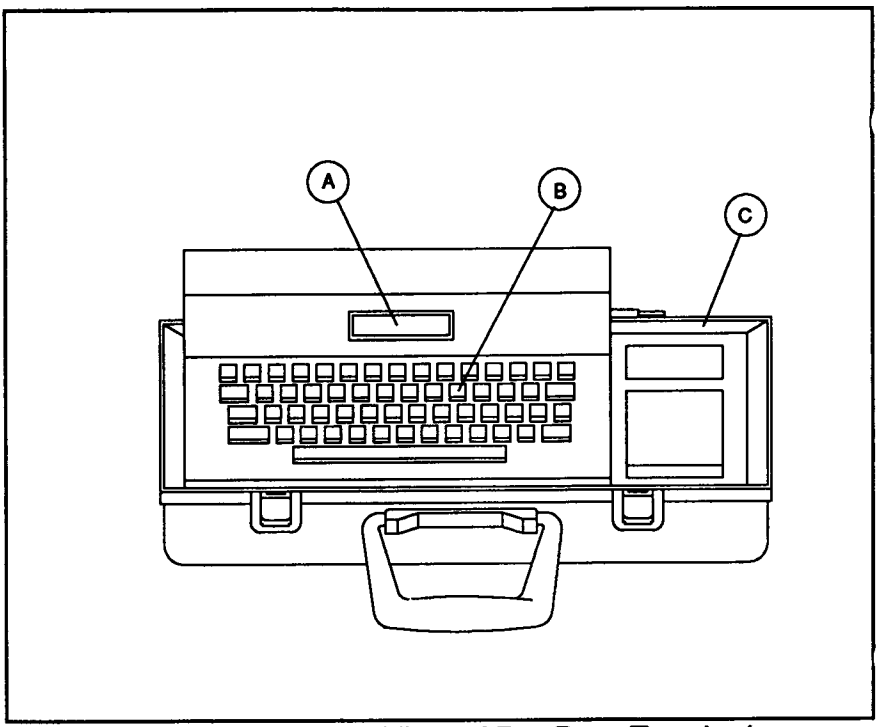


Figure 1-2. Front View of P-9 Data Terminal

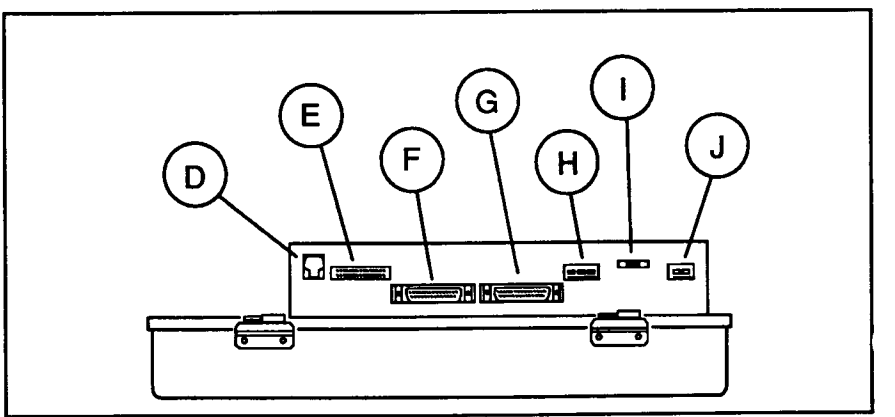


Figure 1-3. Rear View of P-9 Data Terminal

1.2.2 CONTROLS AND CONNECTIONS (CONT.)

A: Alphanumeric Liquid Crystal **Display** (LCD) presents the operator self prompting, easy to answer programming questions.

B: Data Entry **Keyboard** for data and dual-level password entry.

C: The **Carrying Case** features a removable cover and storage for the AC transformer and power cables.

D: **Phone Line Jack** for connection to the commercial telephone system to correspond with field communicators.

E: The **6000/1800 Interface** is intended for future use and is not active at this time.

F: **Computer I/O Port** for connection to an external host computer or used to connect two P-9 programmers together to transfer memory files.

G: **Printer I/O Port** for connection to an external serial printer. The printer can output program files, system activity (on some model communicators), and communicator access codes.

H: **AC Power Input** for connection to a low voltage transformer to power the P-9.

I: **Power Switch** for selection of the power input. The center position of the three-way switch is OFF, left selects the AC power input, and right selects the DC power input.

J: **DC Power Input** for connection to a 12 volt battery. Can be used for field situations where AC power is not available.

1.2.3 P-9 SPECIFICATIONS

P-9 DATA TERMINAL

Physical dimensions	9.5" x 15" x 4.25"
Power supply voltage	12-16.5 VAC or 12 VDC
Current consumption	.6 Amp DC or .9 Amp AC
Input / Output	57 key keypad
	2 - RS232 compatible ports
	Eight pin telephone jack

TELEPHONE INTERFACE

Transmission modulation	FSK
Transmission frequencies	2225 Hz (mark) 2025 (space)
Transmission level (data)	≤ -9 dbm
Transmission rate (data)	300 Baud
Dialing method	Pulse or tone
Pulse dialing ratio	60 / 40
Pulse interdigit time	600 ms
Transmission level (DTMF)	≤ 0 dbm
On line impedance	600 ohms
On line resistance	95 ohms
Off line resistance	> 20 megohms
Return loss	> 11 db from 500 - 2500 Hz
	> 3 db from 300 - 3500 Hz
Breakdown voltage	> 1500 V (T/R to all)
Dial tone detect	300 - 1000 Hz
Receiver sensitivity	> -35 dbm
Ringer equivalence	.4A , 1.7B
FCC registration	AAT99L-72479-DT-E

SECTION 2

INSTALLATION

2.0 INSTALLATION

2.1 PACKING LIST

Before using the P-9 Data Terminal, check that each of the following items were included in the P-9 carrying case.

1. Plug-in Transformer
2. 3-Conductor AC Power Cord
3. 2-Conductor DC Power Cord
4. Telephone Cord
5. Insert Indicating Factory-Programmed Password

2.2 CONNECTING A POWER SOURCE

The P-9 Data Terminal has been designed to operate from either an AC or DC power source. To operate from an AC power source, **you must use either the low voltage plug-in transformer supplied, or an equivalent. DO NOT plug the P-9 directly into a 110 VAC outlet or serious damage to the P-9 will occur!**

The P-9 does not contain a battery charger. Therefore, it is not possible to operate on AC power while charging a battery through the P-9 for subsequent DC operation.

2.2.1 AC POWER CORD AND TRANSFORMER

The P-9 is supplied with a 16.5V/20VA plug-in transformer for operation of the P-9 from the AC line power. The AC power cord supplied has a 3-conductor connector on one end and three spade lugs on the other end. Connect the center spade lug to the center GND terminal on the plug-in transformer. Connect the two outer lugs to the two AC terminals on the transformer (polarity is not important). Plug the connector into the 12-16.5 VAC socket on the rear of the P-9 and plug the transformer into a three-prong wall outlet. **Do not use a ground isolation adapter.**

2.2.2 DC POWER CORD

The P-9 can be powered from a 12 volt DC power source (such as the backup battery in an alarm system). The DC power cord has a 2-conductor connector on one end and two insulated alligator clips on the other end. Connect the RED clip to the positive battery terminal; connect the BLACK clip to the negative battery terminal.

> *WARNING!*
> *Reversing polarity of the DC input will damage the P-9. Be sure that the RED clip is attached to positive, and the BLACK clip is attached to negative.*

2.3 CONNECTING A PRINTER

The P-9 Data Terminal will interface to most printers equipped with an RS232-C serial interface and which support either a Busy/Ready or an X-ON/X-OFF protocol.

After installing a printer, it will be necessary to execute the printer SETUP routine to configure the serial port.

The printer port connector on the P-9 requires a Cannon DB-25P (or equivalent) mating connector, and must be constructed to meet the following interface requirements:

Pin	Signal	Direction	Description
2	Receive Data	Input from printer	Serial data from printer Used with X-ON/X-OFF protocol
3	Transmit Data	Output to printer	Serial data to printer
4	Clear to Send	Input from printer	Must be +5 to +12V to transmit Connect to printer Busy/Ready output for Busy/Ready protocol, or +5 to +12V for X-ON/X-OFF protocol
5	Request to Send	Output to printer	Set to +12V when ready to transmit
7	Signal Ground		Ground **Do not connect to chassis ground!**
20	Data Terminal Ready	Input from printer	Must be +5 to +12V to receieve
22	Ring Indicator	Input from printer	Always ignored by P-9

Table 2-1. Printer Port Signals

2.3.1 TYPICAL PRINTER CONNECTION (BUSY/READY PROTOCOL)

The cable shown below will operate with most printers which use the Busy/Ready protocol. In the case of difficulties, verify the pin connections at your printer, and the polarity of the Busy/Ready signal.

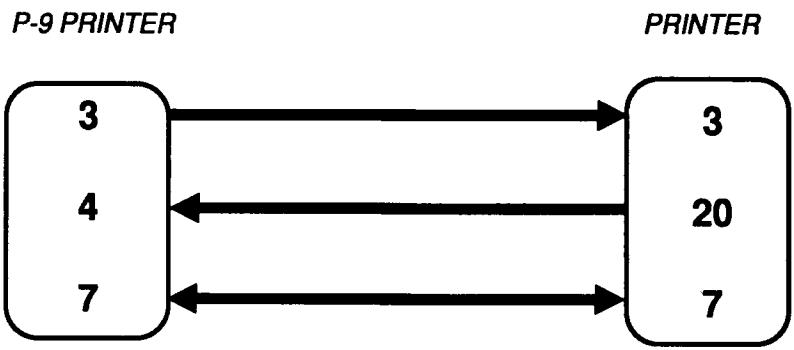


Figure 2-1. Typical Printer Cable (Busy/Ready)

2.3.2 TYPICAL PRINTER CONNECTION (X-ON/X-OFF PROTOCOL)

The cable shown below will operate with most printers which use the X-ON/X-OFF protocol. In the case of difficulties, verify the pin connections at your printer.

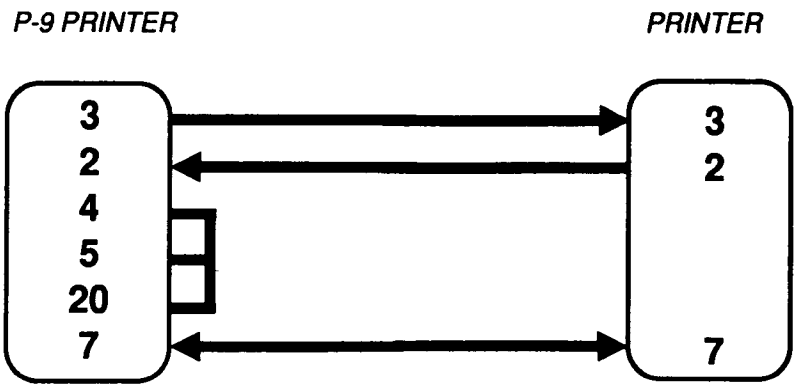


Figure 2-2. Typical Printer Cable (X-ON/X-OFF)

2.4 CONNECTING ANOTHER P-9 OR HOST COMPUTER

The P-9 Data Terminal supports file transfers through the Computer/Modem port to another P-9 or to a Host Computer through an RS232-C serial interface using Request-to-Send/Clear-to-Send protocol.

After installing a P-9 or computer link, it will be necessary to execute the serial port SETUP routine to configure the serial port.

The serial port connector on the P-9 requires a Cannon DB-25P (or equivalent) mating connector, and must be constructed to meet the following interface requirements:

Pin	Signal	Direction	Description
2	Transmit Data	Output to P-9/Computer	Connect to P-9/Computer Receive Data input
3	Receive Data	Input from P-9/Computer	Connect to P-9/Computer Transmit Data output
4	Request to Send	Output to P-9/Computer	Set to +12V when ready to transmit Connect to P-9/Computer Clear to Send input
5	Clear to Send	Input from P-9/Computer	Must be +5 to +12V to transmit Connect to P-9/Computer Request to Send Output
6	Data Set Ready	Input from P-9/Computer	Must be +5 to +12V to transmit
7	Signal Ground		Ground **Do not connect to chassis ground!**
20	Data Terminal Ready	Output to P-9/Computer	Always set to +12V
22	Ring Indicator	Input from P-9/Computer	Always ignored by P-9

Table 2-2. Computer Port Signals

2.4.1 P-9 TO P-9 CONNECTION

The cable shown below can be used to connect one P-9 to another P-9. To communicate with a Host Computer or another P-9, construct a cable which meets the requirements shown in Table 2-2. Refer to Section 7.2 for more information concerning transmission protocol.

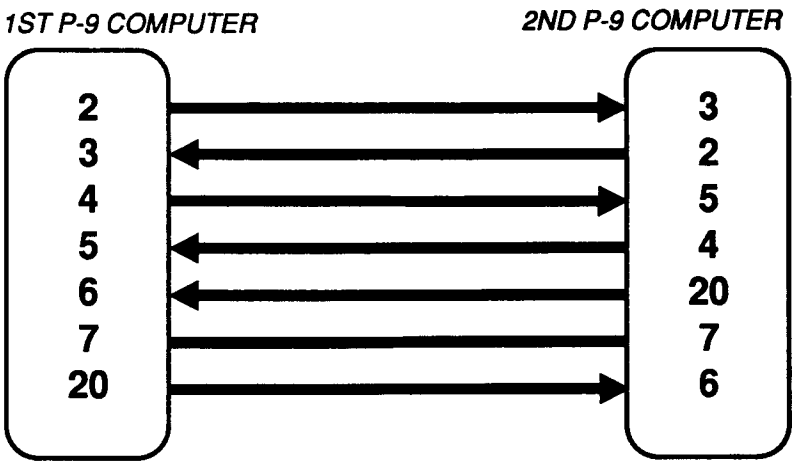


Figure 2-3. P-9 to P-9 Transfer Cable

2.5 TELEPHONE LINE CONNECTION

The P-9 is supplied with an eight-conductor Series 300 phone cord for connection between the P-9 and the telephone company jack. Plug one end into the PHONE LINE jack on the rear of the P-9. Plug the other end into the telephone company jack.

SECTION 3

FAMILIARIZATION

3.0 FAMILIARIZATION

This section provides an introduction to the basic operation of the P-9 Data Terminal, and the way this manual presents the information.

3.1 DISPLAYS

Throughout this manual, at each step where an operator response is allowed or required, the P-9 LCD display is reproduced, along with any information which will assist the operator in determining the appropriate response:

P-9 RESPONSE	VALID ENTRY:
CHARACTERS SHOWN ON P-9 DISPLAY	*The range of entry allowed.*

PURPOSE:

What the function does, and how it affects other aspects of operation.

OPERATOR RESPONSE:

The appropriate operator response and its limits.

If appropriate, the next section number is also given.

3.1.1 MENUS

All of the major functions of the P-9 are accessed through a hierarchical arrangement of menus. At the menu level, the selection message **"TYPE DOWN ARROW OR UP ARROW, OR ENTER KEY."** is constantly displayed in three parts on the top line of the LCD display, while the current menu item is displayed on the bottom line. Throughout the manual, whenever a menu selection is being displayed, the P-9 LCD display reproduction will appear as follows:

P-9 RESPONSE	VALID ENTRY
(SELECT ITEM) CHOICE?	*Press ↑ or ↓ to change, ENTER to select.*

NOTE: "choice" in the above display is replaced by the appropriate menu item.

3.2 KEYBOARD

The P-9 features a fifty-seven key data entry keyboard which is used to enter the operator responses. Eight of these keys provide special functions as explained below:

ESC (ESCAPE)

ESC

The **ESC** key can be used to exit any routine at any time and return the operator to the master menu. If creating or modifying a file when this key is pressed, the P-9 will display:

```
SAVE MASTERFILE?
(Y/N)
```

The operator must then enter **Y** or **N** before returning to the master menu. If **Y** is entered, the workfile is saved in the masterfile previously selected. If **N** is entered, any changes in the workfile are not saved.

ENTER

ENTER

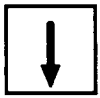
The **ENTER** key is used to input data into the P-9. The key is used to finish any question that does not require a yes/no answer. It is also used to select all master and sub-menu functions.

BACK SPACE

BACK SPACE

The **BACK SPACE** key is used to remove an incorrect entry. This key will erase entered information as the operator back spaces through it.

↑ ↓ ARROWS



The up and down arrows scroll the displayed menu selections in either direction. Pressing the down arrow at the bottom of the menu returns the display to the top of the menu, and vice versa.

The ↑ and ↓ arrow symbols are used interchangeably with the words "UP ARROW" or "DOWN ARROW" in this manual. Both refer to pressing either the ↑ or ↓ key on the P-9 keyboard.

F1 (Except CREATE or MODIFY file modes)

Pressing the **F1** Key will display the communicator type and header of the first valid masterfile. Press the **ENTER** key to proceed to the next valid file.

F3 (CREATE or MODIFY file mode only)

Pressing the **F3** key prompts the user for a target step number when creating or modifying a masterfile.

HELP

The **HELP** key will cause the P-9 to display the telephone number for Technical Services.

SECTION 4

GETTING STARTED

4.0 GETTING STARTED

Once all required connections (telephone line, printer, computer or modem, and power cable) have been made, the P-9 is ready for operation. The power switch, located on the rear of the P-9 between the two power source connectors, is a three-position slide switch. To operate from an AC power source, move the switch **IN THE DIRECTION** of the AC power cable; to operate from DC, move the switch **IN THE DIRECTION** of the DC power cable. To turn the P-9 off, move the switch to the center position, being careful not to go too far.

4.1 PASSWORD ENTRY

When the P-9 is turned on, the following message is displayed:

NOTE: "X.X" = the version number of the P-9 software.

To protect against unauthorized use, the P-9 is programmed at the factory with a four-character password. This factory password is indicated on the card packed with the P-9. If desired, the P-9 may be ordered with a custom password for an additional charge.

Type the password, and then press the **ENTER** key to continue.

4.2 P-9 OPERATOR LEVEL CODES

Access to the P-9 software is controlled by a system of operator level codes. One level is for **supervisors**, the other level is for **operators**. A different code is assigned to each user.

SUPERVISOR LEVEL ACCESS (2)

Supervisor level users have access to all parts of the P-9. This includes the memory file of field system access codes.

OPERATOR LEVEL ACCESS (9)

Operator level users have only limited access to the P-9.

Operator level users are restricted from:

- Printing or displaying Remote Communicator Access codes (Section 9) (Required to establish remote communications with a locked communicator).
- Manually entering communicator Remote Access Codes (Sections 10/11).
- Changing the table of operator level codes (Section 6).

When the P-9 is first used, the operator level codes must be entered into the P-9 memory. These codes usually only have to be set once because an internal lithium backup battery maintains the memory of the P-9 when external power is removed.

4.3 ENTERING THE INITIAL OPERATOR CODES

NOTE: These questions are asked only if the operator level codes have not been entered. If these codes have already been entered, skip to 4.4

To change the existing operator codes, refer to Section 6 "Configuration".

4.3.1 SUPERVISOR - LEVEL CODES (2)

P-9 RESPONSE **VALID ENTRY:**

P-9 RESPONSE	VALID ENTRY:
ENTER SUPERVISOR CODE (X):	*Any two characters except "SK".*

NOTE: "X" = Supervisor level code 1 or 2

PURPOSE:

To enter one of two supervisor-level codes.

OPERATOR RESPONSE:

Enter a two-character supervisor level code, or type SK if supervisor level codes are not required and go to 4.3.2

This question will be repeated for each supervisor code.

CAUTION:
IF NO SUPERVISOR LEVEL CODES ARE ENTERED, IT WILL BE NECESSARY TO CONTACT TECHNICAL SERVICES BEFORE ANY CODES CAN BE ENTERED IN THE FUTURE.

4.3.2 OPERATOR - LEVEL CODES (9)

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER OPERATOR CODE (X):	*Any two characters except "SK".*

NOTE: "X" = operator codes 1 through 9

PURPOSE:

To enter one of the nine operator level codes.

OPERATOR RESPONSE:

Enter a two-character operator level code, or type SK if no additional operator level codes are required and go to 4.4

This question will be repeated until all required operator level codes have been entered.

4.4 ENTERING THE OPERATOR CODE

P-9 RESPONSE:

VALID ENTRY:

Any valid supervisor or operator level code.

PURPOSE:

To determine the current level of operator access.

OPERATOR RESPONSE:

Enter the current operator level code.

Proceed to the Main Menu in Section 5.

SECTION 5

THE MAIN MENU

5.0 THE MAIN MENU

INTRODUCTION

In the P-9's hierarchical system of menus, the Main Menu acts as a gateway to the five sub-menus. It is through these sub-menus that all of the functions of the P-9 are accessed.

If you want to:	You need this submenu:
Maintain (create, modify, delete, etc.) Master Files	FILE MAINTENANCE (SECTION 7)
Add or change a serial port, an operator level code, or dialing option.	SETUP (SECTION 6)
Display or print communicator access codes.	DISPLAY (SECTION 9)
Control (upload/download, change/read status, etc.) a supported communicator.	LOCAL COMMUNICATIONS or REMOTE COMMUNICATIONS (SECTION 8)

Table 5-1. Main Menu Selections

The P-9 menus operate in a circular manner. Pressing the ↓ key displays the next menu item (from the bottom menu item, the top menu item is displayed); pressing the ↑ key displays the previous menu item (from the top menu item, the bottom menu item is displayed). To return to the main menu from any sub-menu or function, press the **ESC** key.

5.1 FILE MAINTENANCE

P-9 RESPONSE

```
(SELECT ITEM)
FILE MAINT?
```

VALID ENTRY:

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

Maintain the eight internal Masterfiles of the P-9.
Files can be:

- Created for the first time (to program either 1700 or 1900 communicators).
- Copied to another file (allows a file to be used as a template, or master, for all other files).
- Modified to correct errors, alter existing files to meet new requirements.
- Printed on an external printer.
- Transferred to another P-9 or to a host computer to be archived.
- Deleted to make room for other files.

RESPONSE:

Press the ↑ or ↓ keys to select another menu item.

Press **ENTER** to maintain the masterfiles. Go to Section 7 and continue.

5.2 DISPLAY MODE

P-9 RESPONSE

```
(SELECT ITEM)
DISPLAY MODE?
```

VALID ENTRY:

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

Allow supervisor level users to display and print the communicator access codes stored in the P-9.

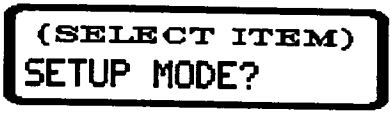
RESPONSE:

Press the ↑ or ↓ keys to select another menu item.

Press **ENTER** to print or display the communicator access codes. Go to Section 9 and continue.

5.3 SETUP MODE

P-9 RESPONSE



VALID ENTRY:

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

Configure certain aspects of the P-9 operation to conform with specific installation requirements. These aspects include:

- Review or change Serial Port 1, the Printer port.
- Review or change Serial Port 2, the Computer/Modem port.
- Change the table of supervisor and operator level codes, and the current operator code.
- Select the Command Mode of operation (for Local and Remote Communications sub-menus only).

RESPONSE:

Press the ↑ or ↓ keys to select another menu item.

Press **ENTER** to change the P-9 configuration. Go to Section 6 and continue.

5.4 REMOTE COMMUNICATIONS

P-9 RESPONSE **VALID ENTRY:**

```
(SELECT ITEM)
REMOTE COMM?
```

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

Establish communications with, and control the operation of, a remote communicator. Depending upon the type of communicator used, the following is an example of the commands which may be allowed:

- Read or write a masterfile to the communicator.
- Arm or disarm the system.
- Enable, disable, or read the status of individual loops.
- Enable, disable, or read the status of certain communicator features.

RESPONSE:

Press the ↑ or ↓ keys to select another menu item.

Press **ENTER** to establish communications with a remote communicator. The Remote and Local Communications sub-menus are identical, the only difference in operation being the manner in which the communications link is established. Go to Section 8 and continue.

5.5 LOCAL COMMUNICATIONS

P-9 RESPONSE **VALID ENTRY:**

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

Establish communications with, and control the operation of, a local communicator. Depending upon the type of communicator used, the following is an example of the commands which may be allowed:

- Read or write a masterfile to the communicator.
- Arm or disarm the system.
- Enable, disable, or read the status of individual loops.
- Enable, disable, or read the status of certain communicator features.

RESPONSE:

Press the ↑ or ↓ keys to select another menu item.

Press **ENTER** to establish communications with a local communicator. The Remote and Local Communications sub-menus are identical, the only difference in operation being the manner in which the communications link is established. Go to Section 8 and continue.

SECTION 6

CONFIGURATION

6.0 CONFIGURATION

INTRODUCTION

The SETUP MODE sub-menu is used to make additions or changes to the manner in which the P-9 operates:

If you want to:	You need this submenu item:
Review the configuration of either serial port.	6.1 Review Serial Port
Change the configuration of either serial port.	6.2 Setup Serial Port
Make changes to the list of authorized operators.	6.3 Change Operator Codes
Change to active operator code.	6.4 Active Operator Code
Change the way the P-9 dials the telephone number.	6.5 Setup Dialing Specs
Select Command or Menu Mode for either Communications Sub-menu.	6.6 Select Command Mode

Table 6-1. Setup Mode Sub-menu Selections

The P-9 menus operate in a circular manner. Pressing the ↓ key displays the next menu item (from the bottom menu item, the top menu item is displayed); pressing the ↑ key displays the previous menu item (from the top menu item, the bottom menu item is displayed). To return to the main menu from this sub-menu or function, press the **ESC** key.

6.1 SERIAL PORT REVIEW

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
REVIEW SERIAL PORT? (Y/N)	*Y or N*

PURPOSE:

Allows the operator to review the printer and computer serial port protocol settings.

OPERATOR RESPONSE:

Enter "Y" to proceed.

Enter "N" to skip the review steps and go to 6.2

6.1.1 PRINTER PORT REVIEW

P-9 RESPONSE:

VALID ENTRY:

Y or N

PURPOSE:

Display the printer port protocol settings.

OPERATOR RESPONSE:

Enter "Y" to proceed.

Enter "N" to skip the printer port review and go to 6.1.2

P-9 RESPONSE

VALID ENTRY:

Press **ENTER** *when ready to continue.*

DISPLAY MEANING:

PAR	Parity Enable	YES = Enabled NO = Disabled
STATE	Parity Select	ODD or EVEN if enabled Blank if parity disabled
B/F	Data Bits per frame	5, 6, 7, or 8
BR	Data baud rate	30=300 Baud 60=600 Baud 12=1200 Baud 24=2400 Baud 48=4800 Baud 96=9600 Baud 19=19200 Baud

Table 6-2. Printer Port Review Display Meaning

6.1.2 COMPUTER PORT REVIEW

P-9 RESPONSE:

```
REVIEW COMPUTER
PORT? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

Display the computer port protocol settings.

OPERATOR RESPONSE:

Enter "Y" to proceed.

Enter "N" to skip the computer port review and go to 6.2

P-9 RESPONSE

```
PAR STATE B/F BR
YES  ODD   7  96
```

VALID ENTRY:

Press **ENTER** *when ready to continue.*

DISPLAY MEANING:

PAR	Parity Enable	YES = Enabled NO = Disabled
STATE	Parity Select	ODD or EVEN if enabled Blank if parity disabled
B/F	Data Bits per frame	5, 6, 7, or 8
BR	Data baud rate	30=300 Baud 60=600 Baud 12=1200 Baud 24=2400 Baud 48=4800 Baud 96=9600 Baud 19=19200 Baud

Table 6-3. Computer Port Review Display Meaning

6.2 SERIAL PORT SETUP

P-9 RESPONSE:

```
SETUP SERIAL
PORT? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

The two serial ports of the P-9 can be configured for different data speeds and formats to match the external printer or computer being used. Consult the technical manual of the device being used for the possible values available. Choose the best values for that device then select the same values for the P-9.

OPERATOR RESPONSE:

Enter "Y" to proceed.

Enter "N" to skip the port setup and go to 6.3

6.2.1 PRINTER PORT SETUP

P-9 RESPONSE: **VALID ENTRY:**

SETUP PRINTER PORT? (Y/N)	*Y or N*

PURPOSE:

Allow changes to the printer port protocol settings.

OPERATOR RESPONSE:

Enter "Y" to proceed.

Enter "N" to skip the printer port setup and go to 6.2.2

P-9 RESPONSE: **VALID ENTRY:**

ENTER BAUD RATE:	*300, 600, 1200, 2400, 4800, 9600, or 19200*

PURPOSE:

Allows selection of different data speeds for the printer port.

OPERATOR RESPONSE:

Enter 300, 600, 1200, 2400, 4800, 9600, or 19200 to correspond with the baud rate of the printer being used.

P-9 RESPONSE: **VALID ENTRY:**

```
PARITY ENABLED?
(Y/N)
```

Y or N

PURPOSE:

Allows parity checking for the printer port.

OPERATOR RESPONSE:

Enter "Y" if parity checking is required by the printer being used.

Enter "N" if parity checking is not required by the printer being used and skip the next question.

P-9 RESPONSE: **VALID ENTRY:**

```
PARITY - ODD OR
EVEN? (O/E)
```

O (odd) or E (even)

PURPOSE:

Allows selection of odd or even parity for the printer port.

OPERATOR RESPONSE:

Enter "O" if odd parity is required by the printer being used.

Enter "E" if even parity is required by the printer being used.

6.2.1 PRINTER PORT SETUP (CONT.)

P-9 RESPONSE:

```
ENTER BITS-PER-
FRAME (5,6,7,8)
```

VALID ENTRY:

5, 6, 7, or 8

PURPOSE:

Allows selection of different lengths of data frames for the printer port.

OPERATOR RESPONSE:

Enter 5,6,7, or 8 to correspond with the number of bits of data per frame required by the printer being used.

6.2.2 COMPUTER PORT SETUP

P-9 RESPONSE:

```
SETUP COMPUTER
PORT? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

Allow changes to the computer port protocol settings.

OPERATOR RESPONSE:

Enter "Y" to proceed.

Enter "N" to skip the computer port setup and return to the Main Menu in Section 5.2

P-9 RESPONSE:

```
ENTER BAUD RATE:
```

VALID ENTRY:

300, 600, 1200, 2400, 4800, 9600, or 19200

PURPOSE:

Allows selection of different data speeds for the computer port.

OPERATOR RESPONSE:

Enter 300, 600, 1200, 2400, 4800, 9600, or 19200 to correspond with the baud rate of the P-9/computer connected to this port.

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
PARITY ENABLED? (Y/N)	*Y or N*

PURPOSE:

Allows parity checking for the computer port.

OPERATOR RESPONSE:

Enter "Y" if parity checking is required by the P-9/computer connected to this port.

Enter "N" if parity checking is not required by the P-9/computer connected to this port and skip the next question.

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
PARITY - ODD OR EVEN? (O/E)	*O (odd) or E (even)*

PURPOSE:

Allows selection of odd or even parity for the computer port.

OPERATOR RESPONSE:

Enter "O" if odd parity is required by the P-9/computer connected to this port.

Enter "E" if even parity is required by the P-9/computer connected to this port.

6.2.2 COMPUTER PORT SETUP (CONT.)

P-9 RESPONSE:	VALID ENTRY:
ENTER BITS-PER- FRAME (5,6,7,8)	*5, 6, 7, or 8*

PURPOSE:

Allows selection of different lengths of data frames for the computer port.

OPERATOR RESPONSE:

Enter 5,6,7, or 8 to correspond with the number of bits of data per frame required by the P-9/computer connected to this port.

Return to the Main Menu in Section 5.2

6.3 OPERATOR CODE SETUP

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
CHANGE OPERATOR CODES? (Y/N)	*Y or N*

PURPOSE:

Allows supervisor level users only to change the nine operator and two supervisor level user access codes.

OPERATOR RESPONSE:

Enter "Y" to change each one of the codes.

Enter "N" to skip this step and proceed to 6.4

6.3.1 SUPERVISOR - LEVEL CODES (2)

P-9 RESPONSE **VALID ENTRY:**

P-9 RESPONSE	VALID ENTRY:
ENTER SUPERVISOR CODE (X):	*Any two characters except "SK".*

NOTE: "X" = supervisor level code 1 or 2

PURPOSE:

To enter one of two supervisor-level codes.

OPERATOR RESPONSE:

Enter a two-character supervisor level code, or type **SK** if supervisor level codes are not required and go to 6.3.2

This question will be repeated for each supervisor code.

CAUTION:
IF NO SUPERVISOR LEVEL CODES ARE ENTERED, IT WILL BE NECESSARY TO CONTACT TECHNICAL SERVICES BEFORE ANY CODES CAN BE ENTERED IN THE FUTURE.

6.3.2 OPERATOR - LEVEL CODES (9)

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER OPERATOR CODE (X):	*Any two characters except "SK".*

NOTE: "X" = operator level codes 1 through 9

PURPOSE:

To enter one of the nine operator level codes.

OPERATOR RESPONSE:

Enter a two-character operator level code, or type **SK** if no additional operator level codes are required.

This question will be repeated until all required operator level codes have been entered.
Return to the Main Menu in Section 5.2

6.4 ACTIVE OPERATOR CODE

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
CHANGE ACTIVE OPR CODE? (Y/N)	*Y or N*

PURPOSE:

Allows a different operator access code to be entered. This step is useful for shift changes where a different person is going to operate the P-9. Each masterfile when created or modified is tagged for identification with the current active operator code.

OPERATOR RESPONSE:

Enter "Y" to change the active operator code.

Enter "N" to keep the current operator code active. Go to 6.5

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER OPERATOR LEVEL CODE:	*Any valid supervisor or operator level code.*

PURPOSE:

Allows entry of new operator's level code.

OPERATOR RESPONSE:

Enter a valid supervisor or operator level code and return to the Main Menu in Section 5.2

6.5 P-9 DIALING SETUP

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
SETUP DIALING SPECS? (Y/N)	*Y or N*

PURPOSE:

To determine the way the P-9 dials telephone numbers.

OPERATOR RESPONSE:

Enter "Y" to change the dialing specifications.

Enter "N" to skip this step and go to 6.6

P-9 RESPONSE:	VALID ENTRY:
USE DTMF DIALING? (Y/N)	*Y or N*

PURPOSE:

The P-9 can dial using either the pulse (rotary) or DTMF (Touch Tone®) dialing method.

OPERATOR RESPONSE:

Answer according to the requirements of the telephone system being used.

Enter "Y" to select tone dialing, or "N" to select pulse dialing.

Touch-Tone® is a registered trademark of AT&T

P-9 RESPONSE: **VALID ENTRY:**

```
IS GROUND START
REQUIRED? (Y/N)
```

Y or N

PURPOSE:

With some phone systems, one of the two phone line conductors (ring) must be grounded in order to establish a dial tone.

OPERATOR RESPONSE:

Answer according to the requirements of the telephone system being used.

Enter "Y" for ground start or "N" for standard loop start.

6.6 COMMAND MODE SELECTION

P-9 RESPONSE: **VALID ENTRY:**

Y or N

PURPOSE:

COMMAND MODE applies only to the local and remote communications sub-menus (Section 8), and replaces the tedious menu-scrolling process with simple two- and three-character command entry.

In COMMAND MODE, the menu selection prompt:

Press ↑ or ↓ to change,
ENTER *to select.*

is replaced by the command entry prompt:

Each command description in Section 8 documents both forms of the command.

OPERATOR RESPONSE:

Enter "Y" to select COMMAND MODE, or "N" to remain in MENU MODE.

6.7 CALIBRATE MODE SELECTION

P-9 RESPONSE:

```
ENTER CALIBRATE
MODE? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

This mode is for factory use only to calibrate various circuits in the P-9.

OPERATOR RESPONSE:

Do not select this mode. **Enter "N" and return to the Master Menu in Section 5.2**

SECTION 7

FILE MAINTENANCE

7.0 FILE MAINTENANCE

INTRODUCTION

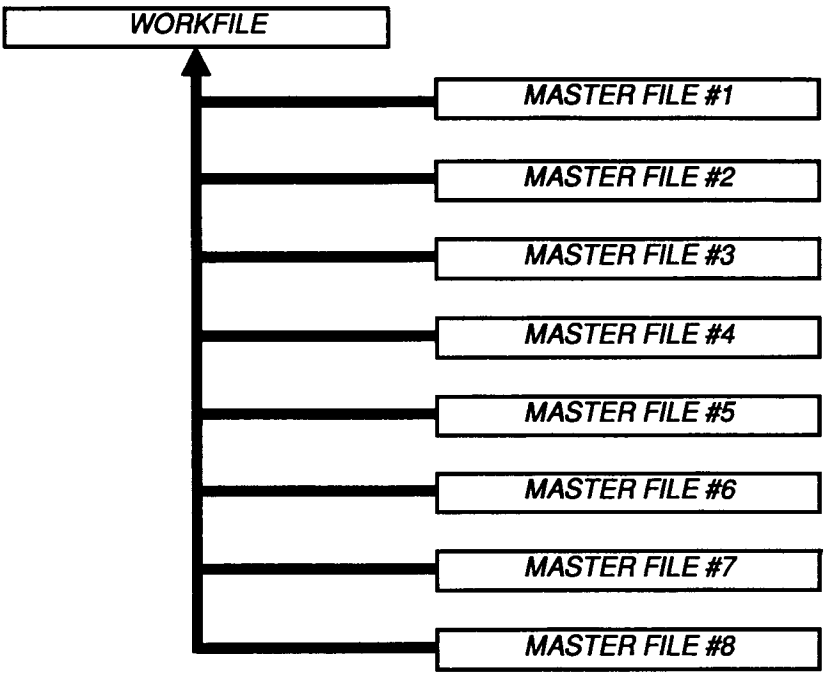


Figure 7-1. P-9 Memory File Layout

The P-9 runs a permanent internal software program that creates and maintains eight internal masterfiles. These files can be transmitted over the telephone line to field communicator units. Communicators can also be programmed locally by the P-9 without using the telephone network.

The P-9 can retrieve existing control programs from communicators and store them in a masterfile for examination or modification. An internal lithium backup battery maintains the memory of the P-9 when external power is removed.

WORKFILE

The workfile is an independent "scratch pad" memory used by the P-9 as a work area when modifying or creating program files. After manipulation, the P-9 will ask the user if the workfile should be saved in the pre-selected masterfile.

INTRODUCTION (CONT.)

The FILE MAINTENANCE sub-menu is used to maintain the eight internal Masterfiles of the P-9:

If you want to:	You need this submenu item:
Create a new program file for either a 1700 or 1900 communicator.	7.1 Create File
Transfer a file to another P-9 or a host computer to be archived.	7.2 Transfer File
Print a formatted copy of a file on an external printer.	7.3 Print File
Delete a file from P-9 memory.	7.4 Delete File
Copy one file to another (allows file to be used as a template).	7.5 Copy File
Modify an existing file to meet new requirements or correct errors.	7.6 Modify File

Table 7-1. File Maintenance Sub-Menu Selections

The P-9 menus operate in a circular manner. Pressing the ↓ key displays the next menu item (from MODIFY, CREATE will be displayed); pressing the ↑ key displays the previous menu item (from CREATE, MODIFY will be displayed). To return to the main menu from this sub-menu or any of its functions, press the **ESC** key.

7.1 CREATE FILE

P-9 RESPONSE: **VALID ENTRY:**

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

Create a new communicator program file. The new file will be stored in one of the eight masterfiles.

OPERATOR RESPONSE:

Press **ENTER** to begin the CREATE FILE function.

Press ↑ or ↓ key to select a different function.

P-9 RESPONSE: **VALID ENTRY:**

1 to 8

PURPOSE:

Select the P-9 masterfile to be used to store the new communicator program.

OPERATOR RESPONSE:

Enter the desired file number (1-8). If the file selected is empty, go to 7.1.1

If the file selected is not empty, the following is displayed:

P-9 RESPONSE: **VALID ENTRY:**

Y or N

NOTE: "XXXX" = the communicator type.

PURPOSE:

Notifies the operator that the file selected already contains a communicator program.

OPERATOR RESPONSE:

Enter "Y" if the new file is to be the same communicator type as displayed. Go to 7.1.2

If the new file is to be a different communicator type than the one displayed, the existing file must be deleted before a new one can be created.

Enter "N" to abort this function and return to the File Maintenance Sub-menu.

7.1.1 CREATE FILE (CONT.)

P-9 RESPONSE: **VALID ENTRY:**

Press ↑ or ↓ to change,
ENTER *to select.*

NOTE: "XXXX" = COMMUNICATOR TYPE

PURPOSE:

Allows selection of the communicator type when creating a program file.

OPERATOR RESPONSE:

Press the down or up arrows to display the proper communicator type. 1700, 1800, 1900, and 6000 types are available. When the desired type is displayed, press **ENTER.**

NOTE:
The 1800 and 6000 series communicators are not currently supported.

7.1.2

P-9 RESPONSE: **VALID ENTRY:**

Up to 16 characters.

PURPOSE:

This is Step #1 of either a 1700 or 1900 Masterfile.

If programming a 1700 series communicator, go to Section 10 for complete step by step programming information.

If programming a 1900 series communicator, go to Section 11 for complete step by step programming information.

TRANSFER FILE OVERVIEW

The following information is necessary to transfer a masterfile to or from a P-9. Before attempting a file transfer, read all of the information carefully.

When the TRANSFER FILE function is selected, a series of questions will be asked to set up the file transfer. Once all selections have been made, the P-9 will attempt the transfer.

> *NOTE:*
> *For a P-9 to P-9 transfer,* **ALWAYS** *set up the receiving P-9 first.*
>
> *For a P-9 to Host Computer transfer,* **ALWAYS** *setup the Host Computer first.*

TRANSMISSION CHARACTERISTICS

The TRANSFER FILE function uses Serial Port 2 (the Computer/Modem connector on the back of the P-9) when transferring files. Before attempting a file transfer, this port must be properly configured:

- Any supported baud rate may be selected.
- Parity **MUST ALWAYS BE** enabled.
- Either even or odd parity may be selected.
- Data frame length **MUST ALWAYS BE** 8 bits.

Refer to Section 6.2 ("SETUP SERIAL PORT"), accessed through the Main Menu, for detailed configuration instructions. Section 2.4 provides the information necessary to build a suitable cable.

TRANSMISSION PROTOCOLS

The P-9 is capable of operating at the maximum data rate of 19,200 baud without difficulty. In order to support transmission to a slower Host Computer, the P-9 supports the "Request-to-Send/Clear-to-Send" protocol.

TRANSFER FILE OVERVIEW (CONT.)

If the P-9 detects the loss of "Clear-to-Send" from the Host Computer, transmission will be halted, and will not resume until the signal is again detected.

If the P-9 receives an "X-OFF" character (Hex 13) from the Hos Computer, transmission will be halted, and will not resume until an "X-ON" character (Hex 11) is received.

TRANSMISSION FORMATS

Each file is transferred in a fixed-length block of 348 bytes, and consists of the following:

Byte 0:	Always Hex 02
Bytes 1-2:	Communicator type: 1700 = ASCII "17" 1900 = ASCII "19"
Bytes 3-346:	Masterfile data: dependent upon communicator type, and is defined in appropriate documentation.
Byte 347	Always ASCII Carriage Return (Hex 0D)

TRANSMISSION ACKNOWLEDGEMENT

Within approximately 1.5 seconds after the end of the transmission, the receiving unit (P-9 or Host Computer) should transmit either an "ACK" (Hex 06) character (to indicate that the file was received without error), or a "NAK" (Hex 15) character (to indicate that the file was not successfully transferred). If no character is received, a "NAK" is assumed.

If an "ACK" is not received, the transmitting unit will re-transmit the file up to four additional times. If the file still cannot be successfully transferred, the following messages will be displayed:

```
** COMPUTER NOT
ON LINE **
```

```
RETRY? (Y/N)
```

Check that the cables are properly constructed and connected, and that the transfer procedures were followed correctly.

P-9 VERSION 1.8 AND LATER FIRMWARE

With Version 1.8 and later P-9 firmware, the file transfer data exchange must conform to the following conditions:

- The host computer must delay a minimum of 10 milliseconds between all sequences of ACK/NAK responses from the P-9, prior to sending data.
- Once the host computer has begun sending data, a maximum delay of 750 milliseconds between characters is allowed.
- Due to the short length of the request and data file, the X-ON/X-OFF protocol has been deactivated. Data flow can be controlled with the use of the RST/CTS signals.

7.2 TRANSFER FILE

P-9 RESPONSE: **VALID ENTRY:**

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

To transfer a masterfile between two P-9 Data Terminals or between a P-9 and a Host Computer.

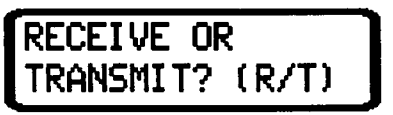
OPERATOR RESPONSE:

Press ↑ or ↓ key to select a different function.

Press **ENTER** to begin the Transfer File Function.

7.2 TRANSFER FILE (CONT.)

P-9 RESPONSE: **VALID ENTRY:**



R or T

PURPOSE:

To select the direction for data transfer. The P-9 can either transmit or receive data.

OPERATOR RESPONSE:

Enter "R" if the P-9 is to receive data.

Enter "T" if the P-9 is going to transmit data. Go to 7.2.1

P-9 RESPONSE:	VALID ENTRY:
RECEIVE FROM HOST/P9? (H/P)	*H or P*

PURPOSE:

To define the data source. The source can be another P-9 or a host computer.

OPERATOR RESPONSE:

Enter "H" to define a host computer as the data source.

Enter "P" to define a P-9 as the data source. Go to 7.2.1

Even when transferring a masterfile from a Host Computer to a P-9, the P-9 must initiate the transfer by sending a request block to the Host to identify the specific masterfile to be transferred. This request block consists of the following:

Byte

0: Always Hex 03

1: ASCII Receiver number

2: ASCII Line number

3: ASCII Account number (thousands digit)

4: ASCII Account number (hundreds digit)

5: ASCII Account number (tens digit)

6: ASCII Account number (units digit)

7: Always ASCII Carriage return (0D Hex)

The following questions are asked so that the request block can be constructed.

7.2 TRANSFER FILE (CONT.)

P-9 RESPONSE:

```
ENTER RECEIVER
# (1-9):
```

VALID ENTRY:

1 to 9

PURPOSE:

To distinguish between accounts that have the same account number, but are reported into different central station receivers.

OPERATOR RESPONSE:

Enter a number from 1 to 9.

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER LINE
# (1-9):
```

1 to 9

PURPOSE:

To distinguish between accounts that have the same account number, but are reported into different line cards of a multi-line central station receiver.

OPERATOR RESPONSE:

Enter a number from 1 to 9.

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER ACCOUNT #
(0-9999):
```

0 to 9999

PURPOSE:

To identify the masterfile being transferred.

OPERATOR RESPONSE:

Enter an account number from 0 to 9999.

7.2.1 TRANSFER FILE (CONT.)

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER MASTER FILE # (1-8).	*1 to 8*

PURPOSE:

To select the P-9 masterfile to send or receive transferred data.

OPERATOR RESPONSE:

Enter a masterfile number from 1 to 8.

If transferring files **TO** the P-9, the transfer data is written into the selected masterfile, over-writing any data currently in the file. All data in that file will be permanently lost.

If transferring **FROM** the P-9, the file remains intact after the transfer.

The selected masterfile must be valid. If the selected file is empty, the following error message will be displayed:

```
****INVALID****
**SOURCE FILE**
```

Re-enter the masterfile number, specifying the correct file number.

While the data transfer is in progress, the following message will be displayed:

```
*** STAND BY ***
```

Wait about two minutes for the data transfer to be completed.

> **NOTE:**
> **If the display remains the same for more than two minutes and the transfer does not occur, call Technical Service for assistance.**

7.3 PRINT FILE

P-9 RESPONSE: **VALID ENTRY:**

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

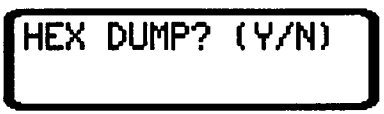
To print a masterfile on an external printer.

OPERATOR RESPONSE:

Press **ENTER** to select this function.

Press ↑ or ↓ key to select a different function.

P-9 RESPONSE: **VALID ENTRY:**



Y or N

PURPOSE:

To select the format of the printed file. A hexadecimal format dump is usually used for factory analysis of a communicator program.

OPERATOR RESPONSE:

Enter "Y" to proceed with a hex dump.

Enter "N" to for a standard printout.

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER MASTER FILE # (1-8).	*1 to 8*

PURPOSE:

Selects the masterfile to print.

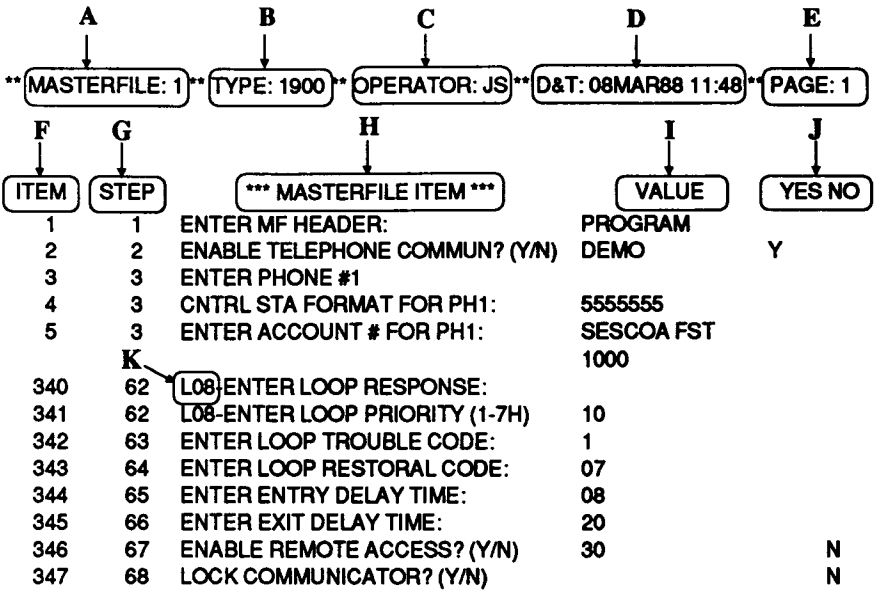
OPERATOR RESPONSE:

Enter 1-8 for the file number. The selected file will then be printed on the external printer. A sample printout is shown on the next page.

If the Masterfile selected does not exist in memory, the following error message will be displayed:

```
****INVALID****
**SOURCE FILE**
```

Retry the function by selecting a valid masterfile number.



A	MASTERFILE	Identifies the P-9 Masterfile containing the listed program.
B	TYPE	Communicator model. Currently, only 1700 or 1900.
C	OPERATOR	Two-character code of the operator logged onto the P-9 when the masterfile was created or last modified.
D	D&T	(Date & Time) Valid only if the masterfile has been written to a 1900 Control/Communicator and read back. The 1900 installs the date and time at which the file was last written.
E	PAGE	Page number of the listing. The length of the listing depends on the number and type of options selected.
F	ITEM	Sequence number of the question.
G	STEP	Programming step number. Same as the programming step numbers in the communicator programming guides.
H	MASTERFILE ITEM	Text shown on the P-9 display while programming a communicator masterfile.
I	VALUE	Value entered by the operator in response to the question presented by the P-9.
J	YES NO	Answer provided by the operator in response to a "YES or NO" question. Listed separately from other "values" so as to stand out.
K		Loop number.

Table 7-2. Sample Masterfile Printout

7.4 DELETE FILE

P-9 RESPONSE: **VALID ENTRY:**

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

To remove (erase) a masterfile from the P-9 memory.

OPERATOR RESPONSE:

Press **ENTER** to select this function.

Press ↑ or ↓ key to select a different function.

P-9 RESPONSE: **VALID ENTRY:**

1 to 8

PURPOSE:

Selects the masterfile to delete.

OPERATOR RESPONSE:

Enter 1-8 for the file number. The selected file will then be deleted.

7.5 COPY FILE

P-9 RESPONSE:

VALID ENTRY:

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

Copies file information from a selected source file into a selected target file. The source file remains intact after copying. Use this function to make minor modifications to the target file while retaining all of the original information in the source file.

The file to be copied (source) must be a valid file. The file to which the file is to be copied (target) must not be in use.

OPERATOR RESPONSE:

Press **ENTER** to select this function.

Press ↑ or ↓ key to select a different function.

P-9 RESPONSE: **VALID ENTRY:**

1 to 8

PURPOSE:

Select the number of the masterfile to be copied.

OPERATOR RESPONSE:

Enter the file number 1-8 to select the source file.

If the masterfile selected does not exist in memory, the following error message will be displayed:

Retry the function by selecting a valid masterfile number.

7.5 COPY FILE (CONT.)

P-9 RESPONSE: **VALID ENTRY:**

1 to 8

PURPOSE:

Select the number of the masterfile to which the source file will be copied.

OPERATOR RESPONSE:

Enter the file number 1-8 to select the target file.

If the target file is empty, the source file will be copied.

If the target file is not empty, the following error message will be displayed:

The selected file must be empty before copying another file into it. Use the DELETE FILE function to clear the selected file.

7.6 MODIFY FILE

P-9 RESPONSE:

```
(SELECT ITEM)
MODIFY FILE?
```

VALID ENTRY:

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

To review or change program information in one of the eight masterfiles.

OPERATOR RESPONSE:

Press **ENTER** to select this function.

Press ↑ or ↓ key to select a different function.

P-9 RESPONSE:

```
ENTER MASTER
FILE # (1-8).
```

VALID ENTRY:

1 to 8

PURPOSE:

Select the number of the masterfile to modify.

OPERATOR RESPONSE:

Enter the file number 1-8.

If the selected file is empty, the following error message will be displayed:

```
***SELECTED FILE
IS NOT VALID***
```

P-9 RESPONSE: **VALID ENTRY:**

Y or N

NOTE: "XXXX" = the communicator type.

PURPOSE:

Notifies the operator that the file selected already contains a communicator program.

OPERATOR RESPONSE:

Enter "Y" if the file to be modified is the same communicator type as displayed.

If the file to be modified is going to be a different communicator type than the one displayed, a complete new file must be created. The existing file can be deleted to make room for a new file, or a different masterfile number can be selected.

Enter "N" to abort this function and return to the File Maintenance Sub-menu.

7.6 MODIFY FILE (CONT.)

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER TARGET STEP NUMBER:	*Valid target step number for the type of communicator being programmed.*

PURPOSE:

Enter the target step of the control program being modified.

OPERATOR RESPONSE:

If programming a 1700 series communicator, refer to **Section 10** to identify the step number to be modified. Input the step number and press **ENTER**.

If programming a 1900 series communicator, refer to **Section 11** to identify the step number to be modified. Input the step number and press **ENTER**.

To exit the MODIFY FILE function after programming, press **ESC** (escape).

When all modifications have been completed, the following is displayed:

P-9 RESPONSE:	VALID ENTRY:
SAVE MASTERFILE? (Y/N)	*Y or N*

PURPOSE:

Gives the operator the option of keeping the changes made by transferring the workfile into the masterfile.

OPERATOR RESPONSE:

Enter "Y" to copy a file that has been modified in the workfile into the previously selected masterfile.

Enter "N" to abort the MODIFY FILE function. Any changes that have been made will not be saved.

SECTION 8

LOCAL AND REMOTE

COMMUNICATIONS

8.0 LOCAL AND REMOTE COMMUNICATIONS

INTRODUCTION

The P-9 can program and interrogate communicators either remotely (over the telephone network) or locally (in the shop or on the job site).

LOCAL COMMUNICATION

A communicator can be connected directly to the P-9 with an appropriate modular phone cord. When required, the P-9 will prompt the operator to push a button on the communicator to begin the data transfer. Refer to ESTABLISH COMMUNICATION (LOCAL) (Section 8.10) for details on commands relating to this function.

REMOTE COMMUNICATION

The P-9 can be linked to a remote communicator by placing a call to it over the switched telephone network.

When the P-9 calls a communicator, it lets the line ring one-and-one-half times, then hangs up. This places the communicator into a "listen mode". The P-9 then calls the communicator again within a specific time, causing the communicator to answer and send a handshake signal. When the P-9 recognizes the handshake, the communications link is established. Refer to ESTABLISH COMMUNICATION (REMOTE) (Section 8.10) for details on commands relating to this function.

LOCKED COMMUNICATORS

Communicators have the programmable option of being "locked" with a four-character access code to prevent unauthorized remote access (refer to the appropriate programming section ENTER ACCESS CODE).

A table of field system access codes is stored in the P-9 and may only be retrieved by supervisor level operators (see Section 9, Displaying Access Codes).

LOCAL & REMOTE COMMUNICATIONS

The LOCAL COMMUNICATIONS and REMOTE COMMUNICATIONS sub-menus are used to control the operation of the communicator, including the uploading or downloading of program files. The two sub-menus are identical except for the manner in which the communications link is established and maintained.

The P-9 menus operate in a circular manner. Pressing the DOWN ARROW key displays the next menu item (from the bottom menu item, the top menu item is displayed); pressing the UP ARROW displays the previous menu item (from the top menu item, the bottom menu item is displayed). To return to the main menu from any sub-menu or function, press the ESC key.

Because there are over twenty commands which are accessed from these sub-menus, an optional COMMAND MODE of operation is provided (refer to Section 6 CONFIGURATION for details). Each command description documents both forms of the command.

Error messages unique to a single command are described along with the command. All other error messages can be found in section 8.22

If you want to:	You need these commands:
Arm or disarm the system from the P-9.	8.18 Arm System * 8.16 Perimeter Arm Instant * 8.17 Perimeter Arm Delayed * 8.15 Disarm System *
Control loop activity.	8.13 Area Out * 8.12 Area In * 8.3 Zero Swinger Count 8.6 Reset Smoke Detectors *
Control miscellaneous system activity.	8.11 Remote Control 8.7 Send Test Message * 8.4 Silence Alarm * 8.20 Set Date and Time * 8.19 Read Time * 8.2 Set 24-Hour Delay †
Make or break communications.	8.10 Establish Communications 8.9 Disconnect
Read or write to a communicator.	8.21 Write Communicator 8.1 Read Communicator 8.8 Read Activity * 8.14 (Read Loop) Status 8.5 Read Firmware Version
NOTE: * 1900 Control/Communicator Only- Not applicable to 1700 † 1700 Slave Communicator Only- Not applicable to 1900	

Table 8-1. Local & Remote Commands

8.1 READ COMMUNICATOR (RD)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
READ COMM?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **RD** *then press* **ENTER**.

PURPOSE:

Read (upload) a communicator program file into one of the eight P-9 masterfiles.

P-9 DISPLAY **OPERATOR RESPONSE:**

```
ENTER MASTER
FILE # (1-8).
```

Enter the P-9 masterfile number (1 to 8) that will receive the communicator program.

CAUTION!
The selected masterfile will be overwritten by the data retrieved from the communicator. All data in that file before the upload will be permanently lost.

```
*** STAND BY ***
```

Communications are in progress. No response required.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the READ COMMUNICATOR function.

8.2 SET 24-HR DELAY (SDL)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
SET 24HR DELAY?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **SDL** *then press* **ENTER.**

PURPOSE: *1700 SLAVE COMMUNICATOR ONLY!*

Re-schedule the 24-hour report at a time more convenient to the operator. The next 24-hour report will be transmitted at the end of the specified delay, and approximately every 24 hours thereafter.

P-9 DISPLAY: **OPERATOR RESPONSE:**

```
ENTER 24H REPORT
DELAY: HH MM
```

Enter the delay time as two digits for hours and two digits for minutes. Separate each item with one space.

The minimum delay allowed is 00:01. The maximum delay allowed is 23:59.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the SET 24-HOUR DELAY function.

8.3 ZERO SWINGER COUNT (RSC)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
ZERO SWINGR CNT?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **RSC** *then press* **ENTER**.

PURPOSE:

Resets the swinger eliminator count for a specific loop (or optionally, for all loops).

> *NOTE TO 1700 USERS ONLY:*
> *This command is automatically executed after the WRITE COMMUNICATOR command.*

P-9 DISPLAY: **OPERATOR RESPONSE:**

```
ENTER LOOP
NO. (1-128):
```

Enter the desired loop number to reset. For the 1700 only, enter "A" to reset all loops.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the ZERO SWINGER COUNT function.

8.4 SILENCE ALARM (SIL)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

Press ↑ or ↓ to change,
ENTER *to select.*

In Command Mode:

Enter **SIL** *then press* **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

Silences any active audible alarm.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the SILENCE AUDIBLE ALARM function.

8.5 FIRMWARE VERSION (VER)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

Press ↑ or ↓ to change,
ENTER *to select.*

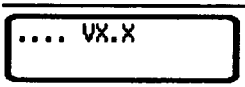
In Command Mode:

Enter **VER** *then press* **ENTER.**

PURPOSE:

Displays the current version of the firmware installed in the communicator.

P-9 DISPLAY: **OPERATOR RESPONSE:**



"...." = Model Of Communicator.
"x.x" = Version Number Of Firmware.
"??" = 1900 System Firmware Previous To 2.1

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the READ FIRMWARE VERSION function.

8.6 RESET SMOKE DETECTOR (RSD)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

Press ↑ or ↓ to change,
ENTER *to select.*

In Command Mode:

Enter **RSD** *then press* **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

Momentarily interrupts power to the smoke detector power terminal to reset latching smoke detectors.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the RESET SMOKE DETECTOR function.

8.7 SEND TEST MESSAGE (STM)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

Enter **STM** *then press* **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

Causes the control/communicator to send a test message to the central station after communications with the P-9 have been terminated.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the SEND TEST MESSAGE function.

8.8 READ ACTIVITY (RA)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
READ ACTIVITY?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **RA** *then press* **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

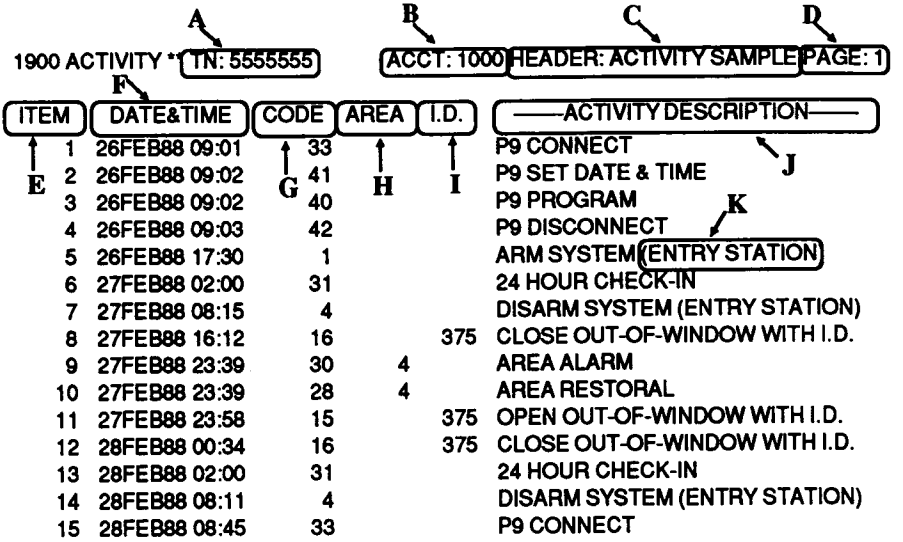
Reads the communicator's activity buffer which contains previously stored system events and sends the selected information to the printer.

See next page.

P-9 DISPLAY:	OPERATOR RESPONSE:
ENTER ACTIVITY TYPE (A,B,C,D):	Enter A,B,C, or D to select activity types. **A** = All activities stored in the buffer including the date, time, activity, and the point-of-origin (P-9, local, keypad, ...) of the event. **B** = Opening and closing information only. **C** = Supervisory functions only (trouble reports, AC failures, battery reports, etc.). **D** = Loop information only (alarm, restoral, trouble, area in, area out).
ENTER STARTING DATE: MON DA YR	Enter the date for the first (oldest) event of the report. Use three alphabetic characters for the month, and two numeric characters for the day and year. Separate each item with one space.
ENTER ENDING DATE: MON DA YR	Enter the date for the last (newest) event of the report. Use three alphabetic characters for the month, and two numeric characters for the day and year. Separate each item with one space. See the sample printout on the next page for details.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the READ ACTIVITY function.



A	TN	(Telephone Number) The telephone number the P-9 dialed to connect with the remote communicator.
B	ACCT	Account number assigned to Telephone Number 1. Used to identify a subscriber.
C	HEADER	The header text (up to 16 characters) contained in the 1900 memory file. This text may also be used to identify a subscriber.
D	PAGE	Page number of the report. The length of an activity listing depends on the report option selected, date range specified, and the number of events in the 1900's activity buffer.
E	ITEM	Sequence number of the event. Provided by the P-9.
F	DATE & TIME	Date and time the event occurred. Time is always specified in the 24 hour format.
G	CODE	Event code. Each 1900 event has a specific code assigned.
H	AREA	The protective area (loop) involved if applicable.
I	I.D.	The three-digit Personnel Identification Number entered by the user when arming or disarming the 1900 Control/Communicator.
J	ACTIVITY DESCRIPTION	English translation of the event code. The 1900 sends the date, time, code, area, and I.D. information only. The P-9 translates the information into a usable report for the operator.
K		Example of Point-of-Origin

Table 8-2. Sample Activity Buffer Printout

8.9 DISCONNECT (DIS)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

Enter **DIS** *then press* **ENTER**.

PURPOSE:

Terminate communications between the P-9 and a communicator.

8.10 ESTABLISH COMMUNICATIONS (EC)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
ESTABLISH COMM?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **EC** *then press* **ENTER.**

PURPOSE:

Initiate communications between the P-9 and a communicator. From the REMOTE COMMUNICATIONS sub-menu, go to 8.10.2

8.10.1 LOCAL COMMUNICATIONS

P-9 DISPLAY: **OPERATOR RESPONSE:**

```
>DEPRESS COMMUN-
ICATOR SWITCH!
```

Press the LOCAL PROGRAMMING switch on the communicator to initiate communications.

```
*** STAND BY ***
```

Communications are in progress. No response required.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, this command will automatically be executed by any other Local Communications command (except DISCONNECT).

8.10.2 REMOTE COMMUNICATIONS

P-9 DISPLAY:	OPERATOR RESPONSE:
ENTER PHONE #:	The telephone number can contain a total of 15 digits and special characters. Enter the telephone number using the digits **0** through **9**, and any of the following special characters: **S** to insert a 3-second delay **L** to insert a 6-second delay **D** to search for an additional dial tone **#** valid for DTMF dialing only ***** valid for DTMF dialing only
ENTER ACCESS CODE:	Enter the communicator access code. If the communicator is not locked, enter any four characters.
*** STAND BY ***	Communications are in progress. No response required.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, this command will automatically be executed by any other Remote Communications command (except DISCONNECT).

8.11 REMOTE CONTROL (RC)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
REMOTE CONTROL?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **RC** *then press* **ENTER**.

PURPOSE:

1900 CONTROL/COMMUNICATOR ONLY!

Allows the operator to manually latch, reset, pulse, or read the status of the output lines on a 936 or 936B Communications Option Module.

1700 SLAVE COMMUNICATORS V1.3 ONLY!

Allows the operator to manually latch, reset, pulse, or read the status of the communicator parallel port.

These eight port lines can be individually configured as either inputs or outputs when the communicator is programmed (refer to Step 32 SET RCM DIRECTION of the 1700 Programming guide). You can perform any command on a Line configured as an output, but you can only read the status of a line configured as an input.

P-9 DISPLAY:	OPERATOR RESPONSE:
ENTER COMMAND: PU/LA/RE/ST 1-8	Enter the two-character command (Latch = LA, Reset = RE, Pulse = PU, or Status = ST), followed by a space and the line number (1 through 8) to be changed. The letter "A" can be used to operate on all 8 lines simultaneously.

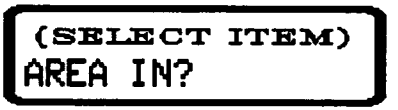
SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the REMOTE CONTROL function.

8.12 AREA IN (AI)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:



Press ↑ or ↓ to change,
ENTER *to select.*

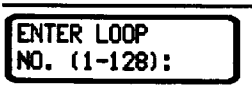
In Command Mode:

Enter **AI** *then*
press **ENTER.**

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

To enable a protective area that has been previously disabled with the AREA OUT command.

P-9 DISPLAY: **OPERATOR RESPONSE:**



Enter the loop number to be enabled. Enter "A" to enable all areas.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the AREA IN function.

8.13 AREA OUT (AO)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
AREA OUT?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **AO** *then press* **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

To disable a protective area. Use this command prior to arming the 1900 when security is not desired on a particular area (or areas), or if one or more areas cannot be placed in the secure condition (usually due to a broken wire or defective sensor).

Areas disabled with this command will remain disabled only until the next time the system is disarmed. The AREA OUT command will have to be executed prior to any subsequent arming.

P-9 DISPLAY: **OPERATOR RESPONSE:**

```
ENTER LOOP
NO. (1-128):
```

Enter the loop number to be disabled. The "ALL" option cannot be used with this command.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the AREA OUT function.

8.14 STATUS (ST)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
STATUS?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **ST** *then press* **ENTER**.

PURPOSE:

Displays the condition of the system and any one or all of the protective loops.

P-9 DISPLAY: **OPERATOR RESPONSE:**

```
ENTER LOOP
NO. (1-128):
```

Enter the number of the loop to be displayed. To sequentially display the status of all loops, enter "A".

```
LXX STATUS
A P I B N T F O
```

NOTE: "XX" = the loop number

The loop status is displayed until the **ENTER** key is pressed. If the "ALL" option has been selected, the next sequential loop will be displayed each time the **ENTER** key is pressed.

See next page.

Status is displayed in the format shown below. Only those conditions which are true will be displayed.

1900 Control/Communicator Status Responses:

A = The system is currently armed.

P = The system is perimeter armed.

I = The system is armed in the instant mode.

B = The system is operating on battery power.

N = The selected loop is in the Normal state, or has not been programmed.

T = The selected loop is in the Trouble state.

F = The selected loop is in the Faulted state.

O = The selected loop has been disabled by the AREA OUT command.

1700 Slave Communicator Status Response:

A = The system is currently closed.

P = Not used, and should never be set.

I = Not used, and should never be set.

B = Not used, and should never be set.

N = The selected loop is in the Normal state.

T = The selected loop has been disabled by the swinger eliminator count.

F = The selected loop is in the Faulted state.

O = The selected loop has not been programmed.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the STATUS function.

8.15 DISARM SYSTEM (DS)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

Press ↑ or ↓ to change,
ENTER *to select.*

In Command Mode:

Enter **DS** *then*
press **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

Disarms the control/communicator.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the DISARM SYSTEM function.

8.16 PERIMETER ARM INSTANT (PAI)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
PERIM ARM INS?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **PAI** *then press* **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

Disables all interior areas and arms the control/communicator. For areas programmed for Entry/Exit operation, the exit time delay will operate normally; however, there will be NO entry delay.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the PERIMETER ARM INSTANT function.

8.17 PERIMETER ARM DELAYED (PAD)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

Press ↑ or ↓ to change,
ENTER *to select.*

In Command Mode:

Enter **PAD** *then*
press **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

Disables all interior areas and arms the control/communicator. For areas programmed for Entry/Exit operation, both exit and entry delays will operate normally.

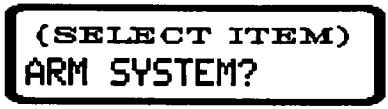
SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the PERIMETER ARM DELAYED function.

8.18 ARM SYSTEM (AS)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:



Press ↑ or ↓ to change,
ENTER *to select.*

In Command Mode:

Enter **AS** *then*
press **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

Arms the control/communicator.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the ARM SYSTEM function.

8.19 READ TIME AND DATE (RDT)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
READ TIME?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **RDT** *then press* **ENTER.**

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

Reads and displays the contents of the communicator's real-time clock/calendar.

P-9 DISPLAY: **OPERATOR RESPONSE:**

```
1900 TIME: FRI
16 OCT 87  14:30
```

Example shown is for Friday, October 16th, 1987 at 2:30 pm.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the READ DATE AND TIME function.

8.20 SET DATE AND TIME (SDT)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

Press ↑ or ↓ to change,
ENTER *to select.*

In Command Mode:

Enter **SDT** *then press* **ENTER**.

PURPOSE: *1900 CONTROL/COMMUNICATOR ONLY!*

Sets the date and time in the communicator's real-time clock/calendar.

CAUTION!
Failure to set the date and time in the communicator will adversely affect opening and closing time window options. In addition, information in the 1900 activity buffer will contain incorrect date and time information.

8.20 SET DATE AND TIME (SDT) (CONT.)

P-9 DISPLAY:	OPERATOR RESPONSE:
ENTER DATE: SUN JAN 1 YR	Enter day (three characters), month (three characters), date (one or two digits), and year (two digits). Separate each item with one space.
ENTER 1900 TIME: HH MM AM	Enter two digits for hours, two digits for minutes, and AM/PM if the 12-hour format is used. The 24-hour format may be entered without regard for entering AM or PM. Separate each item with one space.
DAYLIGHT SAVING TIME ADJ? (Y/N)	Enter "Y" to have the communicator automatically compensate for daylight savings time. Enter "N" for no compensation.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the SET DATE AND TIME function.

8.21 WRITE COMMUNICATOR (WR)

P-9 DISPLAY: **OPERATOR RESPONSE:**

In Menu Mode:

```
(SELECT ITEM)
WRITE COMM?
```

Press ↑ or ↓ to change, **ENTER** *to select.*

In Command Mode:

```
ENTER COMMAND:
```

Enter **WR** *then press* **ENTER.**

PURPOSE:

Writes (downloads) one of the eight P-9 masterfiles to the communicator.

NOTE TO 1700 USERS ONLY:
The ZERO SWINGER COUNT command will automatically be executed after the WRITE COMMUNICATOR command.

Go to 8.21.1

See next page.

P-9 DISPLAY: **OPERATOR RESPONSE:**

1900 CONTROL/COMMUNICATOR ONLY!

```
ARE DATE & TIME
SET? (Y/N)
```

Prior to writing a masterfile to a 1900, it is important to ensure the clock/calender is set to the proper date and time. The 1900 "date and time stamps" the masterfile when it is received from the P-9 and retains this information for later retrieval. Using the READ COMMUNICATOR and PRINT MASTERFILE commands, an operator may determine when the 1900 was last programmed.

Enter "Y" if the clock/calender is set properly. Enter "N" if uncertain or if it is known that the contents of the clock/calender are incorrect. The SET DATE & TIME command (refer to section 8.20) will then execute before continuing with the WRITE COMMUNICATOR command.

8.21.1

```
ENTER MASTER
FILE # (1-8).
```

Enter the file number 1-8 to select the P-9 masterfile that will be written into the communicator program file.

```
*** STAND BY ***
```

Communications are in progress. No response required.

SPECIAL NOTES ABOUT THIS COMMAND:

If communications have not already been established, the appropriate ESTABLISH COMMUNICATIONS command will automatically be executed before performing the WRITE COMMUNICATOR function.

8.22 ERROR MESSAGES

P-9 DISPLAY:	MEANING/POSSIBLE SOLUTIONS:
** NO DIAL TONE DETECTED **	While attempting to establish remote communications, the P-9 was unable to detect dial tone. Check the telephone line connection. Try again.
*** PHONE LINE BUSY! ***	While attempting to establish remote communications, the P-9 detected the busy signal. Try again later.
*** UNABLE TO CONNECT! ***	The communicator failed to answer during the P-9's attempt to establish remote communications. Try again.
*** REQUEST DENIED ***	Remote communications have been established; however, the communicator is locked and the access code provided by the operator is incorrect. The P-9 will allow the operator ONE additional opportunity to enter the access code correctly. If the second attempt is incorrect, communications will be terminated. —OR— An attempt has been made to disable a fire loop using the AREA OUT command. Fire loops cannot be disabled under any circumstance.

P-9 DISPLAY: **MEANING/POSSIBLE SOLUTIONS:**

```
*** XXXX UNABLE
TO COMPLY ***
```

NOTE: "XXXX" = Communicator Model

In an attempt to arm the system using the following commands:

Arm System
Perimeter Arm Delayed
Perimeter Arm Instant

One or more areas were in alarm or trouble. Use the STATUS command to examine the condition of all areas, then use the AREA OUT command as required. Arm the system.

—OR—

The area or line number specified was out of range in the following commands:

Area Out
Area In
Zero Swinger Count
Remote Control
Status

Try again using the correct number.

—OR—

The command is not recognized (supported) by the communicator.

P-9 DISPLAY:	MEANING/POSSIBLE SOLUTIONS:
COMMUNICATION ERROR	During communications, there were excessive (uncorrectable) data errors. This is generally due to poor physical connections or noisy telephone lines and usually results in termination of the communication link. Check data cable connections and try to establish communications again, and if still unsuccessful, contact SESCOA technical service for instructions.
RETRY? (Y/N)	This message is displayed after all of the above error messages, but should only be answered "Y" after the following: ** NO DIAL TONE DETECTED ** *** PHONE LINE BUSY *** *** UNABLE TO CONNECT *** This will instruct the P-9 to redial the last telephone number. Performing a "retry" after the other error messages have displayed will not cause any harm; however, the same error message will be displayed again.

SECTION 9

ACCESS CODE DISPLAY

(FOR SUPERVISOR LEVEL USERS ONLY)

9.0 ACCESS CODE DISPLAY

INTRODUCTION

When DISPLAY MODE is first selected, the internal access code buffer is tested.

If the access code buffer is empty, the following status message will be displayed:

The P-9 will automatically return to the Main Menu after a short delay.

If the access code buffer contains valid data, the level code of the operator currently logged on is checked.

If an operator with operator-level access attempts to display or print the access codes, the following error message will be displayed:

The P-9 will automatically return to the Main Menu after a short delay.

9.1 DISPLAY ACCESS CODES

P-9 RESPONSE:

```
DISPLAY ACCESS
CODES? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

Display the field system access codes on the LCD display.

OPERATOR RESPONSE:

Enter "Y" to begin the display.

Enter "N" if access code display is not desired. Go to 9.2

When displaying access codes, each stored code is displayed as follows:

```
ACCOUNT     CODE
  XXXX      YYYY
```

XXXX = Account number for phone #1

YYYY = Access Code

Press the **ENTER** key to display the next access code.

After the last code has been displayed, go to 9.3

9.2 PRINT ACCESS CODES

P-9 RESPONSE: **VALID ENTRY:**

PRINT ACCESS CODES? (Y/N)	*Y or N*

PURPOSE:

Print the field system access codes on the external printer.

OPERATOR RESPONSE:

Enter "Y" to begin printing.

Enter "N" if access code printing is not desired and go to 9.1 or **press ESC to return to the Main Menu in Section 5.**

9.3 ZERO ACCESS CODE BUFFER

P-9 RESPONSE: **VALID ENTRY:**

ZERO ACCESS CODE BUFFER? (Y/N)	*Y or N*

PURPOSE:

Allows the operator to empty the access code buffer to make room for new entries.

OPERATOR RESPONSE:

Enter "Y" to zero the access code buffer. Enter "N" to keep the data in the access code buffer.

Go to 9.1 or **press ESC to return to the Main Menu in Section 5.**

SECTION 10

1700 SERIES COMMUNICATOR

PROGRAMMING

10.0 1700 SERIES COMMUNICATOR PROGRAMMING

INTRODUCTION

The 1700 is a fully programmable digital slave communicator featuring both "Up-load" and "Down-load" capability. With the 1700, program changes can be made locally or from the central station with the P-9, even if the end user is not present. The 1700 can also send present status information remotely to the P-9 at the central station.

Several models of the 1700 communicator have been designed.

These models are:

1700
1701
1701D
1701L
1701S
1704
1708

Any programming differences between model types are noted in the appropriate programming sections.

10.0 INTRODUCTION (CONT.)

This section contains detailed information on each step involved in programming a 1700 series communicator. The information given for each program step is a sample of the P-9 display, the purpose of the programming step, the appropriate operator response and its compatibility with different firmware versions.

Below is a sample page containing explanations of each area of the page.

COMPLETE STEP NAME **F3 KEY STEP #**

COMPATIBILITY:

P-9 PROGRAMMER:
Compatible version of P-9 firmware.

1700 COMMUNICATORS:
Compatible version of 1700 firmware and hardware model.

P-9 RESPONSE **VALID ENTRY:**

CHARACTERS SHOWN ON P-9 DISPLAY

The range of entry allowed.

PURPOSE:

What the function does, and how it affects other aspects of operation.

OPERATOR RESPONSE:

The appropriate operator response and its limits.

If appropriate, the next programming step is also given.

10.1 MASTERFILE HEADER STEP: 01

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

Up to 16 characters.

PURPOSE:

The masterfile header allows the user to place information in the communicator to identify location, customer I.D. number, or other appropriate data. It does not affect the operation of the communicator.

OPERATOR RESPONSE:

Enter any combination of alpha-numeric (printing) characters up to a maximum of 16.

10.2 TELEPHONE COMMUNICATIONS ENABLE STEP: 02

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

```
ENABLE TELEPHONE
COMMUN? (Y/N)
```

Y or N

PURPOSE:

Telephone communications refers to placing an outgoing call to a Central Station in order to report an event. If disabled, only local programming (and if separately enabled, remote programming) will remain active.

OPERATOR RESPONSE:

Enter "Y" to enable or "N" to disable telephone communications.

> *NOTE:*
> *If you enter "N" at this time, you will still be prompted to answer all other programming steps. However, the telecommunications enable takes precedence over all other enables - therefore no reports of any nature will ever be transmitted.*

10.3 TELEPHONE NUMBER 1 — STEP: 03
10.4 TELEPHONE NUMBER 2 — STEP: 04

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE — **VALID ENTRY:**

P-9 RESPONSE	VALID ENTRY:
ENTER PHONE #X:	*Up to 15 digits or special characters.*

NOTE: "X" = the current telephone number

PURPOSE:

To enter either one of the first two telephone numbers.

The 1700 family of communicators supports a total of three different telephone numbers, any two of which can be selected for each event to be reported.

OPERATOR RESPONSE:

These telephone numbers can contain a total of 15 digits and special characters. Enter the central station number using the digits **0** through **9**, and any of the following special characters:

- **S** to insert a 3-second delay
- **L** to insert a 6-second delay
- **D** to search for an additional dial tone
- **#** valid for DTMF dialing only
- ***** valid for DTMF dialing only

Type **SK**, then **ENTER** to skip the remaining telephone numbers and go directly to step 10.7 In **CREATE** mode only, press only the **ENTER** key to perform the same function.

In **MODIFY** mode, press only the **ENTER** key to skip to the next step containing valid data.

NOTE: The DISPLAY ACCESS CODE function (Section 9) will not operate properly if Telephone Number 1 is not valid.

P-9 RESPONSE:

```
CNTRL STA FORMAT
PHX: SESCOA STD?
```

VALID ENTRY:

Press ↑ or ↓ to change,
ENTER *to select.*

NOTE: "X" = the current telephone number

PURPOSE:

Allows selection of different central station formats for the current telephone number.

OPERATOR RESPONSE:

Press the up or down arrows to view the possible selections. The four formats available are:

SESCOA STANDARD
SESCOA FAST (SESCOA Super Speed)
RADIONICS HEX
SEIA (not supported at this time)

Press **ENTER** when the desired format is displayed.

ACCOUNT NUMBER

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER ACCOUNT #
FOR PHX:
```

Valid account number for the selected central station format.

NOTE: "X" = the current telephone number

PURPOSE:

Allow entry of the communicator account number for the current telephone number.

OPERATOR RESPONSE:

Enter the desired account number. Each telephone number can have a different account number. The account numbers available for each format are:

SESCOA Standard	000 through 999.
SESCOA Super Speed	0000 through 3374.
Radionics Hex	000 through FFE, except the combinations BBB, CCC, DDD, and EEE. The character "A" cannot be used.

Table 10-1. Valid Account Numbers

If the account number entered is too long for the central station format selected, the following error message will be displayed:

```
FIELD TOO LARGE!
```

The P-9 will automatically re-issue the prompt for the account number after a short delay.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

ENTER PHONE #3A:	*Up to 15 digits or special characters.*

PURPOSE:

For entering the first part of Telephone Number 3. This telephone number can be up to 28 digits in length. The first 15 digits are entered as Telephone Number 3A. Any remaining digits are entered in Telephone Number 3B. Telephone Number 3 is normally used for long distance telephone systems that require an extra access code or account numbers.

Telephone Number 3B need not be used, but anything entered is added to the end of Telephone Number 3A, replacing any unused spaces.

OPERATOR RESPONSE:

This telephone number can contain a total of 15 digits and special characters. Enter the central station number using the digits **0** through **9**, and any of the following special characters:

- **S** to insert a 3-second delay
- **L** to insert a 6-second delay
- **D** to search for an additional dial tone
- **#** valid for DTMF dialing only
- ***** valid for DTMF dialing only

Type **SK**, then **ENTER** to skip the remaining telephone numbers and go directly to step 10.7 In **CREATE** mode only, press only the **ENTER** key to perform the same function.

In **MODIFY** mode, press only the **ENTER** key to skip to the next step containing valid data.

10.6 TELEPHONE NUMBER 3B STEP: 06

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER PHONE #3B:	*Up to 13 digits or special characters.*

PURPOSE:

Allows entry of any remaining digits of Telephone Number 3.

OPERATOR RESPONSE:

Enter any remaining digits of the central station telephone number. If no additional digits remain, press **ENTER**.

This telephone number can contain a total of 13 digits and special characters. Enter the central station number using the digits **0** through **9**, and any of the following special characters:

- **S** to insert a 3-second delay
- **L** to insert a 6-second delay
- **D** to search for an additional dial tone
- **#** valid for DTMF dialing only
- ***** valid for DTMF dialing only

> *NOTE:*
> *DO NOT ENTER* **SK** *AT THIS TIME.*

P-9 RESPONSE:

```
CNTRL STA FORMAT
PH3: SESCOA STD?
```

VALID ENTRY:

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

Allows selection of different central station formats for Telephone Number 3.

OPERATOR RESPONSE:

Press the up or down arrows to view the possible selections. The four formats available are:

SESCOA STANDARD
SESCOA FAST (SESCOA Super Speed)
RADIONICS HEX
SEIA (not supported at this time)

Press **ENTER** when the desired format is displayed.

ACCOUNT NUMBER

P-9 RESPONSE:

```
ENTER ACCOUNT #
FOR PH3:
```

VALID ENTRY:

Valid account number for the selected central station format.

PURPOSE:

Allow entry of the communicator account number for Telephone Number 3.

OPERATOR RESPONSE:

Enter the desired account number. Each telephone number can have a different account number. The account numbers available for each format are:

SESCOA Standard	000 through 999.
SESCOA Super Speed	0000 through 3374.
Radionics Hex	000 through FFE, except the combinations BBB, CCC, DDD, and EEE. The character "A" cannot be used.

Table 10-2. Valid Account Numbers

If the account number entered is too long for the central station format selected, the following error message will be displayed:

```
FIELD TOO LARGE!
```

The P-9 will automatically re-issue the prompt for the account number after a short delay.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

```
USE DTMF
DIALING? (Y/N)
```

Y or N

PURPOSE:

The 1700 family of communicators can dial using either the pulse (rotary) or DTMF (Touch Tone®) dialing method. This question applies to all three telephone numbers.

OPERATOR RESPONSE:

Answer according to the requirements of the telephone system being used.

Enter "Y" to select tone dialing. Go to 10.7.1

Enter "N" to select pulse dialing. Go to 10.7.2

Touch Tone® is a registered trademark of AT&T.

10.7.1 DTMF RATE SELECTION

P-9 RESPONSE

```
DTMF FAST RATE
DIALING? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

The 1700 family of communicators dial at only one rate. This question is asked only for compatibility with other products which are programmed with the P-9.

OPERATOR RESPONSE:

Only a Y or N is allowed. The answer will have no effect on the 1700 communicator operation. Go to 10.8

10.7.2 PULSE DIAL RATIO SELECTION

P-9 RESPONSE

```
AMERICAN DIAL
RATIO? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

When pulse dialing, the 1700 family of communicators can be programmed to use either the break/make ratio of 60/40 used in the United States, or the 67/33 ratio used in some foreign countries.

OPERATOR RESPONSE:

Answer according to the ratio required by the telephone system being used.

Enter "Y" for American 60/40 dial ratio or "N" for 67/33 dial ratio.

10.8 GROUND START OPTION STEP: 08

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, model 1700 only

P-9 RESPONSE **VALID ENTRY:**

```
IS GROUND START
REQUIRED? (Y/N)
```

Y or N

PURPOSE:

With some telephone systems, one of the two telephone line conductors (ring) must be grounded in order to establish dial tone.

Certain models of the 1700 family of communicators provide an output for use in these systems: The Model 1700 has ground start circuitry included on the circuit board; a relay must be inserted in the socket provided. The 1701 models have no provision for ground start.

OPERATOR RESPONSE:

Answer according to the requirements of the telephone system being used.

Enter "Y" for ground start or "N" for standard loop start.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE	VALID ENTRY:
ENTER NUMBER OF CALL TRIES:	*1 to 15*

PURPOSE:

To select the number of times the communicator will dial the central station in an attempt to transmit a message.

If transmission is not successful within the specified number of tries, the communicator will repeat the calling sequence at a later time if sleep cycles (10.11 and 10.12) are programmed, otherwise the event will be discarded.

> *NOTE:*
> *The number of attempts is applied to all events and all telephone numbers.*

OPERATOR RESPONSE:

Enter a number from 1 to 15.

> *CAUTION:*
> *When programming the number of call tries, it is important to remember that each unsuccessful attempt requires approximately 45 to 50 seconds to complete, during which time the telephone lines are seized by the communicator and cannot be used for any other purpose.*

10.10 SLEEP CYCLES STEP: 10

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

P-9 RESPONSE	VALID ENTRY:
ENTER SLEEP CYCLES(0-14):	*0 to 14*

PURPOSE:

After exhausting all programmed attempts (Step 9) to complete a call to a central station, the 1700 family of communicators can be programmed to either "sleep" or to cancel further attempts. If sleep cycles are programmed, the communicator will wait the specified length of time, then "wake-up" and begin the calling sequence, including retries, again. See steps 10.9, 10.12 and 10.13 for related subjects.

> *NOTE:*
> *The number of sleep cycles is applied to all events and all telephone numbers.*

OPERATOR RESPONSE:

Enter a number from 0 to 14.

If entry is 0, go to 10.12

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

> *NOTE:*
> *This question is only asked if sleep cycles were selected in the previous step.*

P-9 RESPONSE **VALID ENTRY:**

```
ENTER SLEEP
TIME (MIN):
```

1 to 255 minutes

PURPOSE:

Sets the duration of a sleep cycle (See 10.10). The time is specified in minutes: the minimum time is 1 minute, the maximum is 255 minutes (4 hours and 15 minutes). The shortest practical sleep cycle time is about 5 minutes. See steps 10.9, 10.10, and 10.13 for related subjects.

> *NOTE:*
> *The length of a sleep cycle is applied to all events and all telephone numbers.*

OPERATOR RESPONSE:

Enter a number from 1 to 255.

10.12 ANTI-JAM TIME DURATION STEP: 12

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE

```
ENTER ANTI-JAM
TIME (15-255)
```

VALID ENTRY:

15 to 255 seconds

PURPOSE:

If any of the 1700 family of communicators fails to successfully complete a call to a central station, it can make additional attempts to do so. Before the second attempt, the communicator first enters an anti-jam delay in case the first failure was due to the telephone being either off-hook or being called (ringing) when the line was first seized. By maintaining line seizure during this interval, the communicator tries to ensure that the line will be on-hook long enough to result in a dial tone on the next attempt.

The anti-jam time is specified in seconds: a typical value for the United States is 45 seconds; the requirement is different is some foreign countries. See steps 10.9, 10.10 and 10.11 for related subjects.

> *NOTE:*
> *The length of an Anti-jam period is applied to all events and all telephone numbers.*

OPERATOR RESPONSE:

Enter a number between 15 and 255.

10.13 LOOP RESTORAL CODE STEP: 13

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

> *NOTE:*
> *This question is asked only if SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE	VALID ENTRY:
ENTER LOOP RESTORAL CODE:	*0 to 9*

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify a loop restoral. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

10.14 SUPERVISORY REPORTS ENABLE STEP: 14

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

SUPERVISORY REPORTS? (Y/N)	*Y or N*

PURPOSE:

Supervisory events report activity which may control or affect the manner in which the system operates, or are not related to activity on any one specific loop.

Most of these events can be enabled or disabled separately, but to generate any supervisory report, they must be enabled at this time.

The supervisory reports are:

OPEN/CLOSE
BATTERY REPORTS
TEST/CANCEL
STATUS
24 HOUR CHECK-IN

OPERATOR RESPONSE:

Enter "Y" to enable communicator supervisory reports.

Enter "N" to disable communicator supervisory reports. Go to 10.31

TELEPHONE NUMBER OVERVIEW

There are three questions associated with programming telephone numbers:

PRIMARY TELEPHONE NUMBER
SECONDARY TELEPHONE NUMBER
SECONDARY TELEPHONE MODE

The following is a brief overview of the way in which the 1700 family of communicators uses the answers to these questions when reporting events:

In programming, Telephone Numbers 1, 2, and 3 refer to the numbers entered in Steps 10.3 through 10.6. Telephone Number 4 (which does not really exist), is a special case, and should only be selected as the secondary number. If you select Telephone Number 4, the communicator will not attempt to make a call.

The primary is the first number which will be called for any event; the secondary will be called as either a back-up (only if the primary can not be reached), or as an addition to the primary number.

The secondary telephone mode determines the manner in which the secondary telephone number is treated:

- When reporting to both numbers, the primary and secondary numbers are called alternately, and the event reported to both.

- When reporting to either number, the primary number is called for the specified number of tries, and if not completed, the secondary number is attempted.

SUMMARY:

Select one valid number and Telephone Number 4 to cause an event to be reported to only the valid number, or select two valid numbers to cause an event to be reported to either or both of the numbers, depending upon the secondary mode.

10.15 PRIMARY SUPERVISORY TELEPHONE NUMBER — STEP: 15

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE	VALID ENTRY:
ENTER PRIMARY SUPRV PHONE #:	*1, 2, or 3*

PURPOSE:

The primary is the first number which will be called for any supervisory report. Telephone Numbers 1, 2, and 3 are the telephone numbers, account numbers, and formats that have been selected in Sections 10.3 through 10.6

OPERATOR RESPONSE:

Enter 1, 2, or 3 to correspond with the previously programmed telephone numbers. The P-9 will not allow the selection of a telephone number which has not been programmed.

Entering 4 causes the communicator to not dial a number. Do not select 4 as the primary number.

> *NOTE:*
> *The primary and secondary numbers must be different. The P-9 will display an error message if both numbers are the same. THIS REFERS ONLY TO THE NUMBERS SPECIFIED AS PRIMARY AND SECONDARY - THE TELEPHONE NUMBERS PROGRAMMED AS 1, 2, AND 3 MAY BE, IN FACT, IDENTICAL.*

Because of the duplicate number checking, if both of the selections need to be changed, and the new primary number matches the secondary number programmed, the secondary number must be changed first.

10.16 SECONDARY SUPERVISORY TELEPHONE NUMBER — STEP: 16

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE	VALID ENTRY:
ENTER SECONDARY SUPRV PHONE #:	*1, 2, 3, or 4*

PURPOSE:

The secondary is the number which will be called as either a back-up (called if the primary can not be reached), or in addition to the primary number for any supervisory report. Telephone Numbers 1, 2, and 3 are the telephone numbers, account numbers, and formats that have been selected in Sections 10.3 through 10.6

OPERATOR RESPONSE:

Enter 1, 2, or 3 to correspond with the previously programmed telephone numbers. The P-9 will not allow the selection of a telephone number which has not been programmed.

If Telephone Number 4 is selected, a secondary number will not be dialed.

> *NOTE:*
> *The primary and secondary numbers must be different. The P-9 will display an error message if both numbers are the same. THIS REFERS ONLY TO THE NUMBERS SPECIFIED AS PRIMARY AND SECONDARY - THE TELEPHONE NUMBERS PROGRAMMED AS 1, 2, AND 3 MAY BE, IN FACT, IDENTICAL.*

Because of the duplicate number checking, if both of the selections need to be changed, and the new secondary number matches the primary number programmed, the primary number must be changed first.

10.17 SUPERVISORY SECONDARY TELEPHONE MODE — STEP: 17

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE — **VALID ENTRY:**

```
REPORT TO BOTH
NUMBERS? (Y/N)
```

Y or N

PURPOSE:

The secondary telephone mode for supervisory reports determines the manner in which the supervisory secondary telephone number is treated.

If the communicator is programmed to report to both numbers, it will alternately call the primary and secondary numbers, and report the event to both. If necessary, it will continue to try either or both numbers until it succeeds in reporting to both, or exhausts all allowed tries and sleep cycles.

If not programmed to report to both numbers, the communicator will call first the primary number for the specified number of times, and if it fails to report, will then call the secondary number, continuing until it succeeds in reporting to either one of the numbers, or exhausts all allowed tries and sleep cycles.

OPERATOR RESPONSE:

Enter "Y" to report to both numbers, or "N" to report to only one number.

10.18 OPEN AND CLOSE REPORTS STEP: 18

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, models 1704 and 1708 only

P-9 RESPONSE **VALID ENTRY:**

OPEN OR CLOSE REPORTS? (Y/N)	*Y or N*

PURPOSE:

To select whether or not opening and closing reports should be sent to the central station.

Closing reports are sent when the system is armed, and opening reports when the system is disarmed.

OPERATOR RESPONSE:

Enter "Y" to enable opening and closing reports.

> *NOTE:*
> *Models 1700, 1701, 1701L, 1701D, or 1701S communicators do not have open and close capability. If "Y" is entered when programming these communicators, they will always transmit a "Closing" report on power-up.*

Enter "N" to disable opening or closing reports. Go to 10.22

10.19 OPEN/CLOSE REPORTS: TRIGGER POLARITY — STEP: 19

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, models 1704 and 1708 only

P-9 RESPONSE

```
OPEN SIGNAL
POLARITY+? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

The 1700 family of communicators can be programmed to recognize either a positive (+4 VDC or more) or negative (+1 VDC or less) input on the open/close input as an "open" condition.

"Open" is considered to be the normal condition: NO report will be sent if the input is in the "open" state when power is applied to the communicator; however, a closing report WILL be sent if the input is in the "close" state when power is applied.

OPERATOR RESPONSE:

Enter "Y" if a positive voltage represents an "open" condition, or "N" if a negative voltage represents an "open" condition.

10.20 OPENING (DISARM) CODE STEP: 20

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, models 1704 and 1708 only

> *NOTE:*
> *This question is asked only if Open/Close reports have been enabled and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE **VALID ENTRY:**

```
ENTER OPEN
(DISARM) CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify an opening (system disarm). The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

10.21 CLOSING (ARM) CODE STEP: 21

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, models 1704, and 1708 only

> *NOTE:*
> *This question is asked only if Open/Close reports have been enabled and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE	VALID ENTRY:
ENTER CLOSE (ARM) CODE:	*0 to 9*

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify a closing (system arm). The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, all models except 1700

P-9 RESPONSE	VALID ENTRY:
SEND TEST CODE? (Y/N)	*Y or N*

PURPOSE:

To select whether or not a test code should be sent to the central station.

Test reports and cancel reports are identical in form and content. If a SESCOA central station receiver is used, each message will be received as a "test". If a Radionics central station is used, each message will be received as a "cancel". Therefore, the central station operator must interpret the messages received from a communicator on a given connect.

"Test" is defined as a solitary test or cancel message. A "test" message will be sent to the central station programmed to receive supervisory events if **Test** reports are enabled by this step and the test/cancel input is activated while the 1700 is idle (has no messages to transmit to a central station). A "test" message will always be canceled by any event which occurs before the message is transmitted.

"Cancel" is defined as a test or cancel message which follows any other messages. **Cancel** reports are always enabled by the Supervisory Report Enable, and are sent to the central station programmed to receive supervisory events.

OPERATOR RESPONSE:

Enter "Y" to cause a "test/cancel" message to be sent anytime the input is activated, or "N" to send a "cancel" message only if there are other messages pending.

10.23 TEST/CANCEL CODE STEP: 23

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

> *NOTE:*
> *This question is asked only if SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE	VALID ENTRY:
ENTER TEST/ CANCEL CODE:	*0 to 9*

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify a test or cancel. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

10.24 BATTERY REPORTS STEP: 24

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, all models except 1701D

P-9 RESPONSE **VALID ENTRY:**

ARE BATTERY RPTS REQUIRED? (Y/N)	*Y or N*

PURPOSE:

To select whether or not battery reports should be sent to the central station.

The 1700 family of communicators provides an input dedicated to monitoring the system battery. Hardware on all except the 1701 models compares the battery voltage to a preset value. The 1701 models monitor an external input which can be programmed as either an additional loop input or as a battery status input.

OPERATOR RESPONSE:

Enter "Y" to enable low battery reports.

Enter "N" to disable low battery reports. For Model 1701D communicators, always enter "N" since this input is programmed as a additional loop. Go to 10.29

10.25 LOW BATTERY CODE STEP: 25

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, all models except 1701D

> *NOTE:*
> *This question is asked only if battery reports have been enabled, and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE **VALID ENTRY:**

```
ENTER LOW
BATTERY CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify a low battery. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

10.26 BATTERY RESTORAL REPORTS STEP: 26

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, all models except 1701D

> *NOTE:*
> *This question is asked only if battery reporting has been enabled.*

P-9 RESPONSE **VALID ENTRY:**

P-9 RESPONSE	VALID ENTRY:
ENABLE BATTERY RESTORAL? (Y/N)	*Y or N*

PURPOSE:

When battery reports are enabled (Section 10.24), only Low Battery reports are enabled. Battery Restoral reports must be enabled separately.

OPERATOR RESPONSE:

Enter "Y" to enable battery restoral reports.

Enter "N" to disable battery restoral reports. Go to 10.28

10.27 BATTERY RESTORAL CODE STEP: 27

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, all models except 1701D

> *NOTE:*
> *This question is asked only if battery restoral reports have been enabled, and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE	VALID ENTRY:
ENTER BATTERY RESTORAL CODE:	*0 to 9*

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify a battery restoral. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, all models except 1701D

> *NOTE:*
> *This question is asked only if battery reporting has been enabled.*

P-9 RESPONSE	VALID ENTRY:
ENTER BATTERY DETECT TIME:	*0 to 127 (See delay formula below)*

PURPOSE:

To select the length of time that a change in battery status must exist before any reports are generated.

The 1700 family of communicators will detect and report a change in battery status which is a minimum of 200 milliseconds in duration. This minimum duration can be increased, in increments of 15 seconds, to a maximum of 31 minutes and 45 seconds. If the battery status does not remain constant for the period selected, no report will be generated.

OPERATOR RESPONSE:

Enter the delay desired in increments of 15 seconds from 0 (normal 200 millisecond delay) to 127 (maximum delay).

DELAY FORMULA:
(Delay Number X 15) = Delay Time In Seconds.

EXAMPLES:
0 = 200 milliseconds
1 = 15 seconds
127 = 31 minutes 45 seconds

Enter the delay number (from 0 to 127).

10.29 24 HOUR CHECK-IN REPORTS STEP: 29

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

```
IS 24HR CHECK-IN
REQUIRED? (Y/N)
```

Y or N

PURPOSE:

To select whether or not the communicator will send a report to the central station every 24 hours.

Since the 1700 communicators do not have a real-time clock, this report will be sent each day at the time that power was applied to the communicator.

> *NOTE:*
> *This time can be adjusted using the P-9 SDL command, which sets the length of time (from when the command is issued) until the communicator sends a 24 hour check-in. After the initial report is sent, additional reports will be sent one each day, at approximately the same time, until power to the communicator is removed, or another SDL command is received. Refer to Section 8.2 in this manual for more information concerning this command.*

OPERATOR RESPONSE:

Enter "Y" to enable or "N" to disable the 24 hour check-in and go to 10.31

10.30 24 HOUR CHECK-IN CODE STEP: 30

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

> *NOTE:*
> *This question is asked only if 24 hour check-in has been enabled, and SESCOA Standard or Radionics Hex has been selected as one of the communications formats.*

P-9 RESPONSE **VALID ENTRY:**

```
ENTER CHECK-IN
CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify a 24 hour check-in. The event code to be used when sending these reports must be programmed.

The Radionics Hex pre-defined code is not implemented by the 1700 family of communicators. Instead, the event code entered here will be used.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

LOOP PROGRAMMING OVERVIEW

There is only one step number associated with loop programming, even though there are thirteen questions. To simplify the programming process, this step requests the number of the loop to be programmed or modified. Enter the loop number, then each question will be presented in turn:

10.31.1	ACTIVE LOOP (ENABLE)
10.31.2	TRIGGER POLARITY
10.31.3	SWINGER ENABLE
10.31.4	SWINGER COUNT
10.31.5	PRIMARY TELEPHONE NUMBER
10.31.6	SECONDARY TELEPHONE NUMBER
10.31.7	SECONDARY TELEPHONE MODE
10.31.8	RESTORAL REPORT ENABLE
10.31.9	ALARM CODE
10.31.10	REPORT DELAY
10.31.11	REPORT PRIORITY
10.31.12	AUDIO-BY-LOOP ENABLE
10.31.13	AUDIO LISTEN ONLY

The following is a brief overview of the way in which the 1700 family of communicators uses the answers to these questions when reporting loop events.

- Only active loops will be monitored by the communicator.
- The loop has negative polarity if it has less than +1 VDC on it in its faulted condition; if it has more than +4 VDC, it has positive polarity.
- Disable swinger eliminators to report all detected changes in loop status. If you enable this function, you can limit the number of fault reports that will be transmitted during any 24 hour period. The final fault report is identified through a special reporting format.
- Loop restoral reports are enabled or disabled separately from fault reports.
- The alarm code transmitted in SESCOA Standard and Super Speed can be individually programmed.
- The length of time the loop status must remain constant before it will be detected and a report generated can be programmed from a minimum of 200 milliseconds to a maximum of 31 minutes and 45 seconds.
- The priority of each loop is programmable. Messages are transmitted in order of priority. Among loops of identical priority, the LOWEST numbered loop will be given priority.
- The 1700 family of communicators supports Audio-by-Loop, in which an external audio unit is triggered when a fault is reported for a loop designated as an audio loop. In addition, these loops can be programmed as either two-way or listen-only.

10.31 STARTING LOOP NUMBER STEP: 31

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE

```
ENTER STARTING
LOOP # (1-8):
```

VALID ENTRY:

1 to 5 for 1700
1 to 3 for 1701S and 1701L
1 to 4 for 1701, 1701D
1 to 4 for 1704
1 to 8 for 1708

PURPOSE:

To speed up the programming function, the P-9 can skip directly to a specific loop for programming. The number entered will be the first loop to be programmed.

For each loop programmed, the P-9 will ask a series of questions regarding programming options. These questions are covered in the following sections.

Unless the **F3** function is used (see Section 3.2), all remaining loops will be presented in numerical order.

OPERATOR RESPONSE:

NOTE:
THE P-9 DOES NOT KNOW WHICH 1700 SERIES MODEL IS BEING PROGRAMMED! Loop numbers 1 through 8 are always considered valid by the P-9, and all may be programmed. However, the maximum number of loops which will actually be monitored is determined by the specific model of communicator.

Enter a valid loop number (see "Valid Entry" above).

10.31.1 LOOP ENABLE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

LXX-ACTIVE LOOP? (Y/N)	*Y or N*

NOTE: "XX" = the loop number

PURPOSE:

Only active (enabled) loops will be monitored.

OPERATOR RESPONSE:

Enter "Y" to enable the loop.

Enter "N" to disable the loop. If a loop is not enabled, none of the remaining questions for that loop are asked, and this question will be asked for the next loop.

If Disabling Loop 8, go to 10.32

10.31.2 LOOP TRIGGER POLARITY

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE

```
LXX-TRIGGER
POLARITY+? (Y/N)
```

VALID ENTRY:

Y or N

NOTE: "XX" = the loop number

PURPOSE:

The 1700 family of communicators can be programmed to recognize either a positive (+4 VDC or more) or negative (+1 VDC or less) input on the loop input as being a fault (alarm) condition.

A restoral is considered to be the normal condition. No report will be sent if the input is in the restored state when the communicator is first powered on; a report will be sent if the input is in the fault or alarm state when the communicator is first powered on.

OPERATOR RESPONSE:

Enter "Y" if a positive voltage represents a fault condition, or "N" if a negative voltage represents a fault condition.

10.31.3 LOOP SWINGER ELIMINATOR ENABLE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

LXX-ELIMINATE SWINGERS? (Y/N)	*Y or N*

NOTE: "XX" = the loop number

PURPOSE:

The 1700 family of communicators will normally report all fault events (changes from restored to fault condition) on the loop input, no matter how many faults occur. An unwanted series of multiple faults (usually caused by a bad sensor) is called a "swinger."

If this mode of operation is undesirable, the 1700 can be programmed to stop reporting these faults after a specified number of reports have been transmitted within the 24 hour period between check-in reports.

OPERATOR RESPONSE:

Enter "Y" to automatically eliminate swingers on this loop.

Enter "N" for unlimited fault reports. Go to 10.31.5

10.31.4 LOOP SWINGER COUNT

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

> *NOTE:*
> *This question is asked only if the swinger elimination function was enabled in the previous step.*

P-9 RESPONSE	VALID ENTRY:
LXX-ENTER E.S. COUNT (1-8):	*1 to 8*

NOTE: "XX" = the loop number

PURPOSE:

When the swinger eliminator function is enabled, the 1700 family of communicators will transmit only the specified number of faults for that loop, then cease to report any further activity.

To alert the central station that the loop has equalled the allowed number of events, a "trouble" message is appended to the last fault message transmitted in either the SESCOA Super Speed or Radionics Hex (which is NOT expanded) format. For messages transmitted in the SESCOA Standard format, two successive fault messages are sent.

The swinger count is normally reset once every 24 hours at 24-hour check-in time. To reset the swinger count at any other time using the P-9, refer to the RSC command (Section 8.3).

To adjust the 24-hour check-in time, refer to the SDL command (Section 8.2).

See next page for operator response.

OPERATOR RESPONSE:

Enter a number from 1 to 8.

NOTE:
If the loop is being reported to both telephone numbers, this count MUST be doubled because the 1700 counts the number of messages transmitted, not the number of faults. This was done on the assumption that events which are not transmitted are unknown to the central station, and thus no corrective action can be taken.

TELEPHONE NUMBER OVERVIEW

There are three questions associated with programming telephone numbers:

PRIMARY TELEPHONE NUMBER
SECONDARY TELEPHONE NUMBER
SECONDARY TELEPHONE MODE

The following is a brief overview of the way in which the 1700 family of communicators uses the answers to these questions when reporting events:

In programming, Telephone Numbers 1, 2, and 3 refer to the numbers entered in Steps 10.3 through 10.6. Telephone Number 4 (which does not really exist), is a special case, and should only be selected as the secondary number. If you select Telephone Number 4, the communicator will not attempt to make a call.

The primary is the first number which will be called for any event; the secondary will be called as either a back-up (only if the primary can not be reached), or as an addition to the primary number.

The secondary telephone mode determines the manner in which the secondary telephone number is treated:

- When reporting to both numbers, the primary and secondary numbers are called alternately, and the event reported to both.

- When reporting to either number, the primary number is called for the specified number of tries, and if not completed, the secondary number is attempted.

SUMMARY:

Select one valid number and Telephone Number 4 to cause an event to be reported to only the valid number, or select two valid numbers to cause an event to be reported to either or both of the numbers, depending upon the secondary mode.

10.31.5 PRIMARY LOOP TELEPHONE NUMBER

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE	VALID ENTRY:
LXX-PRIMARY PHONE #? (1-3)	*1,2, or 3*

NOTE: "XX" = the loop number

PURPOSE:

The primary is the first number which will be called for any loop report. Telephone Numbers 1, 2, and 3 are the telephone numbers, account numbers, and formats that have been selected in Sections 10.3 through 10.6

OPERATOR RESPONSE:

Enter 1, 2, or 3 to correspond with the previously programmed telephone numbers. The P-9 will not allow the selection of a telephone number which has not been programmed.

Entering 4 causes the communicator to not dial a number. Do not select 4 as the primary number.

NOTE:
The primary and secondary numbers must be different. The P-9 will display an error message if both numbers are the same. THIS REFERS ONLY TO THE NUMBERS SPECIFIED AS PRIMARY AND SECONDARY - THE TELEPHONE NUMBERS PROGRAMMED AS 1, 2, AND 3 MAY BE, IN FACT, IDENTICAL.

Because of the duplicate number checking, if both of the selections need to be changed, and the new secondary number matches the primary number programmed, the primary number must be changed first.

10.31.6 SECONDARY LOOP TELEPHONE NUMBER

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE	VALID ENTRY:
LXX-SECONDARY PHONE #? (1-3)	*1, 2, 3, or 4*

NOTE: "XX" = the loop number

PURPOSE:

The secondary is the number which will be called as either a back-up (called if the primary can not be reached), or in addition to the primary number for any loop report. Telephone Numbers 1, 2, and 3 are the telephone numbers, account numbers, and formats that have been selected in Sections 10.3 through 10.6

OPERATOR RESPONSE:

Enter 1, 2, or 3 to correspond with the previously programmed telephone numbers. The P-9 will not allow the selection of a telephone number which has not been programmed.

If Telephone Number 4 is selected, a secondary number will not be dialed.

NOTE:
The primary and secondary numbers must be different. The P-9 will display an error message if both numbers are the same. THIS REFERS ONLY TO THE NUMBERS SPECIFIED AS PRIMARY AND SECONDARY - THE TELEPHONE NUMBERS PROGRAMMED AS 1, 2, AND 3 MAY BE, IN FACT, IDENTICAL.

Because of the duplicate number checking, if both of the selections need to be changed, and the new secondary number matches the primary number programmed, the primary number must be changed first.

10.31.7 LOOP SECONDARY TELEPHONE MODE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

```
LXX-REPORT TO
BOTH #'S? (Y/N)
```

Y or N

NOTE: "XX" = the loop number

PURPOSE:

The secondary telephone mode for loop reports determines the manner in which the loop secondary telephone number is treated.

If the communicator is programmed to report to both numbers, it will alternately call the primary and secondary numbers, and report the event to both. If necessary, it will continue to try either or both numbers until it succeeds in reporting to both, or exhausts all allowed tries and sleep cycles.

If not programmed to report to both numbers, the communicator will call first the primary number for the specified number of times, and if it fails to report, will then call the secondary number, continuing until it succeeds in reporting to either one of the numbers, or exhausts all allowed tries and sleep cycles.

OPERATOR RESPONSE:

Enter "Y" to report to both numbers, or "N" to report to only one number.

10.31.8 LOOP RESTORAL REPORTS

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE	VALID ENTRY:
LXX-REPORT LOOP RESTORAL? (Y/N)	*Y or N*

NOTE: "XX" = the loop number

PURPOSE:

Loop restoral reports are disabled by default. If loop restorals are required, they must enabled with this step.

OPERATOR RESPONSE:

Enter "Y" to enable, or "N" to disable loop restoral reports.

10.31.9 LOOP ALARM CODE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE

```
LXX-ENTER ALARM
CODE (0-99):
```

VALID ENTRY:

0 to 9, or 0 to 99 depending on central station formats.

NOTE: "XX" = the loop number

PURPOSE:

Neither the SESCOA Standard nor SESCOA Super Speed format uses a pre-defined code to identify a loop alarm condition. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

The range of numbers allowed depends upon the central station format(s) selected:

If SESCOA Super Speed is **NOT** selected as one of the central station formats, enter a number from 0 to 9 only. If SESCOA Super Speed is selected, enter a number from 0 to 99.

- SESCOA Super Speed always transmits a two-digit alarm code: if the programmed code is less than 10, the most significant (tens) digit is always transmitted as a 0.

- SESCOA Standard always transmits a single-digit alarm code: if the programmed code is greater than 10, only the least significant (units) digit is transmitted.

- Radionics Hex always ignores the programmed code and instead transmits the loop number as a single-digit alarm code.

10.31.10 LOOP RESPONSE TIME

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

LXX-ENTER LOOP RESPONSE:	*0 to 127 (See delay formula below)*

NOTE: "XX" = the loop number

PURPOSE:

To select the length of time that a change in loop status must exist before any reports are generated.

The 1700 family of communicators will detect and report a change in loop status which is a minimum of 200 milliseconds in duration. This minimum duration can be increased, in increments of 15 seconds, to a maximum of 31 minutes and 45 seconds. If the loop status does not remain constant for the period selected, no report will be generated.

OPERATOR RESPONSE:

Enter the delay desired in increments of 15 seconds from 0 (normal 200 millisecond delay) to 127 (maximum delay).

DELAY FORMULA:
(Delay Number X 15) = Loop Delay Time In Seconds.

EXAMPLES:
0 = 200 milliseconds.
1 = 15 seconds
127 = 31 minutes 45 seconds

Enter the delay number (from 0 to 127).

10.31.11 LOOP REPORTING PRIORITY

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

P-9 RESPONSE	VALID ENTRY:
LXX-ENTER LOOP PRIORITY (1-7H)	*1 to 7*

NOTE: "XX" = the loop number

PURPOSE:

To assign the priority of each individual loop.

Messages will be transmitted in order of priority, with priority 1 being the lowest. When two or more loops have identical priority, then the LOWEST number loop will be given priority.

> *NOTE:*
> *Priority 8 is reserved for fire (smoke detector) loops, and is not supported on the 1700 family of slave communicators.*

OPERATOR RESPONSE:

Enter a priority from 1 (lowest) to 7 (highest).

10.31.12 AUDIO-BY-LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, models 1704, and 1708 only

> *NOTE:*
> *Not applicable to the 1700 or 1701, which do not provide the Audio-By-Loop interface.*

P-9 RESPONSE **VALID ENTRY:**

```
LXX-AUDIO
LOOP? (Y/N)
```

Y or N

NOTE: "XX" = the loop number

PURPOSE:

To designate a loop as an audio loop.

The Models 1704 and 1708 support Audio-By-Loop, in which an external audio unit will be triggered when an alarm is reported on a loop designated as an audio loop. With this feature, it is possible to avoid triggering the audio unit on Supervisory reports, such as battery or 24 hour check-in reports.

OPERATOR RESPONSE:

Enter "Y" to define this loop as an audio loop.

Enter "N" for a non-audio loop or if using a 1700 or 1701 communicator. Go to 10.31.1 until all active loops are programmed. Then go to 10.32

10.31.13 AUDIO LISTEN ONLY

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions, models 1704 and 1708 only

> *NOTE:*
> *This question is asked only if the Audio-By-Loop function was enabled in the previous step.*

P-9 RESPONSE **VALID ENTRY:**

```
LXX-AUDIO LISTEN
ONLY? (Y/N)
```

Y or N

NOTE: "XX" = the loop number

PURPOSE:

Whenever a loop is specified as an audio loop, it must also be specified as either two-way or listen-only. In the listen-only mode, the central station may listen, but not talk to, the customer.

> *NOTE:*
> *The 1700 and 1701 models do not have the hardware interface necessary to connect to an external audio unit. Always answer "N" when programming these models.*

OPERATOR RESPONSE:

Enter "Y" for a listen-only loop.

Enter "N" for a two-way loop or if using a 1700 or 1701 communicator.

Go to 10.31.1 until all active loops are programmed. Then go to 10.32

10.32 REMOTE CONTROL MODULE STEP: 32

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.7 and later

1700 COMMUNICATORS:
Version 1.3 and later, models 1704 or 1708 only

> *WARNING!*
> *BE SURE TO FOLLOW ALL DIRECTIONS WHEN CONNECTING THE REMOTE CONTROL MODULE TO THE COMMUNICATOR! FAILURE TO DO SO MAY RESULT IN SEVERE DAMAGE.*

P-9 RESPONSE	VALID ENTRY:
ENTER DIRECTION FOR RCM? (Y/N)	*Y or N*

PURPOSE:

The Remote Control Module is an external device which allows the P-9, through the RC command, to pulse, set, or reset each output line, or read the status of all lines, both input and output. Refer to Section 8.11 of this manual for more information about the RC command.

Each of the eight lines can be configured as either an input or an output. Unless specified differently, all lines will be configured as outputs.

OPERATOR RESPONSE:

Enter "Y" to configure any of the Remote Control Module lines as inputs.

Enter "N" to configure all lines of the Remote Control Module as outputs. Go to 10.33

> *NOTE:*
> *Always enter "N" if a Remote Control Module is not used to prevent any adverse effects.*

10.32.1 SET RCM DIRECTION

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.7 and later

1700 COMMUNICATORS:
Version 1.3 and later, models 1704 and 1708 only

P-9 RESPONSE

```
ENTER 12345678
DIR ->
```

VALID ENTRY:

See selection process below.

PURPOSE:

The direction (input or output) of each line can be individually set in the masterfile and used by the RC command.

OPERATOR RESPONSE:

Enter the direction for each of the eight control lines. For each input, enter the letter " **I** "; for each output, enter the letter " **O** ".

As the direction for each line is entered, it will appear on the second line of the display immediately under the line number (1-8).

10.33 REMOTE ACCESS ENABLE STEP: 33

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
Versions 1.3 and later, all models

WARNING:
DO NOT ENABLE REMOTE ACCESS ON 1700 MODELS WITH VERSION 1.2 FIRMWARE.

P-9 RESPONSE **VALID ENTRY:**

ENABLE REMOTE ACCESS?	*Y or N*

PURPOSE:

The 1700 family of communicators is capable of being accessed either locally or from a remote location. If remote access is required, this function must be enabled. If this function is not enabled, the communicator will not respond to a ring, and it will have be accessed locally.

OPERATOR RESPONSE:

Enter "Y" to enable remote access.

Enter "N" to disable remote access. This completes the 1700 communicator programming steps. **Return to the MASTER MENU in Section 5.0**

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE **VALID ENTRY:**

```
LOCK COMMUN-
ICATOR? (Y/N)
```

Y or N

PURPOSE:

If remote access is enabled, the communicator may optionally be "locked". If the communicator is locked, access will be granted only if the P-9 provides the correct 4-character access code when communications are first established. If the communicator is not locked, any P-9 programmer will have the ability to call and establish a communications link with the communicator.

OPERATOR RESPONSE:

Enter "Y" to "lock" the communicator. If in the CREATE FILE mode, go to 10.34.2

Enter "N" to leave the communicator "unlocked". This completes the 1700 communicator programming. **Return to the MASTER MENU in Section 5.**

10.34.1 ACCESS CODE MODIFICATION

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

> *NOTE:*
> *This question is asked only in the MODIFY mode if remote access lock has been enabled. This question is skipped in the CREATE mode.*

P-9 RESPONSE	VALID ENTRY:
KEEP SAME ACCESS CODE? (Y/N)	*Y or N*

PURPOSE:

To allow the access code to be retained.

OPERATOR RESPONSE:

Enter "Y" to keep the same access code. Go to 10.34.4

Enter "N" to change the communicator access code.

10.34.2 ACCESS CODE CREATION

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

> *NOTE:*
> *This question is asked only if remote access and communicator lock has been enabled and the user is logged on as a Supervisor.*

P-9 RESPONSE **VALID ENTRY:**

P-9 RESPONSE	VALID ENTRY:
ENTER ACCESS CODE? (Y/N)	*Y or N*

PURPOSE:

Allows the operator to select manual entry of a specific communicator 4-character access code instead of having the P-9 generate a random access code.

Up to 30 communicator access codes are stored in the P-9's access code memory buffer. To prevent access code loss, the access code buffer must periodically be displayed or printed, then purged. These functions are available to "Supervisor" level personnel using the "DISPLAY MODE" function in the Main Menu (see Section 9).

OPERATOR RESPONSE:

Enter "Y" to manually enter a specific access code.

Enter "N" to cause the P-9 generate a random 4-character access code. Go to 10.34.4

10.34.3 MANUAL ACCESS CODE CREATION

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

P-9 RESPONSE	VALID ENTRY:
ENTER ACCESS CODE:	*Any four characters.*

PURPOSE:

For manual entry of the 4-character access code.

OPERATOR RESPONSE:

Enter any four characters for the communicator access code.

> *WARNING!*
> *BE SURE TO WRITE THE ACCESS CODE DOWN, AND STORE IT IN A SAFE PLACE!*

If the access code is lost, the P-9 will be unable to gain remote access to the communicator. The only way to recover from this situation is to program locally.

> *CAUTION:*
> *For maximum security, obvious codes such as 1234 or ABCD should be avoided.*

10.34.4 COMMUNICATOR ACCESS CODE DISPLAY

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1700 COMMUNICATORS:
All versions and models

> *NOTE:*
> *The following is displayed only if remote access and communicator lock have been enabled and the user is logged on as a supervisor.*

P-9 RESPONSE

```
ACCESS CODE:
XXXX
```

VALID ENTRY:

None

NOTE: "XXXX" = current access code

PURPOSE:

Shows the operator the current communicator access code.

OPERATOR RESPONSE:

View the access code to verify that it is correct. This is the last 1700 communicator programming step. **Return to the MASTER MENU in Section 5.**

SECTION 11

1900 COMMUNICATOR

PROGRAMMING

11.0 1900 COMMUNICATOR PROGRAMMING

INTRODUCTION

The 1900 Smart Control/communicator is a fully programmable eight-zone digital alarm control panel with a built-in digital communicator featuring both "Up-load" and "Down-load" capability. With the 1900, program changes can be made locally or from the central station with the P-9, even if the end user is not present. The 1900 can also send past system activity and present status information to the P-9 at the central station.

This section contains detailed information on each step involved in programming a 1900 control/communicator. The information given for each program step is a sample of the P-9 display, the purpose of the programming step, the appropriate operator response and its compatibility with different firmware versions. Below is a sample page containing explanations of each area of the page.

COMPLETE STEP NAME **F3 KEY STEP #**

COMPATIBILITY:

P-9 PROGRAMMER:
Compatible version of P-9 firmware.

1900 CONTROL/COMMUNICATOR:
Compatible version of 1900 firmware.

P-9 RESPONSE **VALID ENTRY:**

CHARACTERS SHOWN ON P-9 DISPLAY

The range of entry allowed.

PURPOSE:

What the function does, and how it affects other aspects of operation

OPERATOR RESPONSE:

The appropriate operator response and its limits.

If appropriate, the next programming step is also given.

11.1 MASTERFILE HEADER STEP: 01

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

Up to 16 characters

PURPOSE:

The masterfile header allows the user to place information in the communicator to identify location, customer I.D. number, or other appropriate data. It does not affect the operation of the communicator.

OPERATOR RESPONSE:

Enter any combination of alpha-numeric (printing) characters up to a maximum of 16.

11.2 TELEPHONE COMMUNICATIONS ENABLE — STEP: 02

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

ENABLE TELEPHONE COMMUN? (Y/N)	*Y or N*

PURPOSE:

Telephone communications refers to placing an outgoing call to a Central Station in order to report an event. If disabled, only local programming (and if separately enabled, remote programming) will remain active.

OPERATOR RESPONSE:

Enter "Y" to enable telephone communications.

Enter "N" for the 1900 to operate as a local alarm system.

Go to 11.25

NOTE:
If you enter "N" at this time, you will only be prompted for information pertaining to a local alarm system.

11.3	TELEPHONE NUMBER 1	STEP: 03
11.4	TELEPHONE NUMBER 2	STEP: 04
11.5	TELEPHONE NUMBER 3	STEP: 05
11.6	TELEPHONE NUMBER 4	STEP: 06
11.7	TELEPHONE NUMBER 5	STEP: 07
11.8	TELEPHONE NUMBER 6	STEP: 08
11.9	TELEPHONE NUMBER 7	STEP: 09

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

Up to 15 digits or special characters.

NOTE: "X" = the current telephone number

PURPOSE:

To enter any one of the first seven telephone numbers.

The 1900 supports a total of eight different telephone numbers, any two of which can be selected for each event to be reported.

See next page for operator response.

OPERATOR RESPONSE:

These telephone numbers can contain a total of 15 digits and special characters. Enter the central station number using the digits **0** through **9**, and any of the following special characters:

- **S** to insert a 3-second delay
- **L** to insert a 6-second delay
- **D** to search for an additional dial tone
- **#** valid for DTMF dialing only
- ***** valid for DTMF dialing only

Type **SK**, then **ENTER** to skip the remaining telephone numbers and go directly to step 11.12 In **CREATE** mode only, press only the **ENTER** key to perform the same function.

In **MODIFY** mode, press only the **ENTER** key to skip to the next step containing valid data.

> *NOTE:*
> *The DISPLAY ACCESS CODE function (Section 9) will not operate properly if Telephone Number 1 is not valid.*

CENTRAL STATION FORMAT

P-9 RESPONSE:

```
CNTRL STA FORMAT
PHX: SESCOA STD?
```

VALID ENTRY:

Press ↑ or ↓ to change,
ENTER *to select.*

NOTE: "X" = the current telephone number

PURPOSE:

Allows selection of different central station formats for the current telephone number.

OPERATOR RESPONSE:

Press the up or down arrows to view the possible selections. The four formats available are:

SESCOA STANDARD
SESCOA FAST (SESCOA Super Speed)
RADIONICS HEX
SEIA (not supported at this time)

Press **ENTER** when the desired format is displayed.

P-9 RESPONSE: **VALID ENTRY:**

Valid account number for the selected central station format.

NOTE: "X" = the current telephone number

PURPOSE:

Allows entry of the communicator account number for the current telephone number.

OPERATOR RESPONSE:

Enter the desired account number. Each telephone number can have a different account number. The account numbers available for each format are:

SESCOA Standard	000 through 999.
SESCOA Super Speed	0000 through 3374.
Radionics Hex	000 through FFE, except the combinations BBB, CCC, DDD, and EEE. The character "A" cannot be used.

Table 11-1. Valid Account Numbers

If the account number entered is too long for the central station format selected, the following error message will be displayed:

The P-9 will automatically re-issue the prompt for the account number after a short delay.

11.10 TELEPHONE NUMBER 8A STEP: 10

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

Up to 15 digits or special characters.

PURPOSE:

For entering the first part of Telephone Number 8.

This telephone number can be up to 28 digits in length. The first 15 digits are entered as Telephone Number 8A. Any remaining digits are entered in Telephone Number 8B. Telephone Number 8 is normally used for long distance telephone systems that require an extra access code or account numbers.

Telephone Number 8B need not be used, but anything entered is added to the end of Telephone Number 8A, replacing any unused spaces.

OPERATOR RESPONSE:

This telephone number can contain a total of 15 digits and special characters. Enter the central station number using the digits **0** through **9**, and any of the following special characters:

- **S** to insert a 3-second delay
- **L** to insert a 6-second delay
- **D** to search for an additional dial tone
- **#** valid for DTMF dialing only
- ***** valid for DTMF dialing only

Type **SK**, then **ENTER** to skip the remaining telephone number and go directly to step 11.12 In **CREATE** mode only, press only the **ENTER** key to perform the same function.

In **MODIFY** mode, press only the **ENTER** key to skip to the next step containing valid data.

11.11 TELEPHONE NUMBER 8B STEP: 11

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

ENTER PHONE #8B:	*Up to 13 digits or special characters.*

PURPOSE:

Allows entry of any remaining digits of Telephone Number 8.

OPERATOR RESPONSE:

This telephone number can contain a total of 13 digits and special characters. Enter the central station number using the digits **0** through **9**, and any of the following special characters:

- **S** to insert a 3-second delay
- **L** to insert a 6-second delay
- **D** to search for an additional dial tone
- **#** valid for DTMF dialing only
- ***** valid for DTMF dialing only

If no additional digits remain, press **ENTER**.

NOTE:
DO NOT ENTER **SK** *AT THIS TIME*

CENTRAL STATION FORMAT

P-9 RESPONSE:

```
CNTRL STA FORMAT
PH8: SESCOA STD?
```

VALID ENTRY:

Press ↑ or ↓ to change,
ENTER *to select.*

PURPOSE:

Allows selection of different central station formats for Telephone Number 8.

OPERATOR RESPONSE:

Press the up or down arrows to view the possible selections. The four formats available are:

SESCOA STANDARD
SESCOA FAST (SESCOA Super Speed)
RADIONICS HEX
SEIA (not supported at this time)

Press **ENTER** when the desired format is displayed.

P-9 RESPONSE:

VALID ENTRY:

Valid account number for the selected central station format.

PURPOSE:

Allows entry of the communicator account number for Telephone Number 8.

OPERATOR RESPONSE:

Enter the desired account number. Each telephone number can have a different account number. The account numbers available for each format are:

SESCOA Standard	000 through 999.
SESCOA Super Speed	0000 through 3374.
Radionics Hex	000 through FFE, except the combinations BBB, CCC, DDD, and EEE. The character "A" cannot be used.

Table 11-2. Valid Account Numbers

If the account number entered is too long for the central station format selected the following error message will be displayed:

The P-9 will automatically re-issue the prompt for the account number after a short delay.

11.12 DIALING OPTIONS STEP: 12

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
USE DTMF
DIALING? (Y/N)
```

Y or N

PURPOSE:

The 1900 can dial using either the pulse (rotary) or DTMF (Touch Tone®) dialing method. This question applies to all eight telephone numbers.

OPERATOR RESPONSE:

Answer according to the requirements of the telephone system being used.

Enter "Y" to select tone dialing. Go to 11.12.1

Enter "N" to select pulse dialing. Go to 11.12.2

Touch-Tone® is a registered trademark of AT&T.

11.12.1 DTMF RATE SELECTION

P-9 RESPONSE:

```
DTMF FAST RATE
DIALING? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

The 1900 is capable of dialing DTMF using two different rates. The fast rate uses a 60 millisecond tone/60 millisecond space. The slow rate uses a 120 millisecond tone/120 millisecond space.

OPERATOR RESPONSE:

Enter "Y" for fast DTMF dialing, or "N" for slow DTMF dialing.

Go to 11.13

11.12.2 PULSE DIAL RATIO SELECTION

P-9 RESPONSE:

```
AMERICAN DIAL
RATIO? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

When pulse dialing, the 1900 can be programmed to use the break/make ratio of 60/40 used in the United States, or the 67/33 ratio used in some foreign countries.

OPERATOR RESPONSE:

Answer according to the ratio required by the telephone system being used.

Enter "Y" for American 60/40 dial ratio or "N" for 67/33 dial ratio.

11.13 GROUND START OPTION STEP: 13

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
IS GROUND START
REQUIRED? (Y/N)
```

Y or N

PURPOSE:

With some systems, one of the two telephone line conductors (Ring) must be grounded in order to establish dial tone.

OPERATOR RESPONSE:

Answer according to the requirements of the telephone system being used.

Enter "Y" for ground start, or "N" for standard loop start.

> *NOTE:*
> *This question should only be answered "Y" if the 1900 is equipped with a telephone line monitor/ground start module (Models 933, 934, or 936).*

11.14 CALL TRIES STEP: 14

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

ENTER NUMBER OF CALL TRIES:	*1 to 15*

PURPOSE:

To select the number of times the 1900 will dial the central station in an attempt to transmit a message.

If transmission is not successful within the specified number of tries, the 1900 will repeat the calling sequence at a later time if sleep cycles are programmed (see Section 11.15), otherwise, the event will be discarded.

> *NOTES:*
> *All events are logged in the 1900's activity buffer regardless of transmission success.*
>
> *The number of attempts is applied to all events and all telephone numbers.*

OPERATOR RESPONSE:

Enter a number from 1 to 15.

> *CAUTION:*
> *When programming the number of call tries, it is important to remember that each unsuccessful attempt requires approximately 45 to 50 seconds to complete, during which time the telephone lines are seized by the communicator and cannot be used for any other purpose.*

11.15 SLEEP CYCLES STEP: 15

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER SLEEP
CYCLES(0-14):
```

0 to 14

PURPOSE:

After exhausting all programmed attempts to complete a call to a central station, the 1900 can be programmed to either "sleep" or to cancel further attempts. If sleep cycles are programmed, the 1900 will wait the specified length of time, then "wake-up" and begin the calling sequence, including retries, again. See steps 11.14 and 11.16 for related subjects.

> *NOTE:*
> *The number of sleep cycles applies to all events and all telephone numbers.*

OPERATOR RESPONSE:

Enter a number from 0 to 14.

If entry is 0, go to 11.17

11.16 SLEEP CYCLE DURATION STEP: 16

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is only asked if sleep cycles were selected in the previous step.*

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER SLEEP TIME (MIN):	*1 to 999*

PURPOSE:

Sets the duration of a sleep cycle (see 11.15). This time is specified in minutes: the minimum time is 1 minute, the maximum is 999 minutes, (16 hours and 39 minutes). The shortest practical sleep cycle time is about 5 minutes. See steps 11.14 and 11.15 for related subjects.

> *NOTE:*
> *The length of a sleep cycle applies to all events and all telephone numbers.*

OPERATOR RESPONSE:

Enter a number from 1 to 999.

11.17 SUPERVISORY REPORTS ENABLE STEP: 17

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

SUPERVISORY REPORTS? (Y/N)	*Y or N*

PURPOSE:

Supervisory events report activity which may control or affect the manner in which the system operates, or are not related to activity on any one specific loop.

Most of these events can be enabled or disabled separately, but to generate any supervisory report, they must be enabled at this time.

The supervisory reports are:

OPEN/CLOSE
OPEN/CLOSE OUT OF WINDOW
FAIL TO OPEN/CLOSE
OPEN/CLOSE OUT OF WINDOW WITH ID
OPEN/CLOSE WITH ID
DURESS
LOW BATTERY
POWER RESTORAL
NO BATTERY
AC FAIL/RESTORAL
TELEPHONE LINE FAIL/RESTORAL
24 HOUR CHECK-IN
BELL TROUBLE/RESTORAL
TEST/CANCEL

OPERATOR RESPONSE:

Enter "Y" to enable communicator supervisory reports.
Enter "N" to disable communicator supervisory reports. Go to 11.25

TELEPHONE NUMBER OVERVIEW

There are three questions associated with programming telephone numbers:

PRIMARY TELEPHONE NUMBER
SECONDARY TELEPHONE NUMBER
SECONDARY TELEPHONE MODE

The following is a brief overview of the way in which the 1900 uses the answers to these questions when reporting events:

In programming telephone numbers, Numbers 1 through 8 refer to the numbers entered in Steps 11.3 through 11.11

The primary is the first number which will be called for any report; the secondary will be called as either a back-up (only if the primary can not be reached), or in addition to the primary number.

The secondary telephone mode determines the manner in which the secondary telephone number is treated.

- When reporting to **both** numbers, the primary and secondary numbers are called until the event is reported to both. If one call is completed, only the uncompleted call will continue to be attempted. If necessary, all programmed tries and sleep cycles will be attempted.

- When reporting in the "backup" mode, the primary and secondary numbers are called until the event is reported to the first available central station. If necessary, all programmed tries and sleep cycles will be attempted.

When reporting, the 1900 uses two different strategies depending on the number of call "tries" programmed. If the number of call tries programmed is 4 or greater, the primary number is called the first three times. Thereafter, calls are placed alternately to the secondary and primary until the event is either reported to one of the numbers, or all programmed tries and sleep cycles have been completed.

If the number of call tries programmed is 2, or 3, the 1900 will simply alternate between calling the primary and secondary numbers. In this situation, the primary may be called twice whereas the secondary will only be called once.

NOTE:
From the above description, it may already be apparent that the 1900 gives preference to the primary telephone number. If not, consider the following example where four tries are programmed:

CALL	*NUMBER*
1	Primary
2	Primary
3	Primary
4	Secondary

Use care and consideration when programming the number of call tries.

11.18 PRIMARY SUPERVISORY TELEPHONE NUMBER — STEP: 18

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
ENTER PRIMARY
SUPRV PHONE #:
```

VALID ENTRY:

From 1 to 8

PURPOSE:

The primary is the first number which will be called for any supervisory report. Telephone Numbers 1 through 8 refer to the numbers entered in Sections 11.3 through 11.11

OPERATOR RESPONSE:

Enter 1 through 8 only. The P-9 will not allow the selection of a telephone number which has not been programmed.

11.19 SECONDARY SUPERVISORY TELEPHONE NUMBER — STEP: 19

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
ENTER SECONDARY
SUPRV PHONE #:
```

VALID ENTRY:

From 1 to 8

PURPOSE:

The secondary is the number which will be called as either a back-up (called if the primary can not be reached), or in addition to the primary number for any supervisory report. Telephone Numbers 1 through 8 refer to the numbers entered in Sections 11.3 through 11.11

OPERATOR RESPONSE:

Enter 1 through 8 only. The P-9 will not allow the selection of a telephone number which has not been programmed.

> *NOTE:*
> *If reporting to only one telephone number is desired, the primary and secondary telephone numbers should be the same and the "backup" reporting mode should be selected.*

11.20 SUPERVISORY SECONDARY TELEPHONE MODE — STEP: 20

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: | **VALID ENTRY:**

```
REPORT TO BOTH
NUMBERS? (Y/N)
```

Y or N

PURPOSE:

The secondary telephone mode for supervisory reports determines the manner in which the supervisory secondary telephone number is treated.

If the 1900 is programmed to report to both numbers, it will alternately call the primary and secondary numbers, and report the event to both. If necessary, it will continue to try either or both numbers until it succeeds in reporting to both, or exhausts all allowed tries and sleep cycles.

If not programmed to both numbers, the 1900 will first call the primary number. If unable to report, the 1900 will call the secondary number. Refer to the telephone number overview on the previous pages for specific calling strategy details.

OPERATOR RESPONSE:

Enter "Y" to report to both numbers, or "N" to select the "backup" reporting mode.

11.21 TELEPHONE LINE 1 MONITORING STEP: 21
11.22 TELEPHONE LINE 2 MONITORING STEP: 22

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

MONITOR PHONE LINE X? (Y/N)	*Y or N*

NOTE: "X" = 1 or 2

PURPOSE:

To select whether the indicated telephone line on the 1900 is to be monitored.

If the telephone line voltage falls below 2.0 Volts for 30 seconds, a "PHONE LINE FAIL" message will be sent to the central station. When the telephone line maintains a voltage greater than 2.0 Volts for 30 seconds after having failed, a "PHONE LINE RESTORAL" message will be sent to the central station.

If telephone line monitoring is selected for one or both lines, and a silent alarm is triggered, and the 1900 has detected defective telephone line(s) (no possible way to communicate with the central station), the 1900 will sound a constant 4-minute alarm.

Telephone Line Reports are not available with the Radionics Hex format. To generate telephone line reports, either SESCOA Standard or SESCOA Super Speed must be selected as the communications format for the telephone numbers used for supervisory events.

See next page for operator response.

OPERATOR RESPONSE:

Enter "Y" to enable Telephone Line 1 monitoring only if the 1900 is equipped with a Telephone Line Monitor Module (Models 931-934 or 936).

Enter "Y" to enable Telephone Line 2 monitoring only if the 1900 is equipped with a Dual Telephone Line Monitor Module (Models 932 or 934).

Enter "N" if telephone line monitoring is not required.

11.23 TELEPHONE LINE FAILURE CODE STEP: 23

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if telephone line monitoring is enabled and SESCOA Standard has been selected as a one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER PHONE LINE
FAILURE CODE:
```

0 to 9

PURPOSE:

The SESCOA standard format does not use a pre-defined code to identify a telephone line failure. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.24 TELEPHONE LINE RESTORAL CODE STEP: 24

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if telephone line monitoring is enabled and SESCOA Standard has been selected as a one of the communications formats.*

P-9 RESPONSE:	VALID ENTRY:
ENTER PHONE LINE RESTORAL CODE:	*0 to 9*

PURPOSE:

The SESCOA standard format does not use a pre-defined code to identify a telephone line restoral. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.25 COMBINATION ENTRY TIME STEP: 25

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
ENTER COMBIN
ENTRY TIME:
```

VALID ENTRY:

10 to 60

PURPOSE:

To specify the amount of time that the 1900 will allow for entry of the complete arm/disarm combination.

Some open/close options require the entry of up to eight digits, therefore care must be exercised so as not to allow too little time. The 1900 begins timing combination entry when any key is pressed on a digital keypad. If the complete combination is not entered within the allowed time, the 1900 will resume scanning for the first digit of either Combination One or Combination Two.

> *NOTE:*
> *In 1900 Version 3.3 and later, the combination entry time also applies to the entry of keypad commands. If entry of the entire command (two-key sequence) is not completed within the specified time, the 1900 will resume scanning for the first digit of Combination One or Combination Two.*

OPERATOR RESPONSE:

Combination entry time is specified in seconds. Enter a number from 10 to 60.

ARM/DISARM OVERVIEW

The 1900 supports two independent four-digit Arm/Disarm combinations. In addition, an open/close reporting option may be programmed for each.

OPEN/CLOSE WINDOWS

The 1900 Supports one set of windows for Combination One, and another for Combination Two. Windows can be programmed for any day(s) of the week.

A window is a period of time during which the system is expected to be armed or disarmed. Opening or closing reports are sent only if the system is armed or disarmed outside the programmed time window:

- An "OPENING OUT OF WINDOW" message is sent when the system is disarmed outside of a window. If I.D.'s are required, an "OPEN OUT OF WINDOW BY ID#" message is sent instead.

  A "FAIL TO OPEN" message is sent if the system is in the ARMED state at the end of the window period.

- A "CLOSING OUT OF WINDOW" message is sent when the system is armed outside of a window. If I.D.'s are required, an "CLOSE OUT OF WINDOW BY ID#" message is sent instead.

  A "FAIL TO CLOSE" message is sent if the system is in the DISARMED state at the end of the window period.

The following limitations apply when sending opening and closing information in the Radionics Hex format:

MESSAGE:	LIMITATION:
FAIL TO OPEN	Cannot be sent
FAIL TO CLOSE	Cannot be sent
OPEN OUT OF WINDOW	Sent as "OPEN"
CLOSE OUT OF WINDOW	Sent as "CLOSE"
OPEN OUT OF WINDOW BY ID	Sent as "OPEN BY ID"
CLOSE OUT OF WINDOW BY ID	Sent as "CLOSE BY ID"

Table 11-3. Radionics Hex Format Limitations

PERSONNEL IDENTIFICATION NUMBERS (I.D.'S)

Several open/close options require the use of I.D.'s. These are used to identify who is "opening" or "closing" the security system. I.D.'s are three digits in length, and are entered at the system keypad following the normal four-digit combination. The 1900 will store up to 40 I.D. numbers.

ON-PREMISES TIMER

Two open/close options provide for the use of an On-Premises Timer. When the user disarms the system outside of an opening time window, he will be required to enter the four-digit combination, his three-digit personnel I.D., and a digit from 1 to 9. This last digit indicates the number of hours that the user plans to remain on the premises.

If the system is not re-armed within the specified length of time, an "OPEN OUT OF WINDOW BY ID#" message, followed by a "FAIL TO CLOSE" message will be sent to the central station. When the system is subsequently armed, a "CLOSE OUT OF WINDOW BY ID#" message will be sent.

FORCED CLOSING REPORTS

With all open/close reporting options, disabled areas will be reported if a closing report is sent when the system is armed. The appropriate closing message will be sent, followed by an alarm message for each disabled area. After the last alarm message, another closing message will be sent to bracket the disabled areas.

ACTIVITY LOGGING

Each time the system is armed or disarmed, the event will be stored in the system activity buffer, regardless of the open/close reporting option selected. If the option requires the use of I.D.'s the I.D. will be stored along with the arm/disarm event.

ARM/DISARM OVERVIEW (CONT.)

O/C option	I.D's	Windows	On premises timer	Notes
A				No opening reports. Closing report only if area(s) out.
B		✓		Standard open/close by window option.
C		✓		Area(s) out will force a closing report.
D				After each alarm, only the next opening and closing will be reported.
E				Standard open/close option. Open/close report sent on every disarm/arm.
F	✓	✓	✓	No report when disarmed out of window. No reports if the 1900 is re-armed before on-premises timer expires.
G	✓	✓	✓	Always reports when disarmed out of window. Reports "CLOSING BY ID#" if re-armed before on-premises timer expires.
H	✓			Standard open/close by I.D. option. Open/close by I.D. report sent on every disarm/arm.
I	✓	✓		
J	✓			Activity logging only, no reports.

Table 11-4. Open/Close Options

11.26 COMBINATION ONE — STEP: 26
11.29 COMBINATION TWO — STEP: 29

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
ENTER XXX
COMBINATION:
```

VALID ENTRY:

0000 to 9999

PURPOSE:

To enter arm/disarm Combination One or Two.

OPERATOR RESPONSE:

Either combination may be disabled by pressing only the **ENTER** key while in the CREATE mode only. Once programmed, a combination cannot be disabled.

Enter a four-digit number from 0000 to 9999.

COMBINATION ONE ONLY:

Even if Combination One is disabled, it will be possible to generate Open/Close reports using the keyswitch. Go to 11.27 and continue.

COMBINATION TWO ONLY:

If Combination Two is disabled and Combination One is enabled, go to 11.32 and continue.

If both combinations have been disabled, go to 11.36

See next page.

When in the MODIFY mode, if the last digit of either combination is the same as the duress digit, the following error message will be displayed:

```
CONFLICT WITH
DURESS DIGIT
```

This conflict can be cleared in one of two ways:

1. Choose a different last digit for the combination.
2. Change the duress digit to a different number, then return and change the conflicting combination.

OPEN AND CLOSE REPORTS:

11.27 COMBINATION ONE STEP: 27

11.30 COMBINATION TWO STEP: 30

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *In order to send open or close reports, telecommunications and supervisory reports must be enabled.*

P-9 RESPONSE: **VALID ENTRY:**

```
OPEN OR CLOSE
REPORTS? (Y/N)
```

Y or N

PURPOSE:

To select whether or not opening or closing reports generated by the current combination should be sent to the central station.

> *NOTE:*
> *The keyswitch input and keypad two-key arming commands assume the attributes of Combination One.*

OPERATOR RESPONSE:

Enter "Y" to enable opening and closing reports for the current combination.

Enter "N" to disable opening or closing reports for the current combination.

If programming Combination One, go to 11.29

If programming Combination Two, go to 11.32

OPEN/CLOSE OPTIONS:

11.28 COMBINATION ONE **STEP: 28**

11.31 COMBINATION TWO **STEP: 31**

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER REPORTING
OPTION (A-J):
```

A to J

PURPOSE:

To select the appropriate open/close reporting option for the current combination.

OPERATOR RESPONSE:

Enter "A" through "J" only. Combination One and Two can have the same open/close option if desired. Go to the section indicated in the table below:

If the Selected Option is:	If the Current combination is:	
	Combination One	Combination Two
A	Go to 11.29	Go to 11.32
B	Go to 11.28.1	Go to 11.31.1
C	Go to 11.28.1	Go to 11.31.1
D	Go to 11.29	Go to 11.32
E	Go to 11.29	Go to 11.32
F	Go to 11.28.1	Go to 11.31.1
G	Go to 11.28.1	Go to 11.31.1
H	Go to 11.28.2	Go to 11.31.2
I	Go to 11.28.1	Go to 11.31.1
J	Go to 11.29	Go to 11.32

Table 11-5. Open/Close Options

OPEN/CLOSE SCHEDULE:
11.28.1 COMBINATION ONE
11.31.1 COMBINATION TWO

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question will be asked only if an Open/Close option using windows (B, C, F, G, or I) has been selected.*

P-9 RESPONSE:

```
ENTER OP/CL SCH:
S M T W T F S
```

VALID ENTRY:

See selection process below.

PURPOSE:

To schedule the day(s) of the week that open/close windows for the current combination will be active.

OPERATOR RESPONSE:

To enable window operation for a particular day of the week, position the cursor under the desired day by using the → key, then press any one of the alphabetic keys. The day will change from a letter to a number corresponding with that day of the week (Sunday = 1, Monday = 2, etc).

To disable window operation for a particular day of the week, position the cursor to the right of the desired day, and press the ← key. The day will change back to a letter corresponding to that day of the week.

When all selections have been made, press **ENTER**.

OPEN WINDOW START TIME:
11.28.1 COMBINATION ONE
11.31.1 COMBINATION TWO

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE: This question will be asked only if an Open/Close option using windows (B, C, F, G, or I) has been selected.*

P-9 RESPONSE:

```
(OPEN WIN) ENTER
START: HH MM AM
```

VALID ENTRY:

See entry format below.

PURPOSE:

To establish the earliest time of day at which the 1900 may be disarmed using the current combination without causing an "opening" report to be sent to the central station.

OPERATOR RESPONSE:

The time may be entered in either the 12 or 24 hour format. Always separate the hours from the minutes (and the minutes from the AM or PM if applicable) with one space.

- If the time is entered in the 12 hour format, the times must be between 00:01 and 12:59 with either AM or PM specified.
- If the time is entered in the 24 hour format, the times must be between 00:00 to 23:59. AM or PM need not be specified.

OPEN WINDOW END TIME:
11.28.1 COMBINATION ONE
11.31.1 COMBINATION TWO

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question will be asked only if an Open/Close option using windows (B, C, F, G, or I) has been selected.*

P-9 RESPONSE:

```
(OPEN WIN) ENTER
END: HH MM AM
```

VALID ENTRY:

See entry format below.

PURPOSE:

To establish the latest time of day at which the 1900 may be disarmed using the current combination without causing an "opening" report to be sent to the central station.

OPERATOR RESPONSE:

The time may be entered in either the 12 or 24 hour format. Always separate the hours from the minutes (and the minutes from the AM or PM if applicable) with one space.

- If the time is entered in the 12 hour format, the times must be between 00:01 and 12:59 with either AM or PM specified.
- If the time is entered in the 24 hour format, the time must be from 00:00 to 23:59. AM or PM need not be specified.

CLOSE WINDOW START TIME:
11.28.1 COMBINATION ONE
11.31.1 COMBINATION TWO

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question will be asked only if an Open/Close option using windows (B, C, F, G, or I) has been selected.*

P-9 RESPONSE:

```
(CLOSE WIN)ENTER
START: HH MM AM
```

VALID ENTRY:

See entry format below.

PURPOSE:

To establish the earliest time of day at which the 1900 may be armed using the current combination without causing a "closing" report to be sent to the central station.

> *Exception:*
> *Option "C" will always transmit forced closing messages.*

OPERATOR RESPONSE:

The time may be entered in either the 12 or 24 hour format. Always separate the hours from the minutes (and the minutes from the AM or PM if applicable) with one space.

- If the time is entered in the 12 hour format, the times must be between 00:01 and 12:59 with either AM or PM specified.
- If the time is entered in the 24 hour format, the time must be from 00:00 to 23:59. AM or PM need not be specified.

CLOSE WINDOW END TIME:
11.28.1 COMBINATION ONE
11.31.1 COMBINATION TWO

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question will be asked only if an Open/Close option using windows (B, C, F, G, or I) has been selected.*

P-9 RESPONSE:

```
(CLOSE WIN)ENTER
END: HH MM AM
```

VALID ENTRY:

See entry format below.

PURPOSE:

To establish the latest time of day at which the 1900 may be armed using the current combination without causing a "closing" report to be sent to the central station.

> *Exception:*
> *Option "C" will always transmit forced closing messages.*

See next page for operator response.

CLOSE WINDOW END TIME (CONT.):
11.28.1 COMBINATION ONE
11.31.1 COMBINATION TWO

OPERATOR RESPONSE:

The time may be entered in either the 12 or 24 hour format. Always separate the hours from the minutes (and the minutes from the AM or PM if applicable) with one space.

- If the time is entered in the 12 hour format, the times must be between 00:01 and 12:59 with either AM or PM specified.

- If the time is entered in the 24 hour format, the time must be from 00:00 to 23:59. AM or PM need not be specified.

If programming Options "B" or "C" for Combination One, go to 11.29

If programming Options "B" or "C" for Combination Two, go to 11.32

PERSONNEL I.D.'S
11.28.2 COMBINATION ONE
11.31.2 COMBINATION TWO

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question will be asked only if an Open/Close option with I.D.'S (F, G, H, I, or J) has been selected.*

P-9 RESPONSE: **VALID ENTRY:**

ENTER PERSONNEL I.D. #NN: XXX

See entry format below

NOTE: NN=I.D. NUMBER (1-40)
XXX=USER SUPPLIED I.D.)

PURPOSE:

To enter or modify one or more of the 40 possible Personnel I.D. codes.

The 1900 maintains these codes in a "pool", allowing any I.D. to be used with either Combination One or Combination Two.

OPERATOR RESPONSE:

I.D. numbers are composed of a three-digit number from 000 to 999, and do not have to entered in any particular order.

See next page.

PERSONNEL I.D.'S (CONT.)
11.28.2 COMBINATION ONE
11.31.2 COMBINATION TWO

IN CREATE MODE ONLY:

The P-9 will remember how many I.D.'s have been previously entered no matter how many times this step has been executed, so that the I.D. number displayed is always the next available number that can be entered, up to the maximum of 40.

Enter from one to three digits followed by the **ENTER** key. If less than three digits are entered, the P-9 will automatically insert any leading zeros.

When all desired entries have been made, enter "**SK**" and press the **ENTER** key to continue with the next question. If programming Combination One, go to 11.29

IN MODIFY MODE ONLY:

The P-9 will always begin at I.D. number one. The user can examine all entries in the I.D. list by scrolling in either direction. To examine the previous I.D. number (scroll down), press the ↓ key, then press the **ENTER** key. To examine the next I.D. number (scroll up), press the **ENTER** key.

- To add a new entry, locate the next available entry in the list by scrolling down until the displayed I.D. number is "XXX", then enter from one to three digits, followed by the **ENTER** key. If less than three digits are entered, the P-9 will automatically insert any leading zeros.

- To delete an entry, scroll through the list until the I.D. number to be deleted is displayed. Enter from one to three "X" characters, followed by the **ENTER** key. The entry will be deleted, and all following entries in the list will be moved up to fill the gap.

When all desired changes have been made, enter "**SK**" and press the **ENTER** key to continue with the next question. If programming Combination One, go to 11.29

11.32 DURESS DIGIT STEP: 32

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question will be asked only if either Combination 1 or Combination 2 has been entered.*

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER DURESS DIGIT (0-9):	*0 to 9*

PURPOSE:

This digit may be entered in lieu of the fourth digit of Combination One or Combination Two. If this is done, a "DURESS" message (similar to "PANIC") will be sent to the central station. The 1900 will arm or disarm, which ever is appropriate, and transmit the message. The 1900 and its entry stations will not create any unusual displays or act in and way to arouse suspicion of a "would be" assailant.

> *NOTE:*
> *If the combination entered normally requires the entry of a user ID, the entry of the ID will not be required. The 1900 will arm or disarm immediately on detection of the duress digit. The intent is to start transmission of the duress message as soon as possible since the user may be in a very tense situation.*

See next page for operator response.

OPERATOR RESPONSE:

The duress digit must be in the range of 0 to 9 and cannot be the same as the last digit of Combination One or Combination Two.

Enter a number from 0 to 9.

If the duress digit is the same as the last digit of either combination, the following error message will be displayed:

```
CONFLICT WITH
COMBINATION
```

This conflict can be cleared in one of two ways:

1. Choose a different duress digit.
2. Change the last digit of the conflicting combination, then return to select the duress digit.

NOTE:
To reduce the possibility of accidental trigger. Select a duress digit that is physically the farthest away from the third and fourth digits of Combination One and Two.

11.33 DURESS CODE STEP: 33

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if SESCOA Standard or Radionics Hex have been selected as one of the communications formats.*

P-9 RESPONSE:	VALID ENTRY:
ENTER DURESS CODE:	*0 to 9, or F*

PURPOSE:

The SESCOA Standard and Radionics Hex formats do not use a pre-defined code to identify duress. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

If only Radionics Hex is programmed, the character "F" may also be selected.

11.34 TWO KEY ARMING STEP: 34

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 3.0 and later

P-9 RESPONSE: **VALID ENTRY:**

```
DISABLE 2 KEY
ARMING? (Y/N)
```

Y or N

PURPOSE:

To select whether or not two-key arming (keypad Commands 1, 2, and 3) should be disabled.

Some installations require that the keypad be located in an area that is accessible to the public and is therefore vulnerable to tampering. It would be disastrous for someone to be able to arm the 1900 while the premises are occupied.

In addition, it is normally desirable to disable two-key arming when an open/close option involving I.D.'s has been selected to prevent system arming by unidentified persons.

OPERATOR RESPONSE:

Enter "Y" to disable or "N" to retain the two-key arming capability.

11.35 TWO KEY PANIC STEP: 35

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1900 CONTROL/COMMUNICATOR:
Version 3.3 and later

P-9 RESPONSE: **VALID ENTRY:**

```
ENABLE 2 KEY
PANIC? (Y/N)
```

Y or N

PURPOSE:

To select whether or not the two-key PANIC feature (keypad Command 6) should be enabled.

Some installations require that the keypad be located in an area that is accessible to the public and is therefore vulnerable to tampering. It would be disastrous if someone triggered a PANIC communication if in fact there was no real emergency.

OPERATOR RESPONSE:

Enter "Y" to enable two-key panic.

Enter "N" to disable two-key panic. Go to 11.36

P-9 RESPONSE:

```
TIE 2 KEY PANIC
TO AREA? (1-8)
```

VALID ENTRY:

1 to 8

PURPOSE:

If the two-key panic feature has been enabled, it must be linked to one of the eight hardwired protective areas. This will allow the panic feature, which is activated via the keypad, to use the alarm code and audible alarm attributes of the selected area.

EXAMPLE 1:

The two-key panic feature is enabled and linked to area 5 which is programmed for an 8 minute constant alarm. When the panic feature is activated, the audible alarm will sound constantly for 8 minutes and the alarm code programmed to area 5 will be sent to the central station.

EXAMPLE 2:

The two-key panic feature is enabled and linked to area 8 which is programmed for no audible alarm. When the panic feature is activated, the audible alarm will not sound. The alarm code programmed to area 8 will however, be sent to the central station.

NOTE:
The two-key panic feature, if enabled, may be activated at any time even though the associated area may not be of the "24-hour" type.

OPERATOR RESPONSE:

Enter a number 1 through 8 to correspond with the protective area.

11.36 OPENING (DISARM) CODE STEP: 36

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if Open/Close reports have been enabled (Sections 11.27 or 11.30) and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER OPEN
(DISARM) CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not define a code to identify an opening (system disarm). The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.37 CLOSING (ARM) CODE STEP: 37

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if Open/Close reports have been enabled (Sections 11.27 or 11.30) and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER CLOSE
(ARM) CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not define a code to identify a closing (system arm). The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.38 FAILURE TO OPEN CODE STEP: 38

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if an open/close option using windows has been selected and SESCOA Standard has been selected as a one of the communications formats.*

P-9 RESPONSE: VALID ENTRY:

ENTER FAILURE TO OPEN CODE:	*0 to 9*

PURPOSE:

The SESCOA Standard format does not define a code to identify a failure to open condition. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.39 FAILURE TO CLOSE CODE STEP: 39

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if an open/close option using windows has been selected and SESCOA Standard has been selected as a one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER FAILURE TO
CLOSE CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not define a code to identify a failure to close condition. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.40 OPEN OUT OF WINDOW CODE STEP: 40

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if an open/close option using windows has been selected and SESCOA Standard has been selected as a one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER OPEN-OUT-
OF-WINDO CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not define a code to identify an open-out-of-window condition. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.41 CLOSE OUT OF WINDOW CODE STEP: 41

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if an open/close option using windows has been selected and SESCOA Standard has been selected as a one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER CLOSE-OUT-
OF-WINDO CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not define a code to identify a close-out-of-window condition. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.42 24 HOUR CHECK-IN REPORTS STEP: 42

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
IS 24HR CHECK-IN REQUIRED? (Y/N)	*Y or N*

PURPOSE:

To select whether or not 24 hour check-in reports will be sent to the central station.

Some alarm system installations require communication with the central station to periodically verify the system's integrity. To satisfy this requirement, the 1900 is capable of sending a "check-in" report to the central station once every 24 hours. Since some 1900 installations will have a guaranteed amount of daily communication traffic (open/close reports for example), 24 hour check-in may not be required every day. To accommodate this situation, 24 hour check-in reports may be scheduled for as many or as few days of the week as desired.

Depending on the format selected for supervisory reports, the 24 hour check-in report may take different forms:

SESCOA Standard:
Programmed 24 hour check-in code (0-9)

SESCOA Super Speed:
Pre-defined 24 hour check-in code.

Radionics Hex:
Restoral of code "E".

OPERATOR RESPONSE:

Enter "Y" to enable the 24 hour check-in or "N" to disable the 24 hour check-in. Go to 11.46

11.43 24 HOUR CHECK-IN DAYS STEP: 43

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

See selection process below.

PURPOSE:

If 24 hour check-in has been enabled, the day(s) of the week that check-in reports will be sent must be programmed. 24 hour check-in may be scheduled for any day(s) of the week.

OPERATOR RESPONSE:

To select a day for check-in, position the cursor under the desired day by using the → key, then press any one of the alphabetic keys. The day will change from a letter to a number corresponding with that day of the week (Sunday = 1, Monday = 2, etc.).

To disable check-in for a particular day of the week, position the cursor to the right of the desired day, and press the ← key. The day will change back to a letter corresponding to that day of the week.

When all selections are made, press **ENTER**.

11.44 24 HOUR CHECK-IN TIME STEP: 44

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER CHECK-IN
TIME: HH MM AM
```

See entry format below.

PURPOSE:

Since the 1900 has a real-time clock, it is possible to specify the exact time of day that the 24 hour check-in message will be sent.

OPERATOR RESPONSE:

The time may be entered in either the 12 or 24 hour format. Separate the hours from minutes, and minutes from AM/PM with a space. If the 12 hour format is used, the times must be between 00:01 and 12:59 with AM or PM specified.

If the 24 hour format is used, the time must range from 00:00 to 23:59. Separate the hours from minutes with a space. AM or PM need not be specified.

11.45 24 HOUR CHECK-IN CODE STEP: 45

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if 24 hour check-in has been enabled, and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER CHECK-IN
CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not use a pre- defined code to identify a 24 hour check-in. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
SEND TEST
CODE? (Y/N)
```

Y or N

PURPOSE:

To select whether or not a test code should be sent to the central station at the conclusion of a test sequence.

The 1900 has two test inputs. The first is the Test/Cancel key on the 914/915 Control Station. The other is the dedicated test input located directly on the 1900 circuit board. Both inputs provide identical capability when triggering test or cancel reports.

Test reports and cancel reports are identical in form and content. If a SESCOA central station receiver is used, each message will be received as a "test". If a Radionics central station is used, each message will be received as a "cancel". Therefore, the central station operator must interpret the messages received from a communicator on a given connect.

"Test" is defined as a solitary test or cancel message, or one **followed** by other messages on a connect. A test sequence will start when one of the test inputs is activated while the 1900 is idle (not communicating with a central station). The pre-alarm will sound for two seconds then the audible alarm will sound for one second. In addition, a test message will be sent to the central station programmed to receive **supervisory** events if **test** reports are enabled by this step.

See next page.

"Cancel" is defined as a test or cancel message which follows alarm messages and is also the last message of the connect. This results if one of the test inputs is activated **while the 1900 is attempting to communicate with the central station.** Since communication times can be quite short (as low as 25 seconds), the user must activate the test input as soon as possible if "cancel" is the intended function. **Cancel** reports are always enabled and will always be sent to the same central station to which the alarm message is sent.

OPERATOR RESPONSE:

Enter "Y" to send a "test/cancel" message whenever the input is activated, or "N" to send a "cancel" message only when on line with the central station.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER TEST/
CANCEL CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not define a code to identify a test or cancel. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.48 BATTERY REPORTS STEP: 48

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
ARE BATTERY RPTS
REQUIRED? (Y/N)
```

Y or N

PURPOSE:

To select whether or not battery reports should be sent to the central station.

The 1900 will send a "LOW BATTERY" message to the central station when the battery voltage falls below 10.8 volts.

When A.C. power returns, the normal battery charge voltage will be restored, causing a "POWER RESTORAL" message to be sent to the central station.

The 1900 performs a dynamic battery test any time the system is armed or disarmed, and during the 24-hour check-in.

A dynamic battery test involves the temporary reduction of the battery charge voltage. If the battery is able to sustain normal operation of the system, no report is sent to the central station. If the battery voltage falls below 10.8 Volts, a "NO BATTERY" report is sent to the central station.

See next page.

Depending on the communication format selected for supervisory reports, the "NO BATTERY" report may take different forms:

SESCOA Standard:
Programmed low battery code and programmed battery restoral code.

SESCOA Super Speed:
Pre-defined "NO BATTERY" code.

Radionics Hex:
Pre-defined power trouble code (9) and power restoral code.

OPERATOR RESPONSE:

Enter "Y" to enable battery reports.

If "N" is entered, battery reports will not be sent to the central station. They will, however, be logged in the 1900's Activity Buffer. Go to 11.51

11.49 LOW BATTERY CODE STEP: 49

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if battery reports have been enabled, and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER LOW
BATTERY CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify a low battery. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.50 BATTERY RESTORAL CODE STEP: 50

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if battery reports have been enabled, and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER BATTERY
RESTORAL CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify a battery restoral. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

A.C. MONITORING OVERVIEW

The A.C. power line is always monitored by the 1900. The 1900 uses an "up/down" counter to keep track of the amount of time that A.C. is present or absent. When the 1900 is powered up or reset, the counter is initialized with the programmed A.C. Fail Detect Time. As long as A.C. is present, the counter will not exceed this count.

- If A.C. fails, the counter begins counting down. If AC is not restored before the counter reaches zero, an "AC FAIL" event is placed in the activity buffer.

- When A.C. restores, the counter begins counting up. When the counter reaches the count specified by the A.C. Restoral Detect Time, an "AC RESTORAL" event is placed in the activity buffer.

> *NOTE:*
> *Since A.C. status changes are always logged in the activity buffer, it is very important that the A.C. Fail and Restoral Detect Times be programmed.*

If A.C. reports are enabled, the appropriate message will be sent to the central station.

During periods of time when AC power is "in and out", the counter will count up as long as power is present, and down if it is not.

> *NOTES:*
> *In order to qualify an A.C. failure, the counter must have been previously at or above the restoral detect time and must now be at zero. To qualify an A.C. restoral, the counter must have been previously at zero and must now be at the restoral detect time.*
>
> *The A.C. fail detect time must be equal to or greater than the A.C. restoral detect time. If this rule is violated, the 1900 will only be able to detect ONE A.C. failure and NO A.C. restorals.*

11.51 A.C. FAIL DETECT TIME STEP: 51

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER A.C. FAIL
DETECT TIME:
```

1 to 999

PURPOSE:

To select the length of time that a loss of A.C. power must exist before the change is recognized.

The delay time is entered in minutes. The A.C. Fail Detect Time must be equal to or greater than the A.C. Restoral Detect Time.

OPERATOR RESPONSE:

Enter a number from 1 to 999.

11.52 A.C. RESTORAL DETECT TIME STEP: 52

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER A.C. REST
DETECT TIME:
```

1 to 999

PURPOSE:

To select the length of time that a restoral of A.C. power must exist before the change is recognized.

The delay time is entered in minutes. The A.C. Restoral Detect Time must be equal to or less than the A.C. Fail Detect Time.

OPERATOR RESPONSE:

Enter a number from 1 to 999.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
ARE A.C. REPORTS
REQUIRED? (Y/N)
```

Y or N

PURPOSE:

To select whether or not A.C. status reports should be sent to the central station.

OPERATOR RESPONSE:

Enter "Y" to enable A.C. reports.

Enter "N" to disable A.C. reports. Go to 11.56

> *NOTE:*
> *Answering "N" will prevent A.C. reports from being sent to the central station. However, the loss and restoral of A.C. will still be logged in the 1900's Activity Buffer. It is therefore very important that the A.C. fail detect and A.C. restoral detect times be programmed.*

11.54 A.C. FAILURE CODE STEP: 54

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if AC reports are enabled, and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER A.C. FAILURE CODE:	*0 to 9*

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify A.C. fail. The event code to be used when sending these reports must be programmed.

> *NOTE:*
> *This code is not used by either the SESCOA Super Speed or Radionics Hex formats. SESCOA Super Speed uses a special pre- defined code. Radionics Hex reports A.C. fail as a "power fail" using code 9.*

OPERATOR RESPONSE:

Enter a number from 0 to 9.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if AC reports are enabled, and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER A.C.
RESTORAL CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify A.C. restoral. The event code to be used when sending these reports must be programmed.

> *NOTE:*
> *This code is not used by either the SESCOA Super Speed or Radionics Hex formats. SESCOA Super Speed uses a special pre-defined code. Radionics Hex reports A.C. restoral as a "power restoral" (restoral of code 9).*

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.56 ALARM CIRCUIT SUPERVISION STEP: 56

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

ALARM CIRCUIT SUPRV? (Y/N)	*Y or N*

PURPOSE:

To select whether or not supervision of the audible alarm circuit is desired.

In some high security installations it is desirable to monitor the integrity of the wiring to the audible alarm, especially if the alarm is mounted in a box external to the building.

If alarm circuit supervision is selected, and either of the two alarm wires are cut, the 1900 will detect the problem within 5 seconds and call the central station to report "BELL TROUBLE".

After the wiring has been restored for 5 seconds, the 1900 will call the central station to report "BELL RESTORAL".

> *NOTE:*
> *Alarm circuit reports are not available when using the Radionics Hex format.*

OPERATOR RESPONSE:

Enter "Y" to enable alarm circuit reports.

Enter "N" to disable alarm circuit reports. Go to 11.59

11.57 ALARM CIRCUIT TROUBLE CODE STEP: 57

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if alarm circuit reports are enabled, and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER ALARM CIRC
TROUBLE CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify audible alarm circuit trouble. The event code to be used when sending these reports must be programmed.

> *NOTE:*
> *The Radionics Hex format cannot send this message under any circumstance.*

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.58 ALARM CIRCUIT RESTORAL CODE STEP: 58

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if alarm circuit reports are enabled, and SESCOA Standard has been selected as one of the communications formats.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER ALARM CIRC
RESTORAL CODE:
```

0 to 9

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify audible alarm circuit restoral. The event code to be used when sending these reports must be programmed.

> *NOTE:*
> *The Radionics Hex format cannot send this message under any circumstance.*

OPERATOR RESPONSE:

Enter a number from 0 to 9.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.7 and later

1900 CONTROL/COMMUNICATOR:
Version 3.4 and later

P-9 RESPONSE: **VALID ENTRY:**

```
DISABLE ARM
INHIBIT? (Y/N)
```

Y or N

PURPOSE:

To permit arming with areas in the fault or trouble state.

With arm inhibit enabled, the 1900 will not allow arming if any non-fire area is in the fault or trouble state.

With arm inhibit disabled, the 1900 will automatically disable any non-fire area that is in the fault or trouble state when instructed to arm. This is commonly referred to as an "auto zone-out" feature.

OPERATOR RESPONSE:

Enter "Y" to invoke the "auto zone-out" mode of operation.

Enter "N" to invoke the "arm inhibit" mode of operation.

If the "Arm Inhibit" mode is selected, the AREA OUT command (Section 8.13) can be used to disable problem areas prior to arming.

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1900 CONTROL/COMMUNICATOR:
Version 3.2 and later

P-9 RESPONSE: **VALID ENTRY:**

```
MODEL 936
PRESENT? (Y/N)
```

Y or N

PURPOSE:

To determine if a Model 936, 936A, or 936B communications expansion module has been installed on the 1900.

OPERATOR RESPONSE:

Enter "Y" if a Model 936, 936A, or 936B is installed.

Enter "N" if a Model 936, 936A, or 936B is not installed. Go to 11.61

> *NOTE:*
> *If Models 931-934 are installed, this question must be answered "N".*

11.60 MODEL 936: AREA TRIGGER MODE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.6 and later

1900 CONTROL/COMMUNICATOR:
Version 3.2 and later

> *NOTE:*
> *This question will only be asked if the P-9 operator has indicated that a Model 936/936A is present.*

P-9 RESPONSE: **VALID ENTRY:**

```
AREA TRIGGERS AS
BACKUP? (Y/N)
```

Y or N

PURPOSE:

If a Model 936/936A is present, the operational mode of the Area Triggers must be specified. The Area Triggers may operate as follows:

FLOWTHROUGH MODE:
Each area trigger output follows the state of its associated hardwired area. If an area is in a faulted condition, the output is high (+12V). If the area is not in a faulted condition, the output is open- circuited. This mode is also referred to as "redundant".

BACKUP MODE:
Each area trigger output only goes high if its associated hardwired area has been in a faulted condition and the 1900 has been unsuccessful at reporting the alarm. When the 1900 has made all of the programmed "call tries", the area trigger output will pulse high for 500 milliseconds. This mode is intended to be used in systems where a long or medium range radio transmitter is connected to the 1900 via 936/936A.

OPERATOR RESPONSE:

Enter "Y" for the "backup" mode of operation, or "N" for the "flowthrough" mode of operation.

11.61 ALARM MEMORY STEP: 61

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *The following question is applicable only to installations that use Model 912, 119, or 120 entry stations or Model 2500 zone expanders.*

P-9 RESPONSE: **VALID ENTRY:**

```
ENABLE ALARM
MEMORY? (Y/N)
```

Y or N

PURPOSE:

Alarm memory is a feature that causes the "armed" indicator on an entry station to blink when an area has been in alarm. With installations using the SESCOA Model 2500 zone expander, a blinking "armed" signal can cause problems since the same "armed" signal used by the entry station is used to inform the zone expander that the 1900 is armed. If the signal pulses, the zone expander will assume that the 1900 is armed one second, disarmed the next, and so on. The possibility exists in this situation that the zone expander could miss a momentary alarm. For this reason, alarm memory is an option.

> *NOTE:*
> *Alarm memory is only an option on model 912, 119, and 120 entry stations and is always enabled on the serial control stations (models 913, 914, and 915).*

OPERATOR RESPONSE:

Enter "Y" to enable alarm memory, or "N" to disable alarm memory.

Always enter "N" if using a Model 2500 zone expander.

LOOP PROGRAMMING: OVERVIEW

Depending upon the intended usage, each loop can be designated as supervised or un-supervised, perimeter or interior, controlled, entry/exit, or combined with other loops for special applications:

- Un-supervised loops generate alarm reports only, and can use either Normally Open, Normally Closed, or both Normally Open **AND** Normally Closed contacts.

- Supervised loops require an end-of-line resistor, and can generate trouble reports as well as alarm reports:

  Loops which only generate both alarm and trouble reports can use either Normally Open or Normally Closed contacts, but not both.

  Loops which generate only trouble reports only use both Normally Open **AND** Normally Closed contacts.

- Perimeter loops monitor areas of possible entry, such as windows or doors. It is possible to arm the 1900 so that only Perimeter loops will be monitored.

- Interior loops monitor areas within the protected premises, such as interior hallways and rooms.

- Controlled loops are monitored only while the system is armed, where as 24-hour loops are always monitored.

- 24-Hour loops can be designated as Fire or Non-fire loops.

- Handover loops operate as controlled interior loops, but are disabled during entry/exit delays.

- Master/Slave loops operate together to monitor a single area — reports are generated only if both loops are faulted either simultaneously or within two minutes of each other.

There is only one step number associated with loop programming, even though there are thirty two questions. To simplify this process, this step requests the number of the first loop that is to be programmed or modified. Enter the loop number, then each question will be presented in turn:

11.62.1	ACTIVE LOOP (ENABLE)?
11.62.2	LOOP SUPERVISED?
11.62.3	TROUBLE ONLY?
11.62.4	NORMALLY OPEN?
11.62.5	NORMALLY CLOSED?
11.62.6	NORMALLY OPEN AND CLOSED?
11.62.7	CONTROLLED LOOP?
11.62.8	ENTRY/EXIT DELAY?
11.62.9	PRE-ALARM ENABLED?
11.62.10	24 HOUR FIRE LOOP?
11.62.11	24 HOUR NON-FIRE LOOP?
11.62.12	HANDOVER LOOP?
11.62.13	MASTER LOOP?
11.62.14	SLAVE LOOP?
11.62.15	PERIMETER LOOP?
11.62.16	ELIMINATE SWINGERS?
11.62.17	ENTER E.S. COUNT:
11.62.18	ALARM RELAY ENABLED?
11.62.19	ENABLE ALARM SILENCE?
11.62.20	PULSING ALARM?
11.62.21	MAX ALARM TIME?
11.62.22	TELEPHONE COMM?
11.62.23	PRIMARY PHONE #?
11.62.24	SECONDARY PHONE #?
11.62.25	REPORT TO BOTH #'S?
11.62.26	REPORT ABNML CLOSE?
11.62.27	REPORT LOOP RESTORAL?
11.62.28	ENTER ALARM CODE:
11.62.29	ENTER N.O. CODE:
11.62.30	ENTER N.C. CODE:
11.62.31	ENTER LOOP RESPONSE:
11.62.32	ENTER LOOP PRIORITY (1-7H)

LOOP PROGRAMMING OVERVIEW (CONT.)

The following is a brief overview of the way in which the 1900 Control/Communicator uses the answers to these questions when reporting loop events.

- Only active loops will be monitored by the communicator.
- Swinger eliminators must be disabled to report all detected changes in loop status. If this function is enabled, a limit can be placed on the number of fault reports that will be transmitted during the current "armed" period.
- Loop restoral reports are enabled or disabled separately from fault reports.
- The alarm codes transmitted in SESCOA Standard and Super Speed can be individually programmed.
- The length of time the loop status must remain constant before it will be detected and a report generated can be programmed from a minimum of 27 milliseconds to a maximum of 29 minutes and 29 seconds.
- The priority of each loop is programmable. Messages are transmitted in order of priority, with priority 1 being the lowest. Among loops of identical priority, the events will be processed in the order of detection.

11.62 STARTING LOOP NUMBER STEP: 62

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
ENTER STARTING
LOOP # (1-8):
```

1 to 8

PURPOSE:

To speed up the programming function, the P-9 can skip directly to a specific loop for programming. The number entered will be the first loop to be programmed.

For each loop programmed, the P-9 will ask a series of questions regarding programming options. These questions are covered in the following sections.

Unless the **F3** function is used (see Section 3.2), all remaining loops will be presented in numerical order.

OPERATOR RESPONSE:

Enter a loop number from 1 to 8.

11.62.1 LOOP ENABLE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
LXX-ACTIVE
LOOP? (Y/N)
```

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

Only active (enabled) loops will be monitored.

OPERATOR RESPONSE:

Enter "Y" to enable this loop.

Enter "N" to disable this loop. If a loop is not enabled, none of the remaining questions for that loop are asked, and this question will be asked for the next loop.

If disabling Loop #8, go to 11.63

11.62.2 EOL RESISTOR SUPERVISED LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-LOOP SUPER- VISED? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

The 1900 can be programmed to scan supervised loops (loops which can report a trouble condition). A supervised loop has an advantage over an unsupervised loop in that a condition that would prevent the loop from operating can be detected and subsequently reported to the central station.

For example, with a normally closed loop, a "short" in the wiring would cause a "loop trouble" report to be sent to the central station. With a normally open loop, a break in the wiring would cause the transmission of a loop trouble report.

NOTE:
This type of loop must use an end-of-line resistor.

OPERATOR RESPONSE:

Enter "Y" only if loop trouble reports are required.

Enter "N" if loop trouble reports are not required. Go to 11.62.4

11.62.3 EXCLUSIVE TROUBLE LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-TROUBLE ONLY? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

To select whether or not the current loop will report trouble and restoral messages only.

This type of loop does not generate alarm reports. If at any time the loop opens or becomes shorted, a trouble report will be sent to the central station.

NOTE:
This type of loop must use an end-of-line resistor.

OPERATOR RESPONSE:

Enter "Y" if this loop should report trouble and restoral messages only. Go to 11.62.7

Enter "N" if this is not a "trouble only" loop.

11.62.4 NORMALLY OPEN LOOP CIRCUIT

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
LXX-NORMALLY
OPEN? (Y/N)
```

VALID ENTRY:

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

To select whether or not the current loop will use normally open contacts.

If this is a supervised loop, an alarm report will be generated if the sensor contacts **CLOSE**. A trouble report will be generated if the loop is **OPENED**.

If this is an unsupervised loop, trouble reports cannot be generated.

OPERATOR RESPONSE:

SUPERVISED LOOPS ONLY:

These loops can be defined as either Normally Open or Normally Closed. They must be defined as one or the other.

UNSUPERVISED LOOPS:

These loops can be defined as either Normally Open, Normally Closed, or Normally Open & Closed. They must be defined as one of the three.

Enter "Y" if this loop will use normally open contacts. Go to 11.62.7

Enter "N" if this loop will not use normally open contacts.

11.62.5 NORMALLY CLOSED LOOP CIRCUIT

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

LXX-NORMALLY CLOSED? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

To select whether or not the current loop will use normally closed contacts.

If this is a supervised loop, an alarm report will be generated if the sensor contacts **OPEN**. A trouble report will be generated if the loop is **SHORTED**.

If this is an unsupervised loop, trouble reports cannot be generated.

OPERATOR RESPONSE:

Enter "Y" if this loop will use normally closed contacts. Go to 11.62.7

Enter "N" if this loop will not use normally closed contacts.

If the loop has been defined as a supervised loop, it must also be defined as either Normally Open or Normally Closed. The P-9 will not continue beyond these questions until the loop has been properly defined.

Return to 11.62.4

11.62.6 BOTH NORMALLY OPEN AND CLOSED LOOP CIRCUIT

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if the loop has been defined as an un-supervised loop.*

P-9 RESPONSE: **VALID ENTRY:**

```
LXX-NORMALY OPEN
& CLOSED (Y/N)
```

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

To select whether or not the current loop will use both normally open and normally closed contacts.

Consideration should be given before selecting this type of loop.

The 1900 can monitor a loop using both normally open and normally closed sensors, however the possibility exists that some sensors could be "locked out" if another sensor enters the alarm state.

See next page.

For example, assume normally open sensors are attached to the loop and are closest to the terminal strip. Normally closed sensors are also placed in series with the loop wiring, but are located nearest the end of the loop. If the normally open sensor closes, the alarm will be detected. If the normally open sensor remains closed and the normally closed sensor opens, no change in state will be sensed by the 1900. The normally closed sensors will be disabled until the normally open sensor opens.

NOTE:
This type of loop must use a 1K end-of-line resistor.

OPERATOR RESPONSE:

Enter "Y" if this loop will use both normally closed and normally open contacts.

Enter "N" if this loop will not use both normally closed and normally open contacts. Go to 11.62.4

This loop **MUST** be defined as either Normally Open, Normally Closed or Normally Open & Closed. The P-9 will not continue beyond these questions until the loop has been properly defined.

11.62.7 CONTROLLED LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-CONTROLLED LOOP? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

A controlled loop is one that is active only when the 1900 is armed. Often this type of loop is referred to as a "burglary" loop.

During periods when the 1900 is disarmed, supervised controlled loops have the ability of sending trouble reports to the central station should a trouble condition occur.

During periods when the 1900 is armed, supervised controlled loops will send an alarm code to the central station should a trouble condition occur. The 1900 assumes that tampering could be involved.

OPERATOR RESPONSE:

Enter "Y" if this loop is to be controlled by arming and disarming the 1900. Go to 11.62.15

Enter "N" if this loop is not a controlled loop.

11.62.8 ENTRY/EXIT DELAY LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: | **VALID ENTRY:**

```
LXX-ENTRY/EXIT
DELAY? (Y/N)
```

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

To select whether or not the current loop will be monitoring an access door.

Typically, this type of loop is used when the alarm installation requires that the system control station be located inside the building or home.

- An exit delay allows the system user enough time to exit the premises without causing an alarm after arming the system.
- An entry delay allows the system user enough time to enter the premises and get to the control station and disarm the system before an alarm sequence is started.

During periods when the 1900 is disarmed, supervised entry/exit loops have the ability of sending trouble reports to the central station should a trouble condition occur.

See next page.

During periods when the 1900 is armed, supervised entry/exit loops will start an entry delay and subsequently send an alarm code to the central station should a trouble condition occur. The 1900 assumes that tampering could be involved.

> *NOTE:*
> *During entry or exit delays, all entry/exit and handover loops will be inactive. However, if at the end of an entry delay the system is not disarmed, any alarm activity on these loops will be reported to the central station.*

OPERATOR RESPONSE:

Enter "Y" if this loop is to be an entry/exit loop.

Enter "N" if this loop is not an entry/exit loop. Go to 11.62.10

11.62.9 PRE-ALARM ENABLE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

LXX-PRE-ALARM ENABLED? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

If the loop has been defined as an entry/exit type, the pre-alarm may optionally be programmed to indicate an entry delay in progress. This feature is useful in reminding the system user to disarm the 1900 when entering a secured home or building.

OPERATOR RESPONSE:

Enter "Y" to enable or "N" to disable the pre-alarm.

Go to 11.62.16

NOTE:
If "N" is selected, there will be no indication by the 1900 or any control station that an entry delay is in progress.

11.62.10 24 HOUR FIRE LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-24 HR FIRE LOOP? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

To designate the loop as a 24 hour fire detection loop.

If latching smoke detectors have been installed, users will be able to reset them from the control station and the 1900 will be able to perform a fire alarm verification sequence (future version). For a complete description on the operation and characteristics of 24 hour fire loops, refer to the 1900 operations manual.

OPERATOR RESPONSE:

Enter "Y" if this loop is to be a 24 hour fire loop. Go to 11.62.18

Enter "N" if this loop is not a 24 hour fire loop.

11.62.11 24 HOUR NON-FIRE LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

To designate the loop for continuous duty regardless of the arm/disarm state of the 1900.

This type of loop is useful for secret panic buttons, glass break detectors, water level detectors, etc.

OPERATOR RESPONSE:

Enter "Y" if this loop is to be a 24 hour non-fire loop. Go to 11.62.18

Enter "N" if this loop is not a 24 hour non-fire loop.

11.62.12 HANDOVER (FOLLOWER) LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

LXX-HANDOVER LOOP? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

In a typical installation, a motion detector monitors the control station area located somewhere inside a home or building.

During entry/exit delays or periods when the 1900 is disarmed, the handover loop is disabled. If the handover loop is violated while the 1900 is armed and an entry delay is not in progress, an alarm will be triggered instantly. As a result, it is not possible to disarm the 1900 (without causing an alarm) unless an entry/exit loop has already been violated. This loop is useful in detecting "lock-in's" and burglars that gain access to the premises other than through a door or window.

> *NOTE:*
> *Entry/exit loops are classified as perimeter loops by the 1900, while handover loops are classified as interior loops.*

OPERATOR RESPONSE:

Enter "Y" if this loop is to be a handover loop. Go to 11.62.16

Enter "N" if this loop is not a handover loop.

11.62.13 MASTER LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
LXX-MASTER
LOOP? (Y/N)
```

VALID ENTRY:

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

The master loop is used with a slave loop. The intent of the master/slave loops is to combat false alarms. If the master and slave loops are faulted simultaneously, an alarm will be triggered. If one of the two loops faults and then restores, and the other loop faults within two minutes, an alarm is triggered.

NOTE:
Only one master loop may be programmed.

OPERATOR RESPONSE:

Enter "Y" if this loop is to be a master loop. Go to 11.62.15

Enter "N" if this loop is not a master loop.

11.62.14 SLAVE LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-SLAVE LOOP? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

The slave loop is used with a master loop. The intent of the master/slave loops is to combat false alarms. If the master and slave loops are faulted simultaneously, an alarm will be triggered. If one of the two loops faults and then restores, and the other loop faults within two minutes, an alarm is triggered.

NOTE:
Only one slave loop may be programmed.

OPERATOR RESPONSE:

Enter "Y" if this loop is to be a slave loop.

Enter "N" if this loop is not a slave loop.

This loop **MUST** be defined as one of the following types:

CONTROLLED
ENTRY/EXIT
24-HOUR
HANDOVER
MASTER OR SLAVE

Return to 11.62.7

The P-9 will not continue beyond these questions until the loop has been properly designated.

11.62.15 PERIMETER LOOP

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

LXX-PERIMETER LOOP? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

To designate the loop as perimeter or interior.

In the 1900, a distinction is made between perimeter and interior loops to provide a perimeter arm capability through the control station. When the 1900 is perimeter armed, all loops NOT designated as perimeter will be disabled. Normally a system is perimeter armed so as to allow the occupants of the premises to move about freely without causing an alarm, while at the same time providing "perimeter protection".

NOTE:
Only loops that monitor doors or windows should be designated as "perimeter". Entry/exit loops are classified as perimeter by the 1900, while handover loops are classified as interior.

OPERATOR RESPONSE:

Enter "Y" if this loop is to be a perimeter loop, or "N" if this loop is an interior loop.

11.62.16 LOOP SWINGER ELIMINATOR ENABLE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question will not be asked if the loop has been designated as 24 hour fire or 24 hour non-fire.*

P-9 RESPONSE: **VALID ENTRY:**

```
LXX-ELIMINATE
SWINGERS? (Y/N)
```

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

The 1900 will normally report all fault events (changes from restored to fault condition) on the loop input, no matter how many faults occur. An unwanted series of multiple faults (usually caused by a bad sensor) is called a "swinger."

If this mode of operation is undesirable, the 1900 can be programmed to stop reporting these faults after a specified number of reports have been transmitted within the current arming period.

OPERATOR RESPONSE:

Enter "Y" to automatically eliminate swingers on this loop.

Enter "N" for unlimited fault reports. Go to 11.62.18

11.62.17 LOOP SWINGER COUNT

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if the loop is enabled, and the swinger elimination function was enabled in the previous step.*

P-9 RESPONSE: **VALID ENTRY:**

```
LXX-ENTER E.S.
COUNT (1-8):
```

1 to 8

NOTE: "XX" = Loop Number

PURPOSE:

When the swinger eliminator function is enabled, the 1900 will transmit only the specified number of faults for that loop, then cease to report any further activity.

The swinger count is normally reset each time the 1900 is armed. To reset the swinger count at any other time using the P-9, refer to the RSC command (Section 8.3).

OPERATOR RESPONSE:

Enter a number from 1 to 8.

11.62.18 ALARM RELAY ENABLE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
LXX-ALARM RELAY
ENABLED? (Y/N)
```

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

Each loop, when faulted, has the ability to start the audible alarm. Audible alarms may be constant or pulsing and may run for different lengths of time as specified in the following questions.

NOTE:
If an audible alarm is in progress and another loop faults, the current audible alarm will be cancelled. The audible alarm will be re-started with the attributes specified by the last loop faulted. If a fire alarm is in progress, it will not be overridden by a burglary alarm.

OPERATOR RESPONSE:

Enter a "Y" for constant or pulsing alarms.

Enter "N" for silent alarm operation. Go to 11.62.22

11.62.19 ALARM SILENCE ENABLE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
LXX-ENABLE ALARM
SILENCE? (Y/N)
```

VALID ENTRY:

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

When an audible alarm is triggered, it will continue to run until it times out or the system user silences it through a keypad command. If the user wishes to be able to silence the alarm, this capability will have to be enabled.

> *NOTE:*
> *It is extremely important that alarm silence be enabled on loops that have untimed audible alarms.*

OPERATOR RESPONSE:

Enter a "Y" to enable the keypad alarm silence capability or "N" to disable.

11.62.20 PULSING ALARM RELAY

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

```
LXX-PULSING
ALARM? (Y/N)
```

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

If the audible alarm is enabled, it must be defined for either pulsing or constant operation. If defined for pulsing operation, the alarm relay will alternately activate and deactivate at one second intervals for the programmed duration or until manually silenced.

OPERATOR RESPONSE:

Enter "Y" for this loop to cause pulsing alarms, or "N" for this loop to cause constant alarms.

11.62.21 AUDIBLE ALARM TIME

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: | **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-MAX ALARM TIME? (4,8,15)	*4,8, or 15 (See note)*

NOTE: "XX" = Loop Number

PURPOSE:

Each audible loop can be programmed for a four, eight, or fifteen minute alarm shut-off time. Untimed, unlimited alarms are also available, but are not allowed by law in many locations. Check with local ordinances for details.

OPERATOR RESPONSE:

Enter 4, 8, or 15 for the number of minutes before audible alarm shut-off.

NOTES:
Entering any other number will cause an untimed alarm.

It is extremely important that alarm silence be enabled on loops that have untimed audible alarms.

When MODIFYING a masterfile which has the alarm time programmed to "untimed", the P-9 will indicate this selection by displaying the characters "UT".

11.62.22 LOOP TELEPHONE COMMUNICATIONS

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-TELEPHONE COMM? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

Telephone communications refers to placing an outgoing call to a central station in order to report an event.

If disabled, the loop will still have the capability of starting the audible alarm. Additionally, all loop events will still be placed in the activity buffer.

OPERATOR RESPONSE:

Enter "Y" if this loop will be reporting to the central station.

Enter "N" if this will be a local loop only. Go to 11.62.31

TELEPHONE NUMBER OVERVIEW

There are three questions associated with programming telephone numbers:

PRIMARY TELEPHONE NUMBER
SECONDARY TELEPHONE NUMBER
SECONDARY TELEPHONE MODE

The following is a brief overview of the way in which the 1900 uses the answers to these questions when reporting events:

In programming telephone numbers, numbers 1 through 8 refer to the numbers entered in Steps 11.3 through 11.11

The primary is the first number which will be called for any report; the secondary will be called as either a back-up (only if the primary can not be reached), or in addition to the primary number.

The secondary telephone mode determines the manner in which the secondary telephone number is treated.

- When reporting to both numbers, the primary and secondary numbers are called alternately until the event is reported to both. If one call is completed, only the uncompleted call will continue to be attempted. If necessary, all programmed tries and sleep cycles will be attempted.

- When reporting in the "backup" mode, the primary and secondary numbers are called until the event is reported to the first available central station. If necessary, all programmed tries and sleep cycles will be attempted.

When reporting to either number, the 1900 uses two different strategies depending on the number of call "tries" programmed. If the number of call tries programmed is 4 or greater, the primary number is called the first three times. Thereafter, calls are placed alternately to the secondary and primary until the event is either reported to one of the numbers, or all programmed tries and sleep cycles have been completed.

If the number of call tries programmed is 2 or 3, the 1900 will simply alternate between calling the primary and secondary numbers. In this situation, the primary may be called tw whereas the secondary will only be called once.

NOTE:
From the above description, it may already be apparent that the 1900 gives preference to the primary telephone number. If not, consider the following example where four tries are programmed:

CALL	NUMBER
1	Primary Number
2	Primary Number
3	Primary Number
4	Secondary Number

Use care and consideration when programming the number of call tries.

11.62.23 PRIMARY LOOP TELEPHONE NUMBER

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

LXX-PRIMARY PHONE #? (1-8)	*1 to 8*

NOTE: "XX" = Loop Number

PURPOSE:

The primary is the first number which will be called for any loop report; telephone numbers 1-8 are the telephone numbers, account numbers and formats that have been selected in Sections 11.3 through 11.11

OPERATOR RESPONSE:

Enter 1 through 8 only. The P-9 will not allow the selection of a telephone number which has not been programmed.

11.62.24 SECONDARY LOOP TELEPHONE NUMBER

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-SECONDARY PHONE #? (1-8)	*1 to 8*

NOTE: "XX" = Loop Number

PURPOSE:

The secondary is the number which will be called as either a back-up (called if the primary can not be reached), or in addition to the primary number for any loop report. Telephone numbers 1 through 8 are the telephone numbers selected in Sections 11.3 through 11.11

OPERATOR RESPONSE:

Enter 1 through 8 only. The P-9 will not allow the selection of a telephone number which has not been programmed.

11.62.25 LOOP SECONDARY TELEPHONE MODE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

LXX-REPORT TO BOTH #'S? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

The secondary telephone mode for loop reports determines the manner in which the secondary loop telephone number is treated:

If the 1900 is programmed to report to both numbers, it will alternately call the primary and secondary numbers, and report the event to both. If necessary, it will continue to try either or both numbers until it succeeds in reporting to both, or exhausts all allowed tries and sleep cycles.

If not programmed to report to both numbers, the 1900 will first call the primary number. If unable to report, the 1900 will call the secondary number. Refer to the **Telephone Number Overview** on the previous pages for specific calling details.

OPERATOR RESPONSE:

Enter "Y" to report to both numbers, or "N" select the "backup" reporting mode.

11.62.26 REPORT ABNORMAL CLOSINGS

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question will not be asked if the loop has been designated for 24 hour service.*

P-9 RESPONSE:

```
LXX-REPORT ABNML
CLOSE? (Y/N)
```

VALID ENTRY:

Y or N

NOTE: "XX" = Loop Number

PURPOSE:

This option operates in conjunction with open/close reporting options that send "forced close" information.

It is not always desirable to report disabled loops to the central station when arming. Consider the following example:

The 1900 is programmed with an open/close option that only reports closings to the central station when there is a forced closing. Seven loops on the 1900 are programmed for perimeter operation. The eighth loop is programmed as interior and has abnormal close reporting enabled.

When the 1900 is perimeter armed, the 1900 automatically disables the interior loop. Since the 1900 is programmed to send forced close information and the interior loop has abnormal close reporting enabled, the 1900 will send a closing message followed by force close information.

See next page.

This will occur every time the 1900 is perimeter armed unless abnormal close reporting is DISABLED on the interior loop. This is important if the system user wishes to avoid unnecessary central station communications, and possibly extra costs.

OPERATOR RESPONSE:

Enter "Y" to report abnormal closings if this loop is disabled.

Enter "N" to disable this capability.

11.62.27 LOOP RESTORAL REPORTS

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-REPORT LOOP RESTORAL? (Y/N)	*Y or N*

NOTE: "XX" = Loop Number

PURPOSE:

Loop restoral reports are disabled by default. If loop restorals are required, they must be enabled with this step.

OPERATOR RESPONSE:

Enter "Y" to enable or "N" to disable loop restoral reports.

11.62.28 LOOP ALARM CODE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
LXX-ENTER ALARM
CODE (0-99):
```

VALID ENTRY:

0 to 9 or 0 to 99 depending on central station formats.

NOTE: "XX" = Loop Number

PURPOSE:

Neither the SESCOA Standard nor SESCOA Super Speed format uses a pre-defined code to identify a loop alarm condition. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

The range of numbers allowed depends upon the central station format(s) selected:

If SESCOA Super Speed is **NOT** selected as one of the central station formats, enter a number from 0 to 9 only. If SESCOA Super Speed is selected, enter a number from 0 to 99.

- SESCOA Super Speed always transmits a single-digit alarm code: if the programmed code is less than 10, the most significant (tens) digit is always transmitted as a 0.
- SESCOA Standard always transmits a single-digit alarm code: if the programmed code is greater than 10, only the least significant (units) digit is transmitted.
- Radionics Hex always ignores the programmed code and instead transmits the loop number as a single-digit alarm code.

11.62.29 N.O. LOOP ALARM CODE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if the loop has been programmed to use both normally open and normally closed sensors.*

P-9 RESPONSE: **VALID ENTRY:**

```
LXX-ENTER N.O.
CODE (0-99):
```

0 to 99

NOTE: "XX" = Loop Number

PURPOSE:

Neither the SESCOA Standard nor SESCOA Super Speed format uses a pre-defined code to identify a loop alarm condition. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

The range of numbers allowed depends upon the central station format(s) selected:

If SESCOA Super Speed is **NOT** selected as one of the central station formats, enter a number from 0 to 9 only. If SESCOA Super Speed is selected, enter a number from 0 to 99.

- SESCOA Super Speed always transmits a single-digit alarm code: if the programmed code is less than 10, the most significant (tens) digit is always transmitted as a 0.

See next page.

- SESCOA Standard always transmits a single-digit alarm code: if the programmed code is greater than 10, only the least significant (units) digit is transmitted.

- Radionics Hex always ignores the programmed code and instead transmits the loop number as a single-digit alarm code. (Because of this, Radionics Hex cannot distinguish between a Normally Open and a Normally Closed alarm code.)

11.62.30 N.C. LOOP ALARM CODE

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if the loop has been programmed to use both normally open and normally closed sensors.*

P-9 RESPONSE: **VALID ENTRY:**

```
LXX-ENTER N.C.
CODE (0-99):
```

0 to 99

NOTE: "XX" = Loop Number

PURPOSE:

Neither the SESCOA Standard nor SESCOA Super Speed format uses a pre-defined code to identify a loop alarm condition. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

The range of numbers allowed depends upon the central station format(s) selected:

If SESCOA Super Speed is **NOT** selected as one of the central station formats, enter a number from 0 to 9 only. If SESCOA Super Speed is selected, enter a number from 0 to 99.

- SESCOA Super Speed always transmits a single-digit alarm code: if the programmed code is less than 10, the most significant (tens) digit is always transmitted as a 0.

See next page.

- SESCOA Standard always transmits a single-digit alarm code: if the programmed code is greater than 10, only the least significant (units) digit is transmitted.

- Radionics Hex always ignores the programmed code and instead transmits the loop number as a single-digit alarm code. (Because of this, Radionics Hex cannot distinguish between a Normally Open and a Normally Closed alarm code.)

11.62.31 LOOP RESPONSE TIME

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-ENTER LOOP RESPONSE:	*1 to 65535 (See delay formula below.)*

NOTE: "XX" = Loop Number

PURPOSE:

To select the length of time that a change in loop status must exist before the change will be processed.

The 1900 will detect and report a change in loop status which is present for a minimum of 27 milliseconds. The duration can increased, in increments of 27 milliseconds, to a maximum of 29 minutes and 29 seconds. If the loop status does not remain constant for the period selected, no report will be generated.

OPERATOR RESPONSE:

Enter the delay desired in increments of 27 milliseconds from 1 to 65535.

DELAY FORMULA:
(Delay Number X .027)= Loop Delay Time In Seconds.

Enter the delay number (from 1 to 65535).

EXAMPLES:

1 = 27 milliseconds.
2 = 54 milliseconds.
65535 = 29 minutes and 29 seconds.

11.62.32 LOOP REPORTING PRIORITY

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
LXX-ENTER LOOP PRIORITY (1-7H)	*1 to 7*

NOTE: "XX" = Loop Number

PURPOSE:

To assign the priority of each individual loop.

Messages will be transmitted in order of priority, with priority 1 being the lowest. When two or more loops have identical priority, messages will be sent in the order that the events were detected.

Priority 8 is reserved for fire (smoke detector) loops, and is assigned automatically.

OPERATOR RESPONSE:

Enter a priority between 1 (lowest) and 7 (highest).

Go to 11.62.1 until all active loops are programmed.

11.63 LOOP TROUBLE CODE STEP: 63

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if SESCOA Standard has been selected as one of the communication formats.*

P-9 RESPONSE:	VALID ENTRY:
ENTER LOOP TROUBLE CODE:	*0 to 9*

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify loop trouble. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.64 LOOP RESTORAL CODE STEP: 64

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if SESCOA Standard has been selected as one of the communication formats.*

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER LOOP RESTORAL CODE:	*0 to 9*

PURPOSE:

The SESCOA Standard format does not use a pre-defined code to identify a loop restoral. The event code to be used when sending these reports must be programmed.

OPERATOR RESPONSE:

Enter a number from 0 to 9.

11.65 ENTRY DELAY TIME STEP: 65

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if at least one of the eight loops has been programmed for entry/exit delay operation.*

P-9 RESPONSE:

```
ENTER ENTRY
DELAY TIME:
```

VALID ENTRY:

1 to 99

PURPOSE:

Entry delay is necessary in installations where the system control station is located inside the premises. When the user enters the premises, violating the entry/exit loop, the entry timer is started. Pre-alarm may optionally be started at this time. If the user has not disarmed the system before the entry time expires, an alarm will be triggered.

OPERATOR RESPONSE:

Entry time is specified in seconds. Enter a number from 1 to 99.

> *NOTE:*
> *Be realistic! Allow enough time for the user to get to the control station and enter all of the required digits.*

11.66 EXIT DELAY TIME STEP: 66

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if at least one of the eight loops has been programmed for entry/exit delay operation.*

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENTER EXIT DELAY TIME:	*1 to 99*

PURPOSE:

Exit delay is necessary in installations where the system control station is located inside the premises. When the user arms the 1900, the exit delay timer is started in order to allow the user time to leave the premises and secure the entry/exit door.

If the entry/exit door is not secure when the exit time expires, an entry delay sequence will be started. If the 1900 is not disarmed before the entry time expires, an alarm will be triggered.

See next page.

NOTE:
If open/close reports are programmed, the STATUS LED on the 913/914/915 control stations will illuminate immediately after the 1900 has been armed. This signals the user that an attempt to transmit the closing event is in progress.

When the report has been sent successfully, or the report has not been sent successfully within 5 minutes after arming, the STATUS LED will turn off and the exit delay will begin. The 1900 will however, continue to try and report to the central station if programmed to do so.

OPERATOR RESPONSE:

Exit time is specified in seconds. Enter a number from 1 to 99.

NOTE:
Be realistic! Allow enough time for the user to get out of the premises and secure the door.

11.67 REMOTE ACCESS ENABLE STEP: 67

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
ENABLE REMOTE ACCESS?	*Y or N*

PURPOSE:

The 1900 Control/Communicator is capable of being accessed either locally or from a remote location. If remote access is required, this function must be enabled. If this function is not enabled, the communicator will not respond to a ring, and it will have to be accessed locally.

OPERATOR RESPONSE:

Enter "Y" to enable remote access.

Enter "N" to disable remote access. This completes the 1900 programming. **Return to the Master Menu in Section 5.**

11.68 REMOTE ACCESS LOCK STEP: 68

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
LOCK COMMUN-
ICATOR? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

If remote access is enabled, the 1900 may optionally be "locked". If the 1900 is locked, access will only be granted if the P-9 provides the correct 4-character access code when communications are first established. If the 1900 is not locked, any P-9 programmer will have the ability to call and establish a communications link with the 1900.

OPERATOR RESPONSE:

Enter "Y" to lock the 1900. If in the CREATE FILE mode, go to 11.68.2.

Enter "N" to leave the communicator "unlocked." This completes the 1900 programming. **Return to the Master Menu in Section 5.**

11.68.1 ACCESS CODE MODIFICATION

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only in the MODIFY mode and when remote access lock is enabled. This question is skipped in the CREATE mode.*

P-9 RESPONSE: **VALID ENTRY:**

P-9 RESPONSE:	VALID ENTRY:
KEEP SAME ACCESS CODE? (Y/N)	*Y or N*

PURPOSE:

To allow the access code to be retained.

OPERATOR RESPONSE:

Enter "Y" to keep the same access code. Go to 11.68.4

Enter "N" to change the communicator access code.

11.68.2 ACCESS CODE CREATION

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *This question is asked only if remote access and communicator lock has been enabled and the user is logged on as a Supervisor.*

P-9 RESPONSE:

```
ENTER ACCESS
CODE? (Y/N)
```

VALID ENTRY:

Y or N

PURPOSE:

Allows the operator to select manual entry of a specific communicator 4-character access code instead of having the P-9 generate a random 4-character access code.

Up to 30 communicator access codes are stored in the P-9's access code memory buffer. To prevent access code loss, the access code buffer must periodically be displayed or printed, then purged. These functions are available to "Supervisor" level personnel using the "DISPLAY MODE" function in the Master Menu (see Section 9).

OPERATOR RESPONSE:

Enter "Y" to manually enter a specific access code.

Enter "N" to cause the P-9 to generate a random 4-character access code. Go to 11.68.4

11.68.3 MANUAL ACCESS CODE CREATION

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

P-9 RESPONSE:

```
ENTER ACCESS
CODE:
```

VALID ENTRY:

Any four characters.

PURPOSE:

For manual entry of the 4-character access code.

OPERATOR RESPONSE:

Enter any four characters for the communicator access code.

> *WARNING!*
> *BE SURE TO WRITE THE ACCESS CODE DOWN, AND STORE IT IN A SAFE PLACE!*

If the access code is lost, the P-9 will be unable to gain remote access to the communicator. The only way to recover from this situation is to program locally.

> *CAUTION:*
> *For maximum security, obvious codes such as 1234 or ABCD should be avoided.*

11.68.4 COMMUNICATOR ACCESS CODE DISPLAY

COMPATIBILITY:

P-9 PROGRAMMER:
Version 1.5 and later

1900 CONTROL/COMMUNICATOR:
Version 1.5 and later

> *NOTE:*
> *The following is displayed only if remote access and communicator lock has been enabled and the user is logged on as a Supervisor.*

P-9 RESPONSE:

```
ACCESS CODE:
XXXX
```

VALID ENTRY:

None

NOTE: "XXXX" = current access code

PURPOSE:

Shows the operator the current communicator access code for the file in memory.

OPERATOR RESPONSE:

View the access code to verify that it is correct. This completes the 1900 control/communicator programming. **Return to the Master Menu in Section 5.**

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MODEL 1900

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Attention: Repairs Department

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