

Section 5

Programming

This section lists the programmable features in programming mode and the procedures for each of them. The options available are general options, line card options, and user options.

5.1 How to Enter Program Mode

Follow these steps to enter into program mode:

1. Log on to the receiver (see Section 4.4.4 for log on procedure).

2. Press the  button.

3. Press the  button.

The display will briefly display Initializing











Please wait . . .

4. Select the option you wish to program. (See Section 5.2 for options.)

5.1.1 Programming Fields

In program mode there are three types of programming fields that data can be entered into. Table 5-1 list the three types of fields and the various parameters associated with them.

Table 5-1: Types of Programming Fields

Type of Field	Control Keys	Comments
Numeric	 through  or   keys	These fields require a numeric entry only.
List	  keys	Predefined choices are put in a list and can be selected by pressing the up or down arrow keys.
Edit	 through  or   keys	Enter a number from the numeric keypad or enter any special characters by pressing the up or down arrow keys.

5.1.2 How to Maneuver Around in Program Mode

Figure 5-1 shows what keys on the touchpad are used to maneuver in program mode.

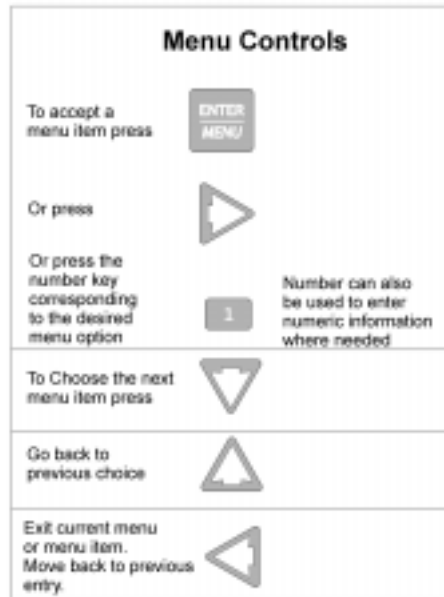


Figure 5-1 Programming Controls

5.2 Programming Choices

In programming mode your first set of choices are general options, line card options, and user list. (Each of these choices will be described in greater detail in the following sections.) Figure 5-2 shows what the display will look like before and after the down arrow is pressed.

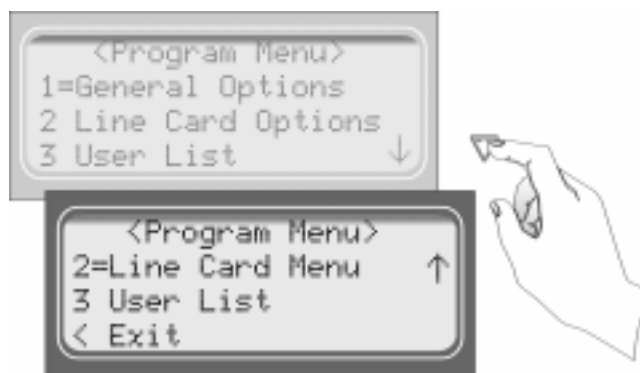


Figure 5-2 Program Menu Choices

5.3 General Options

The features available for programming under general options are operation mode, display options, communications, and system options.

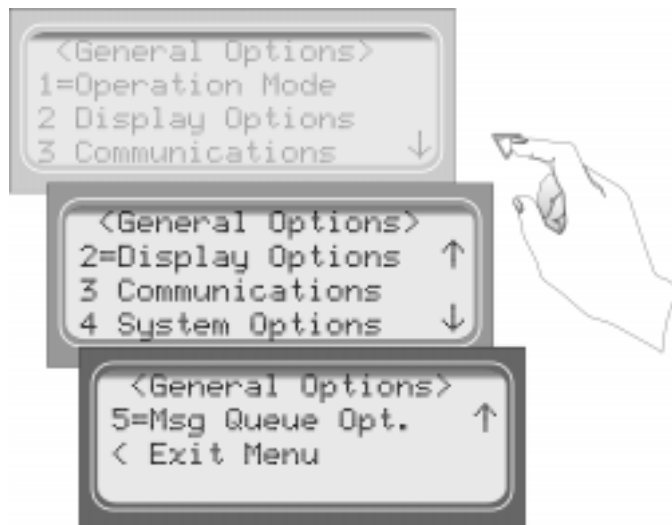


Figure 5-3 General Options Display

Table 5-2 list the available choices under General Options and gives a description of those choices.

Table 5-2: General Options Items and Description

General Options Items	Level 1 Choices	Level 2 Choices	Level 3 Choices	Comments	
Operation Mode	Manual			See Section 5.3.1 for additional information on Operation Modes.	
	Automatic				
	Log Only				
Display Options	Language	English		See 5.3.2.1.	
		español		Not available at this time	
	Time Display	AM/PM		AM/PM is used for 12 hour time clock displays. See 5.3.2.2.	
		24 Hour			
	Date Format	M/D/Y		M = month, D = day, and Y = year. See 5.3.2.3.	
		D·M·Y			
		Y-M-D			
	Daylight Savings	Yes		See 5.3.2.4.	
		No			
	ITI (Edit Options)	Attempts		Yes	Affects printer output for ITI calls only.
				No	
		CPU Time		Yes	
				No	
		CPU Type		Yes	
				No	
Panel Rev			Yes		
			No		
Arming Level			Yes		
			No		
MeterAcnt 5		Yes			
		No			
MeterAcnt 12		Yes			
		No			

Table 5-2: General Options Items and Description

General Options Items	Level 1 Choices	Level 2 Choices	Level 3 Choices	Comments	
Display Options (continued)	FMT (Edit Format options)	FSK1	Code	If “English” is selected then the printer and LCD output for calls of these formats will be text descriptions. If “Code” is selected then the printer and LCD output for calls of these formats will be the Code and Zone numbers.	
			English (default)		
		BFSK	Code		
			English		
		SIA	Code		If “English” is selected, the printer and LCD output will be text. If “Code” is selected then the printer and LCD will display the SIA codes followed by zone or other information.
			English (default)		
		CID	Code (default)	This option only affects the SK Expanded automation protocol output. If “English” is selected each event will be sent to the automation as two SIA events; the first with the two digit Group number and the second with the three digit ID number. If “Code” is selected, each event is sent as eleven digits; two digits Message type, one-digit Event Qualifier, three-digit Event Code, two-digit Group Number, and three-digit ID number.	
	English				
	PULSE	0 .. 9			
		0 .. F			
	SK9000	Packed			
		Unpacked			
	Hold Last Event	Yes		LCD will display the last or oldest unacknowledged event instead of the date/time display. See 5.3.2.7.	
No					
Communication	Port Functions	Com1	Unused/Automation/Printer/	<p>Rules for Port Configuration:</p> <ol style="list-style-type: none"> 1. Functions in Brackets [] will not appear unless “Automation” is selected for Com1 function. 2. Functions in { } will not appear unless “Printer” is selected in Com1 or Par. 3. A function may be selected only once in the 3 ports (only one printer, only one Diag, and so on). 4. All ports may be configured “Unused”. <p>See Section 5.3.3 for additional information.</p>	
		Com2	Unused/[Auto Bkp]/[Auto Bkp Prn]/{Print Bkp}/Diag/Printer MeterMinder		
		Par	Unused/[Auto Bkp]/Printer/Diag MeterMinder		

Table 5-2: General Options Items and Description

General Options Items	Level 1 Choices	Level 2 Choices	Level 3 Choices	Comments
Communication (Continued)	Com Port 1	Baud Rate	19200/9600/7200/ 4800/2400/1200/ 600/300/110	See Section 5.3.3.2.
		D (# Data Bits)	7, 8	
		S (# Stop Bits)	1, 2	
		P (Parity)	Even, Odd, Space, Mark, No	
		Duplex	Half	
			Full	
		F (Flow Control)	Hdwr, None	
	Init String		See Section 5.3.3.4.	
	Com Port 2	Same as Com Port 1		See Section 5.3.3.3.
	Par Port	Init String		See Section 5.3.3.4.
	Automation Config	Format	SIA CIS, SIA 2000, SK 9000, SK EXP, ITI Gen, ITIComp	See 5.3.3.5.
		Hex (only visible if SK 9000 format is selected)	Y = Enabled	
			N = Disabled	
		Heart Beat	Y = Enabled	
			N = Disabled	
	Time (of Heartbeat)	10-600 Seconds		
	Ack timeout	0-600 Seconds		
	Annunciator Configuration	Printer	Yes or No	See Section 5.3.3.6. Must be set to No for UL installations.
		Bkp Printer	Yes or No	
		Auto Comp	Yes or No	
		Bkp Auto Comp	Yes or No	
		Meter Minder	Yes or No	
		Battery	Yes or No	
Line Card		Yes or No		
Line Fault		Yes or No		
AC Power		Yes or No		
Buffer Full		Yes or No		
Listen In		Yes or No		
Call Pending		Yes or No		

Table 5-2: General Options Items and Description

General Options Items	Level 1 Choices	Level 2 Choices	Level 3 Choices	Comments
Communication (Continued)	Aux Relay Cfg	Printer	Yes or No	See Section 5.3.3.7.
		Bkp Printer	Yes or No	
		Auto Comp	Yes or No	
		Bkp Auto Comp	Yes or No	
		Meter Minder	Yes or No	
		Battery	Yes or No	
		Line Card	Yes or No	
		Line Fault	Yes or No	
		AC Power	Yes or No	
		Buffer Full	Yes or No	
		Listen In	Yes or No	Must be set to No for UL installations.
Call Pending	Yes or No			
System Options	Battery Backup Cfg	No Battery Bkp		See Section 5.3.4.
		Battery Bkp		
		DC Bkp		
	Receiver ID No.	01-99		
	Bad Data Blocks	Strip Bad	Yes or No	If this is selected an indicator will be sent to the automation computer that indicates a bad data block was received.
		Send Bad	Yes or No	Same as Strip Data except the bad data block is sent with the indicator.
	Auxiliary Relay Normal State	De-energized	Yes or No	See Section 5.3.4.
Energized		Yes or No	See Section 5.3.4.	
Message Queue Options	% Warning Lvl On	10 to 99 %	75%	The percentage of how full the message queue can get before a trouble indication occurs.
	% Warning Lvl Off	01 to 90%	50%	What percentage the message queue must go back down to in order to clear a trouble indication.
	Max Buf Limit	500 to 5000	1000	Used to set the maximum number of bytes in a call. This number is used to determine if a call is a runaway call.

5.3.1 Operation Mode

Operation mode chooses how the receiver will operate in normal mode (manual, automatic or log only operation). Table 5-3 breaks down the choices available under operation mode menu item.

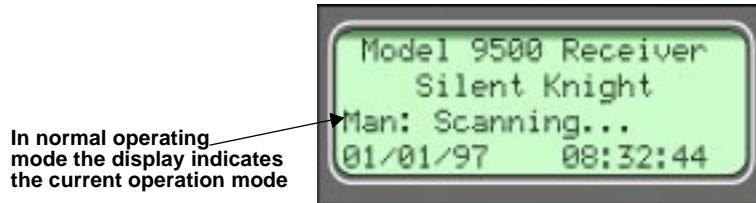


Figure 5-4 Normal Operating Mode Display Indicating Manual Operation

Table 5-3: Operation Mode Choices and Descriptions

Choices	Description	Default
Manual	Requires manual acknowledgments of each call or event from an operator.	4
Automatic	All event information is sent directly to the automation computer and must be acknowledged by the automation software.	
Log Only	All event information is internally acknowledged and put into event history buffer.	

Note: Defaults refer to settings from the factory. Once the receiver is programmed, the system will power up in the programmed operation mode.

5.3.1.1 How to change the operation mode


Follow these steps to change the operation mode of the receiver:


1. Log on to the receiver. (See Section 4.4.4 for log on procedure.)

2. Press  button.



3. Press  for program menu.

The display will briefly display Initializing
Please wait . . .


4. Press  to choose general options.

5. Press  to choose operation mode.

The current operation mode will flash in the display.

6. Press the  or  button to move through the operation mode choices.

Note: Each additional press of the up or down arrow key will toggle the operation mode setting to the next choice.

7. When the display flashes on the desired operation mode press .

5.3.2 Display Options

Display options lets you customize the visual outputs of the receiver. These items include language formats, the time display, how events are sorted to the LCD display, or whether or not to hold unacknowledged events. Table 5-4 lists the available choices and gives a description of those choices.



Figure 5-5 View of Display Options







Table 5-4: Display Options and Descriptions

Display Menu Items	Choices	Default	Comments
Language	English	4	See Section 5.3.2.1 for step-by-step instructions.
	español		Not available at this time.
Time Display	AM/PM	4	AM/PM is used for 12 hour time clock displays. See Section 5.3.2.2 for step-by-step instructions.
	24 hour		Military time standard. See Section 5.3.2.2 for step-by-step instructions.
Date Display	m/d/y	4	m = month, d = day, and y = year.
	d'm'y		See Section 5.3.2.3 for step-by-step instructions.
	y-m-d		
Daylight Savings	Yes	4	See Section 5.3.2.4 for step-by-step instructions.
	No		
Edit ITI Options	Attempts	No	See Section 5.3.2.5 for step-by-step instructions.
	CPU Time	No	
	CPU Type	No	
	Panel Rev	No	
	Arming Level	No	
	MeterAcnt 5	Yes	
	MeterAcnt 12	Yes	

Table 5-4: Display Options and Descriptions


Display Menu Items	Choices	Default	Comments
FMT (Edit Format Options)	FSK1	English	If “English” is selected then the printer and LCD output for calls of these formats will be text descriptions. If “Code” is selected then the printer and LCD output for calls of these formats will be the Code and Zone numbers. See Section 5.3.2.6 for step-by-step instructions.
	BFSK	Code	
	SIA	English	If “English” is selected, the printer and LCD output will be text. If “Code” is selected then the printer and LCD will display the SIA codes followed by zone or other information. See Section 5.3.2.6 for step-by-step instructions.
	CID	Code	This option only affects the SK Expanded automation protocol output. If “English” is selected each event will be sent to the automation as two SIA events; the first with the two digit Group number and the second with the three digit ID number. If “Code” is selected, each event is sent as eleven digits; two digits Message type, one-digit Event Qualifier, three-digit Event Code, two-digit Group Number, and three-digit ID number. See Section 5.3.2.6 for step-by-step instructions.
	PULSE	0 .. 9	If “0 .. 9” is selected hexadecimal digits B through F are forced to 0 as in the way the 9000 receiver does it, or if “0 .. F” is selected digits are sent as is.
	SK9000	Unpacked	Each data packet to the automation contains a single (unpacked) or multiple (packed) events.
Hold Last Event	Yes		LCD will display the last acknowledged event instead of the date/time display in the auto mode. In manual mode the display will show the oldest unacknowledged event.
	No	4	






5.3.2.1 How to Change Language Display

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for display options.
4. Press  until the display flashes on the language format field.
5. Press the  or  button until the display flashes on the desired setting.
6. Press .







Note: Only English format is available at this time.

5.3.2.2 How to Change Time Format Display







1. Enter program mode. (See Section 5.1.)
2. Press  for general options.

3. Press  for display options.
4. Press  until the display flashes on the time format field.
5. Press the  or  button until the display flashes on the desired setting.
6. Press  .

5.3.2.3 How to Change Date Format Display

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for display options.
4. Press  until the display flashes on the date format field.
5. Press the  or  button until the display flashes on the desired setting.
6. Press  .

5.3.2.4 How to Turn “On” or “Off” Daylight Savings.








1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for display options.
4. Press  until the display flashes on the daylight savings field.
5. Press the  or  button until the display flashes on the desired setting.
6. Press  .

5.3.2.5 How to Edit ITI Options

If one of the following ITI options is turned on (set to Yes) then the LCD and printer outputs will include that information.








- Attempts
- CPU Time
- CPU Type
- Panel Rev
- Arming Level
- MeterAcnt 5
- MeterAcnt 12

To set these display options follow these steps:







1. Enter program mode. (See Section 5.1.)
 2. Press  for general options.
 3. Press  for display options.
 4. Press  until the display flashes on the <ITI> savings field.
 5. Press  .
 6. Press the  or  button until the equal sign is on the desired option.
 7. Press  to change the setting of that option.
- Note: Additional presses of the enter button will toggle the setting between Yes and No.*
8. Repeat steps 6 and 7 for any other ITI display options you wish to edit.

5.3.2.6 How to Edit Format Options

To set these display options follow these steps:

1. Enter program mode. (See Section 5.1.)
 2. Press  for general options.
 3. Press  for display options.
 4. Press  until the display flashes on the <FMT> savings field.
 5. Press  .
 6. Press the  or  button until the equal sign is on the desired option.
 7. Press  to change the setting of that option from “English” to “Code”.
- Note: Additional presses of the enter button will toggle the setting between English and Code.*
8. Repeat steps 6 and 7 for any other Format options you wish to edit.

5.3.2.7 How to Set Hold Last Event

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for display options.
4. Press  until the display flashes on the hold last event field.
5. Press the  or  button until the display flashes on the desired setting.
6. Press  .

5.3.3 Communications

In the communication option the installer can configure the communication ports, automation configuration, annunciator configurations, and the auxiliary relay configurations.



Figure 5-6 Communications Options Menu

Table 5-5 list the available choices and gives a description of those choices.

Table 5-5: Communications Options and Description

Communications Menu	Choices	Options	Default	Comments	
Port Functions	Com1	Unused	4	Rules for Port Functions: 1. Functions in Brackets [] will not appear unless "Automation" is selected for Com1 function. 2. Functions in { } will not appear unless "Printer" is selected in Com1 or Par. 3. A function may be selected only once in the 3 ports (only one printer, only one Diag, and so on). 4. All ports may be configured "Unused". 5. Only Com port 1 can be set as the primary automation port.	
		Automation			
		Printer			
	Com2	Unused	4		
		Diagnostics			Would output raw Hex-ASCII code.
		Printer			English output to a printer.
		[Auto Bkp]			Would act as a backup automation port if a fault occurred with the primary automation port.
		[Auto Bkp Prn]			Would act as a backup print output port if a fault occurred with the automation port.
		{Print Bkp}			Would act as a backup printer port if a fault occurred with the primary printer port.
		MeterMinder			Would output MeterMinder output format.

Table 5-5: Communications Options and Description

Communications Menu	Choices	Options	Default	Comments
Port function (Continued)	Par	Unused	4	
		Diagnostics		Would output raw Hex-ASCII code.
		Printer		English output to a printer.
		[Auto Bkp Prn]		Would act as a backup print output port if a fault occurred with the automation port.
		MeterMinder		Would output MeterMinder output format.
Com Port 1	Baud	19200	4	
		9600		
		7200		
		4800		
		2400		
		1200		
		600		
		300		
		110		
	D (# Data Bits)	7		
		8	4	
	S (# Stop Bits)	1	4	
		2		
	P (Parity)	Even		
		Odd		
		Space		
		Mark		
		None	4	
	F (Flow)	Hdwr	4	Unidirectional communication
		None		
Init Str (Initialization String)			Two 20 character ESC command sequences. See Section 5.3.3.4 for step-by-step instructions.	
Com Port 2				Same as Com Port 1
Par Port (Parallel Port)	Init Str (Initialization String)			Two 20 character ESC command sequences. See Section 5.3.3.4 for step-by-step instructions.

Table 5-5: Communications Options and Description








Communications Menu	Choices	Options	Default	Comments
Automation Cfg	Format	SIA CIS		See Section 5.3.3.5 for programming steps.
		SIA 2000		SIA 2000 output same as SIA CIS output.
		SK 9000	4	See Section 8 for more information on automation formats.
		SK EXP		
		ITI Gen		
		ITIComp		
	Hex	Y = Enabled		4
N = Disabled				
Heartbeat	Y = Enabled		4	See Section 5.3.3.5 for programming steps.
	N = Disabled			
Time (of Heartbeat)	10-600 seconds	0 sec		How often a supervisory signal (a heartbeat) is sent to the automation computer. See Section 5.3.3.5 for programming steps.
Ack Timeout	0-600 seconds	10 sec		15 seconds or less in UL applications. See Section 5.3.3.5 for programming steps.
Annunciator Cfg	Printer	Yes	4	Yes = will annunciate if an event, trouble or fault condition occurs.
		No		
	Bkp Printer	Yes	4	No = no annunciation if an event, trouble or fault condition occurs.
		No		
	Auto Comp	Yes	4	See Section 5.3.3.6 for programming steps.
		No		
	Bkp Auto Comp	Yes	4	
		No		
	Meter Minder	Yes	4	
		No		
	Battery	Yes	4	
		No		
	Line Card	Yes	4	
		No		
	Line Fault	Yes	4	
		No		
	AC Power	Yes	4	
		No		
	Buffer Full	Yes	4	
		No		
Listen In	Yes	4	Must be set to No for UL installations.	
	No			
Call Pending	Yes	4		
	No			

Table 5-5: Communications Options and Description

Communications Menu	Choices	Options	Default	Comments
Aux Relay Cfg	Printer	Yes	4	Yes = will annunciate if an event, trouble or fault condition occurs.
		No		
	Bkp Printer	Yes	4	No = no annunciation if an event, trouble or fault condition occurs.
		No		
	Auto Comp	Yes	4	See Section 5.3.3.7 for programming steps.
		No		
	Bkp Auto Comp	Yes	4	Must be set to No for UL installations.
		No		
	Meter Minder	Yes	4	
		No		
	Battery	Yes	4	
		No		
	Line Card	Yes	4	
		No		
	Line Fault	Yes	4	
		No		
	AC Power	Yes	4	
		No		
	Buffer Full	Yes	4	
		No		
	Listen In	Yes	4	
		No		
	Call Pending	Yes	4	
		No		








5.3.3.1 How to Set Up Port Function

Port functions set up how each of the communication ports will be used. Before you start to set up the port functions review the rules for port functions in Table 5-5.

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for communications.
4. Press  to set port functions.
5. Press the  or  button until the display flashes on the desired port setting.
6. Press  .
7. Repeat steps 5 through 6 until all port functions are set.
8. Press  to exit menu.








5.3.3.2 How to set Com Port 1 Parameters

Set the baud rate, the number of data bits, number of stop bits, the parity, and the flow control (see Table 5-5 for choice details).

1. Enter program mode. (See Section 5.1.)
 2. Press  for general options.
 3. Press  for communications.
 4. Press  to set Com Port1 parameters.
 5. Press the  or  button until the display flashes on the desired port setting.
 6. Press  .
- Note: See "How to Edit Init String" in Section 5.3.3.4.*
7. Repeat steps 5 through 6 until all parameters are set.
 8. Press  to exit menu.

5.3.3.3 How to Set Com Port 2 Parameters

Set the baud rate, the number of data bits, number of stop bits, the parity, and the flow control (see Table 5-5 for choice details).

1. Enter program mode. (See Section 5.1.)
 2. Press  for general options.
 3. Press  for communications.
 4. Press  to set Com Port2 parameters.
 5. Press the  or  button until the display flashes on the desired port setting.
 6. Press  .
- Note: See “How to Edit Init String” in Section 5.3.3.4.*
7. Repeat steps 5 through 6 until all parameters are set.
 8. Press  to exit menu.


5.3.3.4 How to Edit Init String (Com 1, Com 2, and Parallel Port)

An initialization string can be used to customize the output to the device connected to a port on the receiver.

For example, you can skip over perforations, set proportional spacing, or condense the print output to a printer.

Note: Refer to the user manual, of the device connected to the receiver, for special command sequences.

Follow these step to insert an initialization string:

1. Press  at the flashing <Init Str> field.

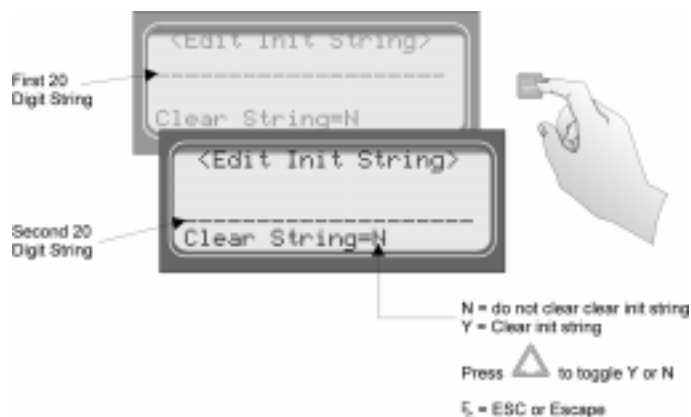


Figure 5-7 Initialization String Display





2. Press the  or  button until the desire character flashes.

Table 5-6: Initialization String Characters

Character	Description
0-9	Numeric characters, which can be entered from the touchpad or up/down arrows.
a-z and A-Z	Alpha characters entered with the up/down arrows.
: _ - . , & * # ? ^E C and space bar.	Special Characters entered with the up/down arrows.

3. Press , the next character position will flash.
4. Repeat steps 2 and 3 until the desired sequence is complete.
5. Press .

- Repeat steps 2 through 5 for the second string.

To clear an init string:

- At the Clear String=N field, press  until the desired option flashes. See Figure 5-7.

- Press .








- Press  to exit menu.

5.3.3.5 How to Set Automation Communication

Through this option the automation communication format and parameters can be set up. (See Table 5-5 for format choices.)

How to Set the Format

Follow these steps to set the automation communication format.









- Enter program mode. (See Section 5.1.)
- Press  for general options.
- Press  for communications.
- Press  to setup automation configuration.
- Press the  or  button until the display flashes on the desired port setting.
- Press .
- Press  if you wish to exit menu or continue with heartbeat.

How Enable or Disable Hex Mode

When Hex Mode is enabled, any call data that is determined to be bad will output in a Hex format. This feature is only available if SK 9000 automation protocol is selected.

Note: This feature should be disabled if the automation software package that you are using does not recognize Hex data.







Follow these steps to enable or disable heartbeat:



1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for communications.
4. Press  to set up automation configuration.
5. Press  until the heartbeat field is flashing.
6. Press the  or  button until the display flashes on the desired setting.
7. Press .
8. If you wish to exit, press  until you exit this menu.

How Enable or Disable Heartbeat

A heartbeat is a supervisory signal continually test the communication link between the automation computer and the receiver.

Follow these steps to enable or disable heartbeat:









1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for communications.
4. Press  to set up automation configuration.
5. Press  until the heartbeat field is flashing.
6. Press the  or  button until the display flashes on the desired setting.

7. Press  .
8. If you wish to exit, press  until you exit this menu.

Time (Period of Heartbeat)

This option determines how often the heartbeat is sent to the automation computer. For example, if the time is set to 60 seconds (default setting) then a heartbeat will be sent every 60 seconds.









Follow these steps to set the time period or the heartbeat:

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for communications.
4. Press  to set up automation configuration.
5. Press  until the time field is flashing.
6. From the number keypad enter the desired number or press the  or  button until the display flashes on the desired setting.
7. Press  .
8. If you wish to exit, press  until you exit this menu.

Ack Time (Acknowledge Time)

The acknowledge time is the duration that the receiver will wait for a response from the automation computer after a data packet has been sent. Data packets include all reports and heartbeats.

Follow these steps to set the time period or the heartbeat:

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for communications.
4. Press  to set up automation configuration.
5. Press  until the ack time field is flashing.
6. From the number keypad enter the desired number or press the  or  button until the display flashes on the desired setting.
7. Press  .
8. If you wish to exit, press  until you exit this menu.

ITI Options (Only Visible if ITI Gen or ITIComp Formats are Chosen)

These are options particular to the ITI automation format and can only be edited if one of these formats is used to communicate with the automation computer. See Sections 8.4 and 8.5.

Follow these steps to set the ITI options:










1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for communications.
4. Press  to set up automation configuration.
5. Press  until the ack <ITI> field is flashing.
6. Press  .

Table 5-7: ITI Automation Format Options





Option	Choices	Default	Meaning	Comments
Log Recs	Y (Yes)	N	Log records identify the time and date of a incoming report.	
	N (No)			
XID	Y (Yes)	N	Extended panel Identification code.	See 8.4.2.2.
	N (No)			
SupCh		s	Supervisory Character is sent from the automation computer. The receiver will respond with an OKAY or supervisory record. See Sections 8.4.5 and 8.5.5.	
No Data		0	Identifies the no data character in the log record.	

Note: ITI automation formats are covered in greater detail in Sections 8.4 and 8.5.





Log Recs (For ITI Formats):

1. At the flashing Log Recs field press the  or  button until the display flashes on the desired setting.
2. Press  .
3. If you wish to exit, press  until you exit this menu.




XID (Extended ID for ITI Panels):

1. At the flashing XID field press the  or  button until the display flashes on the desired setting.
2. Press  .
3. If you wish to exit, press  until you exit this menu.

SupCh (Supervisory Character):

1. At the flashing SupCh[s] field press the  or  button until the display flashes on the desired setting.
2. Press  .
3. If you wish to exit, press  until you exit this menu.




NoData (No Data Character for Log Record):

1. At the flashing NoData[0] field enter a digit from 0-9 from the touchpad or press the  or  button until the display flashes on the desired setting.
2. Press  .




3. If you wish to exit, press  until you exit this menu.

5.3.3.6 How to Configure the On-board Annunciator Outputs

Program what will give a trouble annunciation or what will not annunciate from the on-board annunciator.

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for communications.
4. Press  to set annunciator configuration.

A list of the annunciator output options appears.

5. Press the  or  button to move through the annunciator output options.
6. When the equal sign highlights the option you wish to change, press  .

Note: Additional presses of the enter button toggle the setting between “yes” or “no”. See Table 5-8.

7. Repeat steps 5 through 6 for all annunciator options you wish to change. See Table 5-8 for list of additional options.

Table 5-8: On-board Annunciator and Auxiliary Relay Options




Option	Choices	Comments
Printer	Y (Yes)	Y = The on-board annunciator will beep if there is an error condition. N = No on-board annunciation if an error condition exist.
	N (No)	
Bkp Printer	Y (Yes)	
	N (No)	
Auto Comp	Y (Yes)	
	N (No)	
Bkp Auto Comp	Y (Yes)	
	N (No)	
MeterMinder	Y (Yes)	
	N (No)	
Battery	Y (Yes)	
	N (No)	
Line Card	Y (Yes)	
	N (No)	
Line Fault	Y (Yes)	
	N (No)	
AC Power	Y (Yes)	
	N (No)	
Buffer Full	Y (Yes)	
	N (No)	
Listen In	Y (Yes)	
	N (No)	
Call Pending	Y (Yes)	
	N (No)	

5.3.3.7 How to Configure the Auxiliary Relay Outputs

Program what will give a trouble output to the auxiliary relay contact. (To program the normal state of the auxiliary relay see Section 5.3.4.)

1. Enter program mode. (See Section 5.1.)
2. Press **1** for general options.
3. Press **3** for communications.
4. Press **7** to set relay configuration.

A list of the relay output options appears.

5. Press the  or  button to move through the relay output options.
6. When the equal sign highlights the option you wish to change, press  .

Note: Additional presses of the enter button toggle the setting between “yes” or “no”. See Table 5-8.

7. Repeat steps 5 through 6 for all relay options you wish to change. See Table 5-8 for list of additional options.

5.3.4 System Options

In system options you can configure the backup battery configuration, the receiver ID number, and the normal state of the auxiliary relay.

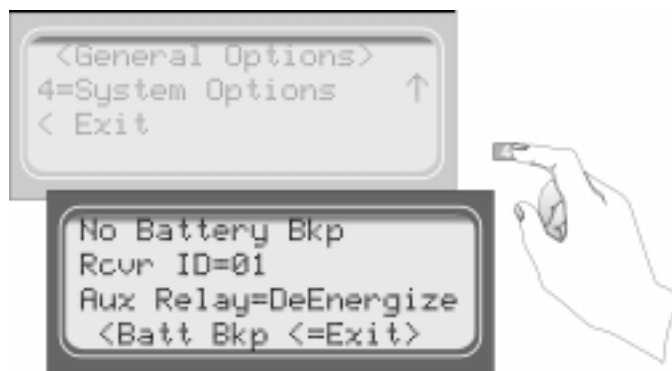


Figure 5-8 System Options Display






Table 5-9 list the available choices and gives a description of those choices.

Table 5-9: System Options


System Options Menu	Choices	Default	Comments
Battery Backup Cfg	No Battery Bkp	4	No charging current applied to battery circuit. Receiver will not test battery output or give trouble annunciations.
	Battery Bkp		Charging current applied to battery circuit.
	DC Bkp		No charging current applied to battery circuit. Typically used for systems that use a UPS (uninterrupted power supply) for backup battery power.
Receiver ID	01-99	01	
Bad Data Blocks	Strip Data	4	If this is selected an indicator will be sent to the automation computer that indicates a bad data block was received.
	Send Data		Same as Strip Data except the bad data block is sent with the indicator.
Aux Relay Normal State	De-energized	4	See Section 5.3.4.4 for auxiliary relay output options.
	Energized		

5.3.4.1 How to Change Backup Battery Setting

Through system options the backup battery can be configured for the type of backup battery your installation site requires.





1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for system options.
4. Press the  or  button until the display flashes on the desired setting.
5. Press .

To Exit:


Press  until you return to the main menu.

5.3.4.2 How to Set the Receiver ID Number

In large central stations where calls may be coming in on several receivers at once, the automation software will need to identify which receiver it received a call from. This will help in troubleshooting if a problem occurred with the automation system or receiver.



1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for system options.
4. Press .
- The display will flash on the receiver ID number: Rcvr ID=01
5. Enter the desired receiver ID number (a number from 01 to 99).
6. Press .

To Exit:

Press  until you return to the main menu.



5.3.4.3 How to Configure Output for Bad Data Blocks

This feature selects how bad data blocks will be sent from the receiver to the automation computer. If Strip Bad is selected then an indicator will be sent to the automation computer when a bad data block is received, but the actual bad data block will not be sent. If Send Bad is selected an indicator will be sent to the automation computer along with the bad data block.

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for system options.


4. Press .

The display will flash on the Bad Data Blocks: Strip_Bad

5. Press the  or  button until the display flashes on the desired setting.

6. Press .

To Exit:

Press  until you return to the main menu.



5.3.4.4 How to Set the Normal State of the Auxiliary Relay Contact

The auxiliary relay contact is a Form C relay. This feature allows you to set the state of the auxiliary relay normally open contact when power is applied to the receiver.

1. Enter program mode. (See Section 5.1.)
2. Press **1** for general options.
3. Press **4** for system options.


4. Press  .

The display will flash on the auxiliary relay setting: Aux Relay=Energized

5. Press the  or  button until the display flashes on the desired setting.

6. Press .

To Exit:

Press  until you return to the main menu.

5.3.5 Message Queue Options

Set the percentage of how full the message queue must be before a “Message Queue Warning” and “Message Queue Warning Restore” occur. See Section 7 for trouble messages.





Figure 5-9 Message Queue Display

Note: The “Warning On” can be set from 10% to 99%, the “Warning Off” can be set from 1% to 90%. A minimum separation of 5% will be set between the On % and the Off %. For example, if the “Warning On” is set to 82% the “Warning Off” maximum setting can be 77%.


5.3.5.1 Set the Message Queue Warning On level

Set the percentage of how full the message queue can get before the receiver indicates a “Message Queue Warning” condition.

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for message queue options.
4. Enter the level (in %) you wish the receiver message queue to get before it will indicate a message queue warning.




5. Press  .

To Exit:

Press  until you return to the main menu.


5.3.5.2 Set the Message Queue Warning Off Level

Set the percentage level where the receiver will indicate a restore condition for a “Message Queue Warning”.

1. Enter program mode. (See Section 5.1.)
2. Press  for general options.
3. Press  for message queue options.
4. Press  until the display flashes on the Off field.
5. Enter the level (in %) you wish the receiver message queue to get before it will indicate a message queue warning restore.



6. Press  .

To Exit:


Press  until you return to the main menu.

5.3.5.3 Set the maximum Buffer Limit

Used to set the maximum number of bytes in a call. This number is used to determine if a call is a runaway call.

1. Enter program mode. (See Section 5.1.)
2. Press **1** for general options.
3. Press **5** for message queue options.
4. Press  until the display flashes on the Max Buf Limit field.
5. Press .

To Exit:

Press  until you return to the main menu.

5.4 Line Card Menu

Through the line card menu you can add a new line card, edit, clear, or view existing line cards.



Figure 5-10 Choosing Line Card Menu and Line Card Program Menu Items

Table 5-10 lists the menu options available under line card menu.

Table 5-10: Line Card Menu Options

Line Card Menu	Choice	Choice	Choice	Default	Comments
Add Line card	Line card #	Use Defaults			
		Copy Existing			
Edit Line Card	Handshake Sequence	Sequence Number	1	See the corresponding numbers below.	The order in which the line card will output different handshakes. For more information see page 5-46.
			2		
			3		
			4		
			5		
			6		
		Format Group	2225Hz	1	Number in default column indicate the defaults per handshake sequence number. For more information see page 5-46
			2300Hz	3	
			1400Hz	4	
			1400_2300Hz	2	
			Westec	5	
			Modem II	6	
			Modem IIe		
		Handshake Delay	0-255 In 50ms periods	1. 010 (500ms)	For more information see page 5-47
				2. 002 (100ms)	
				3. 002 (100ms)	
				4. 002 (100ms)	
				5. 002 (100ms)	
				6. 002 (100ms)	
		Handshake Duration	0-255 In 10ms periods	1. 090 (900ms)	For more information see page 5-47
2. 010 (100ms)					
3. 100 (1 sec)					
4. 100 (1 sec)					
5. 100 (1 sec)					
6. 100 (1 sec)					

Table 5-10: Line Card Menu Options

Line Card Menu	Choice	Choice	Choice	Default	Comments
Edit Line Card (Continued)	Handshake Sequence (Continued)	Handshake Wait	0-255 In 50ms periods	1. 064 (3.2 sec)	For more information see page 5-48
				2. 010 (500ms)	
				3. 064 (3.2 sec)	
				4. 064 (3.2 sec)	
				5. 064 (3.2 sec)	
				6. 064 (3.2 sec)	
		Handshake Acknowledge Duration	0-255 In 10ms periods	1. 075 (750ms)	For more information see page 5-48
				2. 055 (550ms)	
				3. 100 (1 sec)	
				4. 100 (1 sec)	
				5. 100 (1 sec)	
				6. 100 (1 sec)	
	Pulse Format	5-Digit Format	Select Format	4/1	If a pulse comes in a 5-digit format then the data will then be treated as the selected format.
		6-digit Pulse Fmt	Select Format	4/2	If a pulse comes in a 6-digit format then the data will then be treated as the selected format.
		Inter-digit Tm(ms)	300 ms to 2 Sec.		This feature selects the time period between data blocks.
		Ack on Even Round	Yes or No		Select this option if the 1400 or 2300 Hz format requires a Ack tone on even rounds.
		Partially Extended	Yes or No		Select this option if you have multiple extended data blocks for 3/1 or 4/1 formats.
	Line Options	Direct	Y (Yes)		Y = dedicated or direct connect phone line. N = used for standard phone lines. See page 5-50 for more information.
			No (No)	4	
		Number of Rings	000-255	002	If caller ID is turned on (see Section 5.4.2.6), rings should be set to 2.
On time		1-255 in 50ms periods	010 (500ms)	See page 5-51 for more information.	
Off time		1-255 in 50ms periods	010 (500ms)	See page 5-52 for more information.	
dB Level		Lo (Low)		4	Select the db level of the handshake and acknowledge tones.
		Hi (High)			
	Md (Medium)				

Table 5-10: Line Card Menu Options

Line Card Menu	Choice	Choice	Choice	Default	Comments	
Edit Line Card (Continued)	Line Options (Continued)	Threshold	1-15 in 2.0 VDC steps	08 (16.0VDC)	See page 5-52 for more information.	
		Sample Time	0-255 seconds	020 (20 Sec)	See page 5-53 for more information.	
	Listen In	Listen Mode	Not Used		4	See page 5-54 for more information. Must not be used in UL installations.
			Common			
			PBX		PBX String edit	See page 5-55 for more information.
		Timeout	0-255	0	See page 5-56 for more information.	
		Listen In account edit	Add Account		None	See page 5-56 for more information.
	Edit Account					
	Clear Account					
	Trap List	Add Account	Enter Account #	None	None	See page 5-58 through page 5-60 for more information.
		Edit Account	Choose Account			
		Clear Account	Choose Account			
	Misc. Line Options	Echo Suppress	Y (Yes)			Outputs a 2 second 2025Hz tone to disable echo suppression equipment that may interfere with modem formats.
			N (No)		4	
		Caller ID	Yes		4	The Caller ID information will only be sent on incoming call messages that contain no data. If the call message contains any data (valid or invalid) no Caller Id information will be output.
			No			
		Billing Delay	Y (Yes)			Initiates a 2 second delay at the start of each call before the handshake delay.
			N (No)		4	See page 5-62 for more information.
		Hunt Group	00-99	00		Allows multiple line cards to report under the same group number to the automation software.
		Line Card ID	000-999	000		if 000 is selected the line card will use the number of the slot number of the receiver it is plug into as its number.

Table 5-10: Line Card Menu Options


Line Card Menu	Choice	Choice	Choice	Default	Comments	
Edit Line Card (Continued)	ITI Options Menu	ITI SCode Menu	Add Acct/ SCode	None	See Section 5.3.2.5.	
			Edit Acct/ SCode	None	See Section 5.3.2.5.	
			Clear Acct/ SCode	None	See Section 5.3.2.5.	
			Add SCode Table	None	See Section 5.3.2.5.	
			Clear SCode Table	None	See Section 5.3.2.5.	
		Date/Time Flag	Requested	4		
			Always			
		ITI 300 Baud	Yes		4	If enabled, the receiver will attempt to negotiate 300 baud communication with ITI panels that support 300 baud communication. See 5.4.2.6 for programming steps.
			No			
		Audio Mode	Instant			Select the type of listen in that will be performed for ITI control panels.
One Ring						
Dial Back						
Copy Line Card(s)	Use Defaults	Choose Line card(s) #			Choose Line card(s) # that you wish to be programmed to factory defaults.	
	Copy Existing	Choose Line card # of Source & target Line Card			Copy the programming of one line card (source) and paste it into one or several (target) line cards.	
Clear Line Card	Choose line card #				Deletes a line card from the receiver.	
View Line Card					Views what line cards are installed.	
Rollins						

5.4.1 Add Line Card


To program in a new line card follow these steps:


1. Install the new line card. (See Section 3.4.)
2. Log on to the receiver. (See Section 4.4.4 for log on procedure.)

3. Press  button.

4. Press  for program menu.

The display will briefly display Initializing
Please wait . . .

5. Press  to choose line card menu.

6. Press  to add a new line card.

The Display will show <Add Line Card> _ _

Enter Line card #:

7. Enter the slot number of the line card being added (1-2).

8. Press  button.

9. Choose  to use line Card defaults.

or


10. Press  to use the programming of another line card.

5.4.2 Edit Line Card


To edit an existing line card follow these steps:

1. Log on to the receiver. (See Section 4.4.4 for log on procedure.)

2. Press  button.

3. Press  for program menu.

The display will briefly display Initializing
Please wait . . .

4. Press  to choose line card menu.

5. Press  to edit line card.

The display will show a list of the existing line cards.

6. Press the  or  arrow buttons to move through the available list.

7. When the equal sign highlights the line card you wish to edit:

Press .

The display will show a list of choices. Table 5-11 lists these choices and a brief description.

Table 5-11: Edit Line Card List Items and Description

Edit Line Card List	Description
1 Handshake Seq	This function is used to program the handshake order and parameters for this line card.
2 Line Options	Used to set number of rings, ring on/off duration, threshold voltage, and sample time.
3 Listen In	Used to program the parameters for the listen in (two-way voice communication) feature if used. Must not be used in UL installations.
4 Trap List	Used to set up accounts that need to be trapped such as panel which must be sent to a down loading computer for programming or updating.
5 Misc. Line Opt.	Used to program hunt group number, enable or disable echo suppression and billing delay.

5.4.2.1 Handshake Sequence

Each line card is intelligent enough to determine what format is being sent from a reporting panel. You only need to program the handshake order and parameters for each line card. A line card will initiate up to four different types of handshake tone groups. The order in which the receiver sends out these handshake signals can be changed in this program location for each line card. Table 6-1 in Section 6 lists the proper handshake to use for the type of communication format you are using with a panel.

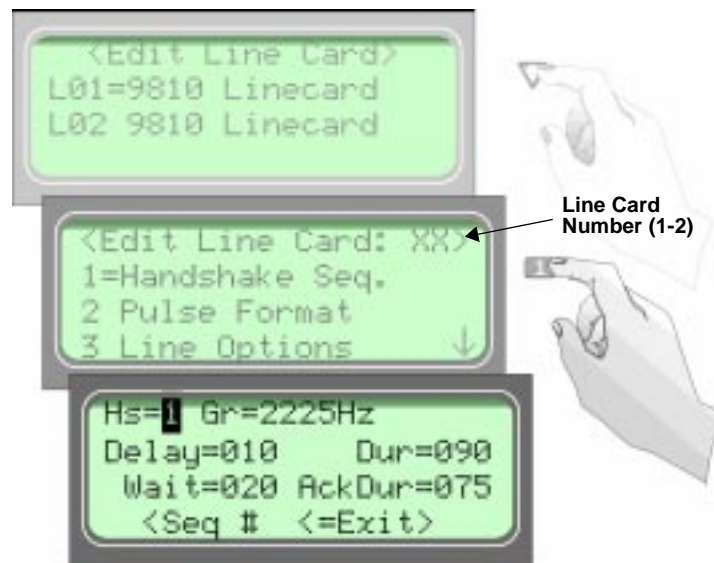


Figure 5-11 Handshake Sequence Menu

Follow these steps to change the handshake order and or the parameters associated with the handshake.



To Change the Handshake Sequence Number:

Handshake sequence sets the order in which the receiver will send out handshakes.

1. Follow the procedures in Section 5.4.2.

2. Press **1** for handshake sequence menu.

When display flashes on the Seq# (see Figure 5-11).

3. Press the  or  button to change the ordered handshake number.

1 = the first handshake tone sent 2 = the second handshake tone to be sent and so on.

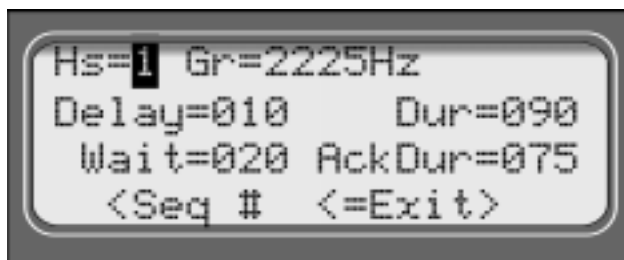




Figure 5-12 Handshake Order Number


4. When the desired order number is flashing press  or .



The display will start flashing the format group field.



To Change the Format Group:

1. Follow the procedures in Section 5.4.2.

2. Press **1** for handshake sequence menu.







3. Press  until the display flashes on the Format Group field. See Table 5-10 for valid entries.

4. Press the  or  button to change the format group. See Table 6-1 in Section 6 for your communication format.

5. When the desired format group is flashing press  or .






To Change the Handshake Delay Time:

This is the duration of time that the receiver will wait before it sends its handshake tone. See Table 5-10 for valid entries.

1. Follow the procedures in Section 5.4.2.
2. Press  for handshake sequence menu.
3. Press  until the display flashes on the Hs delay field.
4. Enter the desired value from the keypad or press the  or  button to change the delay time.
5. When the desired handshake delay time is flashing press  or .







To Change the Handshake Duration Time:

The handshake duration is the length of time that the receiver will send a handshake tone. See Table 5-10 for valid entries.

1. Follow the procedures in Section 5.4.2.
2. Press  for handshake sequence menu.
3. Press  until the display flashes on the Hs duration field.
4. Enter the desired value from the keypad or press the  or  button to change the handshake duration time.
5. When the desired handshake duration time is flashing press  or .





To Change the Maximum Handshake Wait Time:

The wait time is the amount of time the receiver will wait for data from the reporting panel before outputting the next handshake sequence. See Table 5-10 for valid entries.

1. Follow the procedures in Section 5.4.2.
2. Press  for handshake sequence menu.
3. Press  until the display flashes on the Max Wait field.
4. Enter the desired value from the keypad or press the  or  button to change the wait time.
5. When the desired wait time is flashing press  or .

To Change the Acknowledgment Tone Duration Time:





The acknowledgment tone duration time is the amount of time the receiver will send an acknowledgment tone to the reporting panel. See Table 5-10 for valid entries.



1. Follow the procedures in Section 5.4.2.
2. Press  for handshake sequence menu.
3. Press  until the display flashes on the Ack duration field.
4. Enter the desired value from the keypad or press the  or  button to change the acknowledgment tone duration time.

5.4.2.2 Pulse Format







Select how this line card will handle pulse formats that are outside the standards for pulse format protocol.

To Select Which Format a 5-digit Pulse Format will be received as:

1. Follow the procedures in Section 5.4.2.
2. Press  for pulse format menu.
3. Press  until the display flashes on the 5-digit Fmt field.
4. Select the format by pressing the  or  button.







- When the desired wait time is flashing press  or .

To Select Which Format a 6-digit Pulse Format will be received as:







- Follow the procedures in Section 5.4.2.
- Press  for pulse format menu.
- Press  until the display flashes on the 6-digit Pulse Fmt field.
- Select the format by pressing the  or  button.
- When the desired wait time is flashing press  or .

To Select the Inter-Digit:






This option adjust the time period between data blocks that the receiver will tolerate.

- Follow the procedures in Section 5.4.2.
- Press  for pulse format menu.
- Press  until the display flashes on the Inter-digit field.
- Enter the desired value from the keypad or press the  or  button.
- When the desired wait time is flashing press  or .

Set for 2300 and 1400 formats that require Acknowledges on Even Rounds:

- Follow the procedures in Section 5.4.2.
- Press  for pulse format menu.
- Press  until the display flashes on the Ack on Even Round field.
- Select the format by pressing the  or  button.
- When the desired wait time is flashing press  or .

Set for 3/1 and 4/1 Partially Extended Formats:

1. Follow the procedures in Section 5.4.2.
2. Press **2** for pulse format menu.
3. Press  until the display flashes on the Partially Extended field.
4. Select the format by pressing the  or  button.
5. When the desired wait time is flashing press  or .

5.4.2.3 Line Options

Line options is used to set the type of phone line, number of ring, ring on/off duration, threshold voltage, and sample time.

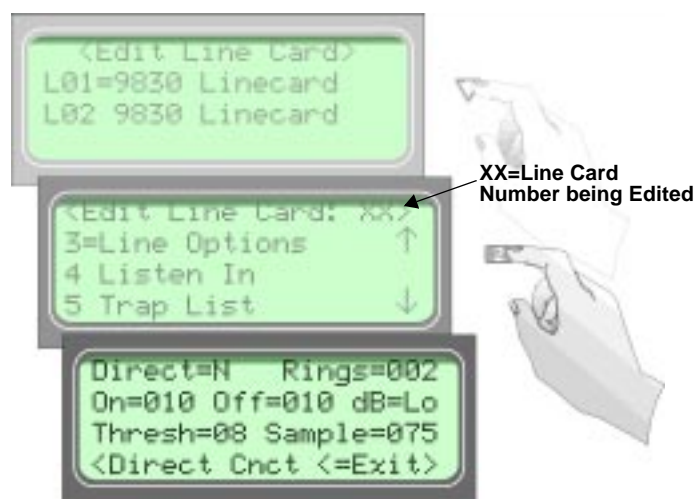











Figure 5-13 Line Options Menu

How to Set the Line Card for a Direct Line (Dedicated Line):

1. Follow the procedures in Section 5.4.2.
2. Press **3** for Line Options menu.
3. The display will flash on the Direct field.
4. Press the  or  button to between Y for Yes, or N for No.
5. When the desired setting is flashing press  or .

To Change the Number of Rings Follow These Steps:







This controls the number of rings the receiver needs to see before it will answer the call.

1. Follow the procedures in Section 5.4.2.
2. Press  for Line Options menu.
3. The display will flash on the Num Rings field.
4. Enter the desired value from the keypad (0-255) or press the  or  button to change the number of rings before the receiver will answer.
5. When the desired number of rings is flashing press  or .

Note: If Caller ID (see Section 5.4.2.6) is turned on the number of rings must be set to 2.






To Change the Ring On Time:

The “On” field controls the ring on time. The ring on time is the length of time the receiver will listen to a ring prior to recognizing it as a ring.

1. Follow the procedures in Section 5.4.2.
2. Press  for Line Options menu.
3. Press  until the display flashes on the On Time field.
4. Enter the desired value from the keypad or press the  or  button to change the ring on time. Values range from 0 to 255 in increments of 50ms (1=50ms, 2=100ms, 3=150ms and so on).
5. When the desired ring on time is flashing press  or .






To Change the Ring Off Time:

The “Off” field controls the ring off time. The ring off time is the length of time the receiver will recognize an “Off” ring voltage.

1. Follow the procedures in Section 5.4.2.
2. Press **2** for Line Options menu.
3. Press  until the display flashes on the Off Time field.
4. Enter the desired value from the keypad or press the  or  button to change the ring off time. Values range from 0 to 255 in increments of 50ms (1=50ms, 2=100ms, 3=150ms and so on).
5. When the desired ring off time is flashing press  or .

To Select the dB Level:






This options selects the dB level of the handshake and acknowledge tone of the line card being programmed.

1. Follow the procedures in Section 5.4.2.
2. Press **3** for Line Options menu.
3. Press  until the display flashes on the dB Level field.
4. Press the  or  button to change the dB level of the handshake and acknowledge tone. Lo (Low) = 11dBm, Md (Medium) = 10dBm, Hi (High) = 9dBm.
5. When the setting is flashing press  or .

To Change the Ring Threshold Voltage:








The “Threshold” field controls the phone line low voltage/Line Fault threshold level. If the voltage on the phone line connected to the line card drops below this set threshold level for that line card, the receiver will indicate a Line Fault on that phone line.

1. Follow the procedures in Section 5.4.2.
2. Press **3** for Line Options menu.

3. Press  until the display flashes on the Threshold field.
4. Enter the desired value from the keypad or press the  or  button to change the Line fault threshold level. Values range from 1 to 15 volts in 2.0 VDC increments (0=line monitor disabled, 1=2.0VDC, 2=4.0VDC, 3=6.0VDC and so on).
5. When the desired line fault threshold is flashing press  or .

To Change the Phone Line Sample Rate:

The sample time field controls how often the receiver will sample the phone line to verify that it is above the set threshold level of that line card. This is how often the receiver verifies the integrity of the phone line.

1. Follow the procedures in Section 5.4.2.
2. Press  for Line Options menu.
3. Press  until the display flashes on the Sample Time field.
4. Enter the desired value from the keypad or press the  or  button to change the line sample rate. Values range from 0 to 255 in 1 second increments (1=1 second, 2=2 seconds, 3=3 seconds and so on). The receiver will make two to three samples before generating a trouble condition on a faulty line.
5. When the desired sample time is flashing press  or .
6. Press  to exit this menu.

5.4.2.4 Listen-In

Note: See Section 2.3.2 for UL requirement on listen-in.



The listen in feature is used to perform two-way voice alarm verification between the central station and the alarm installation site.




Figure 5-14 Listen Mode Menu Display

To Change the Listen Mode:

1. Follow the procedures in Section 5.4.2.
1. Press **4** for the listen in options menu.
2. When the display shows the listen in options menu (see Figure 5-14):

Press the  or  button to change the listen mode setting.

3. When the desired setting is flashing press  .

To Change the PBX String:










1. Follow the procedures in Section 5.4.2.
2. Press  for Listen In options menu.
3. Press  until the display flashes on the <Str> field.
4. Press  .
5. Enter the desired numeric value from the keypad or press the  or  button to enter any special characters.

Table 5-12: Valid Programmable String Characters





Character	Description
F	Flash hook.
P	Delay 500ms
,	Delay 2 seconds
H	Force a hang up of the line.
@	Detect dial tone.
t	Check to see if the line is busy by looking for a busy tone.
0-9, *, #, A, B, C, D	DTMF digits.

6. Press  to move to the next character.
or
7. Press  to enter the PBX string.
8. Select Y or N by pressing the the  or  arrows.
Y = Yes, erase or clear the PBX string. N = No, do not clear the PBX string, save the entered value.



Note: If Yes is selected the PBX string will be cleared and the “Clear String” option will revert to N (No).

To Change the Listen-In Timeout:

Timeout is the amount of time Listen-in will remain active before timing out.

1. Follow the procedures in Section 5.4.2.
2. Press **4** for Listen In options menu.
3. Press  until the display flashes on the <Timeout> field.
4. Enter the desired value from the keypad or press the  or  button to change the timeout setting. Values range from 0 to 255 in 1 second increments.
5. When the desired value is flashing press  .

To Edit the Listen-In accounts Lists:

1. Follow the procedures in Section 5.4.2.
2. Press **4** for Listen In options menu.
3. Press  until the display flashes on the <Account List> field.
4. Press  .

The Figure 5-15 shows the next display.



Figure 5-15 Listen In Accounts Menu

To Add a Listen In Account

5. Press **1**.

The display briefly shows the number (indicated by XX) of the lowest available listen in account number slot (20 total listen in account numbers). Adding # XX

6. Enter the account number you wish to add to the listen in account list.




7. When the desired account number is flashing press .

Table 5-13: Account Characters

Characters	Description
0-9	Numeric entries
A-Z	Alpha entries
*	Alpha-numeric wild card entry. Example: 123* = any account starting with 123.
#	Numeric wild card entry. Example: # = 0 to 9. Example: 12345# = 123450 to 123459.

To Edit a Listen In Account

8. Press **2**.

9. Press the  or  button until the desired listen in account is highlighted by the equal sign.

10. Press .



11. Enter the revised account number you wish to the account list. See Table 5-13.

12. Press .

Note: When editing an existing account it must be completely re-entered.

To Clear a Listen In Account

13. Press **3**.

14. Press the  or  button until the desired listen in account is highlighted by the equal sign.

15. Press .

The Display will read: < WARNING! >

Delete Record No

16. Press the  or  button to toggle to Yes.



Note: Additional presses of the up or down arrow will toggle the choice between “yes” and “No”.

17. Press .


5.4.2.5 Trap List

The trap list is used to trap an account that you wish to route to a downloading computer for initial or additional programming.






To Add a Trap Account

1. Follow the procedures in Section 5.4.2.
2. Press  for Trap List menu.
3. Press .

The display briefly shows the number (indicated by XX) of the lowest available trap account number slot (20 total trap account numbers). Adding # XX





4. Enter the account number you wish to add to the trap account list. See Table 5-13.
5. When the desired account number is flashing press .

To Edit a Trap Account

1. Follow the procedures in Section 5.4.2.
2. Press  for Trap Lists menu.
3. Press .
4. Press the  or  button until the desired trap account is highlighted by the equal sign.
5. Press .
6. Enter the account number you wish to add to the trap account list. See Table 5-13.

7. Press  .

To Clear a Trap Account

1. Follow the procedures in Section 5.4.2.
2. Press  for Trap List menu.
3. Press .
4. Press the  or  button until the desired listen in account is highlighted by the equal sign.

5. Press .

The Display will read: < WARNING! >
 Delete Record No

6. Press the  or  button to toggle to Yes.

Note: Additional presses of the up or down arrow will toggle the choice between “yes” and “No”.

7. Press .

5.4.2.6 Misc. Line Opt.

Some phone lines may use echo suppression, a billing delay feature, or a hunt group. These miscellaneous phone options can be set through this programming menu.





Figure 5-16 Miscellaneous Phone Line Options


To Change the Echo Suppress Setting:

If echo suppression is enabled (Y) a 2025Hz signal will be output for two seconds to disable echo suppression equipment. This option should be used only for panels that require a 2225Hz handshake.

1. Follow the procedures in Section 5.4.2.
2. Press **6** for Miscellaneous Line Options menu (see Figure 5-16).

The display Flashes on the Echo Supres= field.






3. Press the  or  button to change the echo suppress option from Y (Yes) to N (No) or vice versa.

4. When the setting is flashing press .

How to Set Caller ID






Caller Id information is only sent if the incoming call has no data contained in it.

Note: If the incoming message contains any data (valid or invalid) no Caller ID information will be sent.







1. Follow the procedures in Section 5.4.2.
2. Press  for Miscellaneous Line Options menu (see Figure 5-16).
The display Flashes on the Echo Supress= field.
3. Press  until the display flashes on the Caller ID field.
4. Press the  or  button to change the caller ID option from Y (Yes) to N (No) or vice versa.
5. When the setting is flashing press  .

To Change the Billing Delay Setting:

If billing delay is enabled (Y), a delay of two seconds will be inserted at the beginning of each incoming call.







1. Follow the procedures in Section 5.4.2.
2. Press  for Miscellaneous Line Options menu.
3. Press  until the display flashes on the Billing Delay field.
4. Press the  or  button to toggle the billing delay between “Yes” or “No”.
5. When the desired setting is flashing press  .

To Change the Hunt Group:

1. Follow the procedures in Section 5.4.2.
2. Press  for Miscellaneous Line Options menu.
3. Press  until the display flashes on the HntGrp field.
4. Enter the desired value from the keypad or press the  or  button to change the hunt group number.
5. When the desired hunt group is flashing press .
6. To exit press .

To Change the Line Card ID:

If the line card number is set to 000 (default) the line card ID number will correspond to the slot that it is plugged into.

1. Follow the procedures in Section 5.4.2.
2. Press  for Miscellaneous Line Options menu.
3. Press  until the display flashes on the Line Card ID field.
4. Enter the desired value from the keypad or press the  or  button to change the hunt group number.
5. When the desired ID number is flashing press .
6. To exit press .

5.4.2.7 ITI Options Menu

In this programming location settings particular to an ITI control panel can be set, such as security codes (SCode), date and time setting, and 300 baud negotiation.



Figure 5-17 ITI Options Menu

Table 5-14: ITI Options Menu Items

ITI Options Menu	Choice	Valid Entry	Comments	
ITI SCode Menu	Add Acct/SCode (up to 20 entries)	Enter control panel 5-digit account No.	00000 to 99999 Enter the 5-digit account number of the ITI control panel that the receiver will be looking for on this line card.	
		Set or Clear Security Code.	Clear or Set Clear old security code and set to default security code. (See Default SCode above.) If set is chosen an additional menu will appear that allows you to enter the security code you wish to set the panel to.	
		Security Code	00000 to 99999 (Appears only if Set is previously chosen) Note: If the security code entered here is not presently in the SCode table (see below), it will automatically be entered once the line card has successfully communicated with that account.	
	Edit Acct/SCode	1 to 20	Same as Add Acct/SCode	Edit an account previously programmed into Add Acct/SCode table.
	Clear Acct/SCode		1 to 20	Remove an account that was previously programmed into Add Acct/SCode table.
	Add SCode Table (up to 20)		00000 to 99999	Adds a new security code to the security code table.
	Clear SCode Table		1 to 20	Removes an security code from the SCode table.
Date/Time Flag	Requested		The date and time programmed into an ITI control panel will only be updated by the receiver if the control panel requests it.	
	Always		The date and time programmed into an ITI control panel will be updated by the receiver automatically every time the control panel calls into the receiver.	

Table 5-14: ITI Options Menu Items

ITI Options Menu	Choice	Valid Entry	Comments
ITI 300 Baud	Yes		If enabled, the receiver will attempt to negotiate 300 baud communication with ITI panels that support 300 baud communication. See 5.4.2.6 for programming steps.
	No		
Audio Mode	Instant		ITI controls that that have listen in initialized will preform listen in instantly when the control calls the central station.
	One Ring		ITI controls that that have listen in initialized will preform listen in after one ring when the control is called, after the control calls the central station.
	Dial Back		ITI controls that that have listen in initialized will call a programmed phone number after the control calls the central station.

ITI SCode Menu:

Some ITI control panels use one of two types of communication locks (phone lock or a central station lock). On the panels using a central station lock, a security code is required during communication. In this programming location a 5-digit central station lock security code can be set.

1. Follow the procedures in Section 5.4.2.
2. Press **7** for ITI options menu.

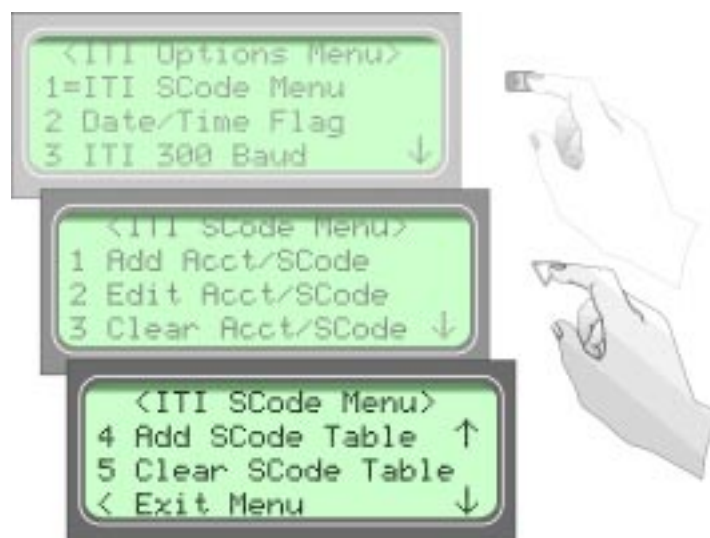


Figure 5-18 ITI SCode Menu

- Press **1** for ITI SCode (security code) menu.

Choose the desired option (refer to Figure 5-18 and Table 5-15).





Table 5-15: ITI SCode (Security Code) Options

Choice	Enter	Comments
Add Acct/SCode (up to 20 entries)	Enter control panel 5-digit account No. 00000 to 99999	Enter the 5-digit account number of the ITI control panel that the receiver will be looking for on this line card.
	Clear or Set	Clear old security code and set to default security code. (See Default SCode above.) If set is chosen an additional menu will appear that allows you to enter the security code you wish to set the panel to.
	Enter Security Code 00000 to 99999 (Appears only if Set is previously chosen)	Note: If the security code entered here is not presently in the SCode table (see below), it will automatically be entered once the line card has successfully communicated with that account.
Edit Acct/SCode	1 to 20 Edit same as Add Acct/SCode	Edit an account previously programmed into Add Acct/SCode table.
Clear Acct/SCode	1 to 20	Remove an account that was previously programmed into Add Acct/SCode table.
Add SCode Table (up to 20)	00000 to 99999	Adds a new security code to the security code table.
Clear Scode Table	1 to 20	Removes an security code from the SCode table.





- Press  .

- Enter the necessary field information (see Table 5-15).





To Set Date/Time Flag:

1. Follow the procedures in Section 5.4.2.
2. Press **6** for ITI options menu.
3. Press **2** for date/time flag menu.
4. Press the  or  button to toggle between Requested or Always. See Table 5-14 for description.
5. When the desired setting is flashing press . To exit press .

To Enable or Disable ITI 300 Baud Negotiation:

1. Follow the procedures in Section 5.4.2.
2. Press **6** for ITI options menu.
3. Press **3** for ITI options menu.
4. Press the  or  button to toggle between Yes or No. See Table 5-14 for description.
5. When the desired setting is flashing press . To exit press .










Set the Type of Listen-In Used for ITI Controls:

1. Follow the procedures in Section 5.4.2.
2. Press **7** for ITI options menu.
3. Press **4** for Audio Mode menu.
4. Press the  or  button to select the desired setting. See Table 5-14 for description.
5. When the desired setting is flashing press . To exit press .

5.4.3 Copy Line Cards

Copy line cards allows you to either program a line card to defaults or copy the programming of an existing line card.

5.4.3.1 To Program the Default Settings Into a Line Card





1. Enter Program Mode (see section 5.1).
2. Press  for Line Card menu.
3. Press  for copy line card menu.
4. Press the  or  button until the equal sign is adjacent the Use Defaults option. See Table 5-10 for description.
5. Press  .
6. Press the  or  button until the equal sign highlights the desired line card number.
7. Press the  or  button to toggle between Y (yes) or N (no). Yes means you wish to program this line card back to default.










When all the line card numbers (of the line card you wish to program to factory defaults) are chosen.

8. Press  .

Warning: *This cannot be undone.*

5.4.3.2 Copy the Programming of an Existing Line Card to Another

1. Enter Program Mode (see section 5.1).
2. Press  for Line Card menu.
3. Press  for copy line card menu.
4. Press the  or  button until the equal sign is adjacent the Copy Existing option. See Table 5-10 for description.

5. Press  .
6. Press the  or  button until the equal sign highlights the desired Source line card number.
7. Press  .
8. Press the  or  button until the equal sign highlights the desired Target line card number.
9. Press the  or  button to toggle between Y (yes) or N (no). Yes means you wish to program this line card with the programming of the line card chosen as the source.
10. Repeat steps 8 & 9 until all the line card numbers (of the line card you wish to program to factory defaults) are chosen.
11. Press  .


Warning: *This cannot be undone.*

5.4.4 Clear Line Card



Figure 5-19 Visual Steps to Clear a Line Card From the Receiver

To Clear or Delete a Line Card Form the Receiver Follow These Steps:


1. Follow the procedures in Section 5.4.2.
2. Press **3** to clear a line card.
3. When display shows the list of line cards (see Figure 5-19) press the  until the desired line card is highlighted with an equal sign.

4. Press  .

The display will read <Warning!>
LC01 9810 Linecard
Delete Record No



5. Press the  until Yes is flashing.

6. Press  .

7. To exit press  .

5.4.5 View Line Cards

To view all the line cards in the receiver follow these steps:


1. Follow the procedures in Section 5.4.2.
2. Press **4** to view line cards.
3. When display shows the list of line cards (see Figure 5-19) press the  to scroll through the list of line cards.
4. To exit press  .

5.4.6 Rollins

To set this line card to receive Rollins control panels.

1. Follow the procedures in Section 5.4.2.
2. Press **4** to select Rollins menu.

3. The display shows the list of line cards, select Yes for the line cards you wish to receive Rollins control panels.

4. To exit press .

5.5 User List

User List is used to program and store the information on the various installers and operators who will operate and maintain the receiver. Through this program menu item you can add, edit or clear (delete) an operator/installer (up to 40 users). The user is identified by name, then assigned a PIN (personal identification number) and a profile.



Figure 5-20 User List Menu Items

Table 5-16 lists the available choices under User List and provides a matrix of choices.

Table 5-16: User List Menu Items and Steps

Choice	Step 1	Step 2	Step 3	Comments
Add User	Enter user name: 1. Use the up or down arrow to move through characters. 2. Press the right arrow to move to next character slot. 3. Press enter key to move to next step.	Enter PIN code: 4 digits minimum 9 digits maximum	Choose profile level: Operator or Installer	Add user is used to add a new user to the system and enter the user's PIN and profile information.
Edit User	When "Choose User" list appears: 1. Press the down arrow key until the desired user is highlighted with the equal sign. 2. Press enter to move to next step.	Repeat Steps 1-3 under Add User.		Edit user is used to change an existing users profile.
Clear User	When "Choose User" list appears: 1. Press the down arrow key until the desired user is highlighted with the equal sign. 2. Press enter to move to clear user from profile list.			Clear user is used to delete a user from the receiver's memory.

5.5.1 Adding a User

Use the following steps to add a user to the system:


1. Log on to the receiver. (See Section 4.4.4 for log on procedure.)

2. Press  button.

3. Press  for program menu.

The display will briefly display Initializing

Please wait . . .

4. Press  to choose User List.

5. Press  to add a user.

The user number to be programmed will appear in the display for one second. This user number will always be the lowest available user number.



6. Press the  or  arrow buttons to move through the available characters.


Table 5-17: Available Characters

Characters	Comments
Space, 0-9, :, -, _, ., ,, &, *, #	The word "Space" indicates that a physical space would be inserted if this character were chosen.
A-Z	Upper case alphabetical characters
a-z	Lower case alphabetical characters

There are 16 characters available for each user name.

Note: If no characters are entered in the name field, the user name will default to "User #XX". XX = the number location of the user being programmed. For example, if user 12 location is being programmed and no name characters are entered in the name field, then that user will be named User #12.

When the desired character is flashing in the display:

7. Press the  right arrow key.
8. Repeat steps 6 and 7 until the user's name is complete.



9. Press  .


10. Enter the desired PIN code for the user.

A minimum of 4 character and a maximum of 9 characters.

11. Press  .

The display will flash Operator.

12. Press the  or  arrow buttons to toggle between Installer and Operator.


13. When the desired profile level is flashing press  .


5.5.2 Editing a User

Use the following steps to edit an existing user:

1. Log on to the receiver. (See Section 4.4.4 for log on procedure.)



2. Press  button.


3. Press  for program menu.
the display will briefly display Initializing
Please wait . . .


4. Press  to choose user list.

5. Press  to edit a user.



A list of all the users will appear starting with the lowest user number.


6. Press the  or  arrow buttons to move through the user list.

7. When the equal sign highlights the user you wish to edit press  .

8. If you **do not** want the user name changed, press  .

Or

To change the user name, press the  or  arrow buttons to move through the available characters. (See Table 5-17 for list of available characters.) When the name



change is complete press  .


9. If you **do not** want the PIN code changed, press  .

Or

To change the PIN code enter the desired code (4 to 9 digits in length), then press  .

The display will flash the current profile level.

10. Press the  or  arrow buttons to toggle between Installer and Operator.

11. When the desired profile level is flashing press  .

5.5.3 Clearing a User Out of the Receiver

Use the following steps to clear or delete a user from the system:


1. Log on to the receiver. (See Section 4.4.4 for log on procedure.)


2. Press  button.

3. Press  for program menu.



The display will briefly display Initializing


Please wait . . .

4. Press  to choose user list.

5. Press  to clear (delete) a user.

A list of all the users will appear starting with the lowest user number.

6. Press the  or  arrow buttons to move through the user list.

7. When the equal sign highlights the user you wish to clear press  .

The display shows < WARNING ! >

Delete Record No

8. Press the  or  arrow button to toggle the flashing display to Yes.

9. Press  .