

MODEL 754A
PROGRAMMING MANUAL
AND
INSTALLATION GUIDE



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MODEL 754A PROGRAMMING MANUAL

AND INSTALLATION GUIDE

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Introduction

- 1.1 The DMP Model 1600 **COMMAND PROCESSOR** is programmed for operation at the Model 700 **SECURITY COMMAND**. It is placed in the programming mode by the Model 754A **PROGRAMMER**. Before programming can begin the unit should be completely installed. Consult the installation instructions which are provided in Section 8 of this manual.

Included with each **COMMAND PROCESSOR** are the Programming Information and Loop Information sheets. These sheets show a basic outline of the programming steps described in this manual. Before programming begins the Information sheets should be filled out completely. Then the sheets can be used as a quick reference during programming. When programming is complete the Information sheets may be kept on file to provide a "blueprint" of the system.

- 1.2 There are six sections that must be programmed in the Model 1600 **COMMAND PROCESSOR**. They are:

1. Method of Communication
2. Various System Options
3. Area Information
4. User Arming Groups
5. Various Loop Information
6. Stop Routine for Final System Initialization

The **COMMAND PROCESSOR** may be programmed to communicate to various receivers. The communication section will be used to specify the type of communication: digital, multiplex, local, etc. If the Model 1600 will be communicating to a digital receiver using a tone pulsing format, knowledge of Sections 2.7 through 2.16 is imperative. These sections provide programming steps to custom fit the communication to almost any receiver format. If the installation is for local alarm only, the **COMMAND PROCESSOR** will operate without a communication module.

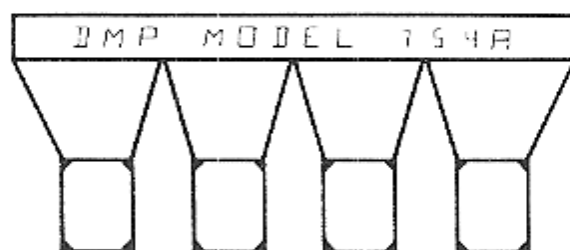
The System Options section provides a means of selecting some of the many options available on each system. This is also where the type of installation is selected: residential using interior and perimeter areas, small commercial using interior and perimeter areas, and large commercial using up to eight independent areas. Each Model 1600 may be programmed to operate in one of these three modes.

The Area Information and Arming Groups sections are programmed when the system is a large commercial type using multiple areas. These two sections allow you to name the different areas and organize access control to restrict certain personnel to selected areas of the buildings.

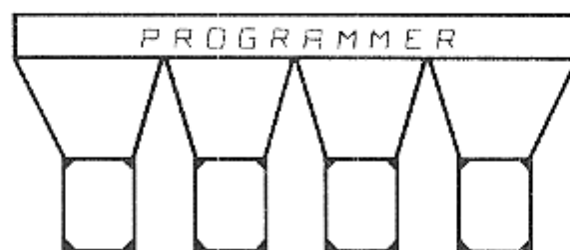
The Loop Information section allows 3 specifications to be made for each loop. The loop name, the area to which it is assigned for arming and disarming, and the loop type. The loop type specifies what action will be taken by the **COMMAND PROCESSOR** when the loop is violated.

The Stop selection is the last option to be used. This option clears selected portions of the **COMMAND PROCESSOR** memory in preparation for the appropriate users manual. It also stops the programmer so that it may be removed from the **COMMAND PROCESSOR**.

- 1.3 The **COMMAND PROCESSOR** system is ready to be programmed after the system has been completely installed and both battery and A.C. power have been applied.¹ First, jumper reset (terminal 5) to ground (terminal 3) on the **COMMAND PROCESSOR**. Next, plug the Model 754A **PROGRAMMER** on the Programmer connector located on the left hand side of the **COMMAND PROCESSOR**. Now remove the jumper and proceed to **SECURITY COMMAND** number one. Press any key once and the following will be displayed:



then



The **SECURITY COMMAND** will begin cycling through the following messages:

COMMUNICATION?
SYSTEM OPTIONS?
AREA INFORMATION?
ARMING GROUPS?
LOOP INFORMATION?
STOP

This is the list of information to be programmed. The list will cycle continuously until a selection is made. Use the **COMMAND** key to quickly step to the desired selection. To make a selection, press any red key while that particular message is displayed. Do not select "STOP" until all programming is complete.

¹ In the event of a complete power loss, the programmed memory is retained by an on board lithium battery.

Communication

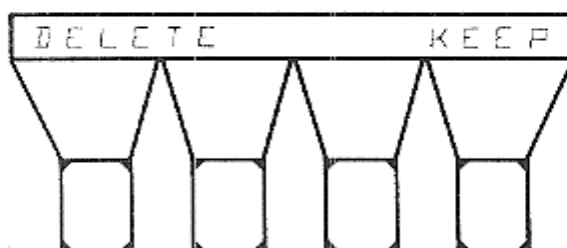
- 2.1 The Communication selection allows entry of all communication information needed in a system. The first specification to be made is the type of communication that will be used. These are listed in Figure 2-1.

Figure 2-1

<u>Description</u>	<u>Communication Type to be Programmed with 754 PROGRAMMER</u>	<u>Communication Module to be Used with COMMAND PROCESSOR</u>
1) Local system using no communication to a central office	"LCL"	Do not install a communicator
2) Multiplex Communication through an open window bridge system to the SECURITY CONTROL Receiver System	"MPX"	984-M
3) Multiplex Communication through a Dataphone Select-a- Station* to the SECURITY CONTROL Receiver System	"DSAS"	984-M
4) Digital Communication to the SECURITY CONTROL Receiver System	"DD"	984-D
5) Digital Communication to a digital receiver using a tone pulsing format Ademco, Silent Knight Franklin, Radionics, SESCOA	"DD-X"	984-X1 984-X2

- 2.2 When "COMMUNICATION?" is selected, the **SECURITY COMMAND** will first display the main type of communication that is currently programmed into the system.

It will then display:



* Dataphone Select-a-Station is a trademark of AT & T.

The **SECURITY COMMAND** is asking if the current communication method is to be deleted from memory or not.² If "KEEP" is selected, the main communication remains unchanged and the back up communication is displayed. If "DELETE" is selected a list of communication types is given four at a time. The descriptions of the communication types are listed in Figure 2-2.

Figure 2-2

- NONE - This selection should be made if no **COMMUNICATION MODULE** will be used.
- DW - This is not used. Do not select.
- MPX - Select this when using the Model 984-M Communicator over an open window bridge (Multiplex) system. The 984-M is used with the DMP **SECURITY CONTROL** Receiver System. This can only be selected for the main communication.
- CATV - This is not used. Do not select.
- DSAS - This selection is made when using the Model 984-M Communicator in conjunction with a Dataphone Select-a-Station. The 984-M is used with the DMP **SECURITY CONTROL** Receiver System. This can only be selected for the main communication.
- RF-2 - This is not used. Do not select.
- LCL - This selection should only be made for main communication when using the Model 1600 as a local system.
- MOD - This is not used. Do not select.
- DD - Select this when using the Model 984-D Communicator for digital communication to the DMP **SECURITY CONTROL** Receiver System.
- DD-X - Select this when using the Model 984-X1 or X2 for digital communication to an older style digital receiver using a tone pulsing format.
- MC - This is not used. Do not select.
- RF-1 - This is not used. Do not select.

Select the appropriate communication type when it is displayed. After the main communication is selected, the backup communication currently programmed in the system's memory will be displayed. Just as before, "DELETE" and "KEEP" will be displayed and the appropriate entries should be made. The operation of the backup communicator is not described in this section. If you are not using a backup communicator "NONE" should be selected. Appendix B fully describes the function of the backup communicator.

The remaining communication information that must be programmed will be dependent upon the type of communication that has been specified. Figure 2-3 outlines the section numbers that contain the remaining programming instructions.

Figure 2-3

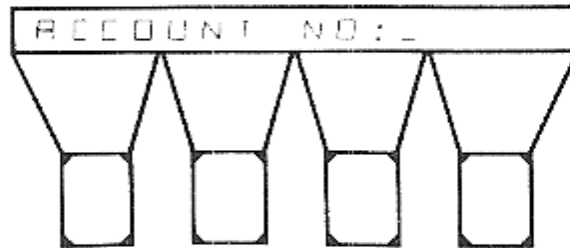
- "LCL" - Programming is complete, no other information is required
- "MPX" - Section 2.3
- "DSAS" - Section 2.3
- "DD" - Section 2.4 through 2.6
- "DD-X" - Sections 2.7 through 2.16

Only the section numbers indicated should be studied for the desired type of communication. The others may be disregarded.

² Throughout the entire programming operation "DELETE KEEP" will always be displayed after the current memory programming is displayed. The only exceptions to this are the "NO YES" selections in Sections 2.10 through 2.14 and 3.3. To speed up programming it is not necessary to wait for the "DELETE KEEP" message to be displayed; the "DELETE KEEP" keys are ready to receive the responses before the message is displayed. If no selection is made the current memory programming is retained and the **SECURITY COMMAND** will step automatically to the next item to be programmed.

MPX or DSAS

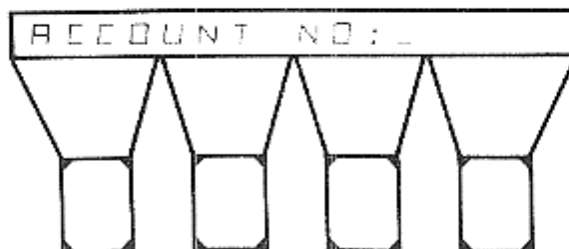
- 2.3 If this is a "MPX" or "DSAS" type communicating system an account number will be required. The range of valid account numbers is zero to 127. The **SECURITY COMMAND** will immediately display the current account number in the system's memory following the backup communication selection. To change the account number, press "DELETE" and the display will read.



Enter the account number when the prompt appears. "PROMPT" refers to an underline (_). A "PROMPT" is displayed by the **SECURITY COMMAND** when it is ready to receive information from the user. After the account number has been entered for a "MPX" or "DSAS" type communicating system the communication programming will terminate.

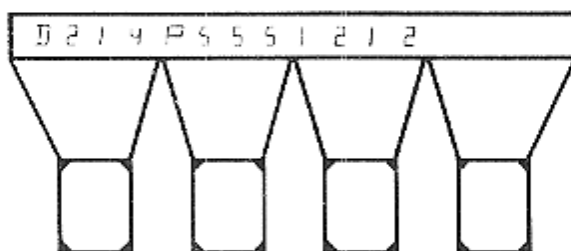
DD

- 2.4 If this is a "DD" type communicating system an account number, two phone numbers and an automatic recall time will be required. The range of valid account numbers is 1 to 65,535. The **SECURITY COMMAND** will immediately display the current account number in the system's memory following the backup communication selection. To change the account number, press "DELETE" and the display will read.



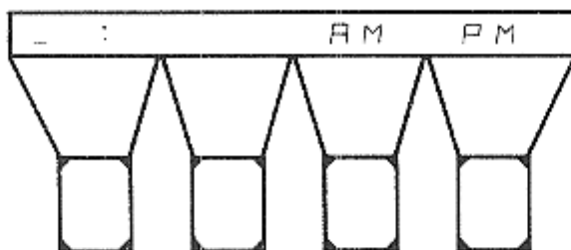
Enter the account number when the prompt appears. "PROMPT" refers to an underline (_). A "PROMPT" is displayed by the **SECURITY COMMAND** when it is ready to receive information from the user.

- 2.5 After the account number is entered the first telephone number will be displayed. To change this number, press "DELETE" and enter the new phone number when the prompt appears. A three second pause may be entered in the dialing sequence by entering the letter P and a dial tone wait may be entered by the letter D.³ If a number were to have a dial tone wait followed by the area code 214, then a three second pause followed by the telephone number 555-1212, it would be entered as shown below:



When the entry of the first number is complete, the second telephone number will be displayed. The second number is entered using the same procedure as before. The **COMMAND PROCESSOR** will dial the second number when after two successive tries it cannot communicate with the central office on the first number. If it fails twice on the second phone number it will switch back to the first for two more tries. The **COMMAND PROCESSOR** will dial a total of 15 times, switching between first and second phone numbers.

- 2.6 After both telephone numbers have been entered the automatic recall time will be displayed. This is a predetermined time each day when the system will test the communication link to the central station. A new time may be entered by pressing "DELETE". The following will be displayed:



The new time should now be entered. Example; If a new automatic recall time is 2:45 a.m., the following keys should be pressed:

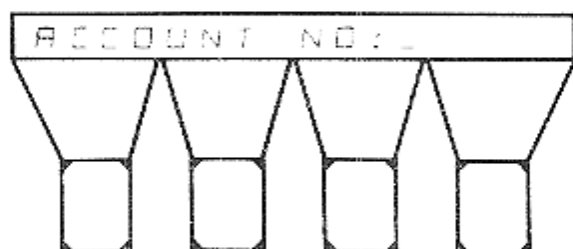


This time is now stored in memory and the system will dial each day at this time and transmit the automatic recall message. If this feature is not wanted, press "DELETE" and enter 15:00 p.m. After the automatic recall time has been entered for a "DD" type communicating system the communication programming will terminate.

³ Letters are entered by pressing and holding down the key on which they appear. First the number will be displayed. As the key is held down, the letters on that key will be displayed one at a time. Release the key when the appropriate letter is displayed. Use the back arrow to erase any erroneous entries.

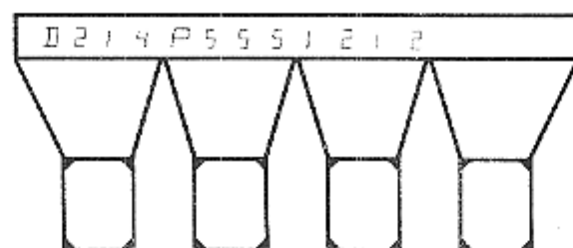
DD-X

- 2.7 If this is a "DD-X" type communicating system the next item to be programmed is the account number. The range of valid account numbers is zero to 999. The **SECURITY COMMAND** will immediately display the current account number in the system's memory following the backup communication selection. To change the account number, press "DELETE" and the display will read:



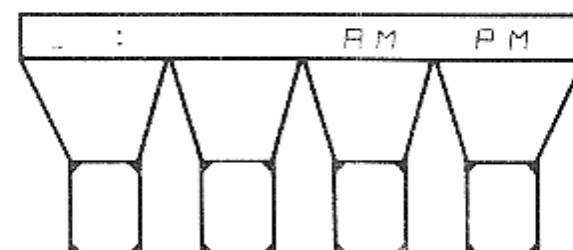
Enter the account number when the prompt appears. "PROMPT" refers to an underline (_). A "PROMPT" is displayed by the **SECURITY COMMAND** when it is ready to receive information from the user.

- 2.8 After the account number is entered the first telephone number will be displayed. To change this number, press "DELETE" and enter the new phone number when the prompt appears. A three second pause may be entered in the dialing sequence by entering the letter P and a dial tone wait may be entered by the letter D.⁴ If a number were to have a dial tone wait followed by the area code 214, then a three second pause followed by the telephone number 555-1212, it would be entered as shown below:



When the entry of the first number is complete, the second telephone number will be displayed. The second number is entered using the same procedure as before. The **COMMAND PROCESSOR** will dial the second number when after two successive tries it cannot communicate with the central office on the first number. If it fails twice on the second phone number it will switch back to the first for two more tries. The **COMMAND PROCESSOR** will dial a total of 15 times, switching between first and second numbers.

- 2.9 After both telephone numbers have been entered the automatic recall time will be displayed. This is a predetermined time each day when the system will test the communication link to the central station. A new time may be entered by pressing "DELETE". The following will be displayed:



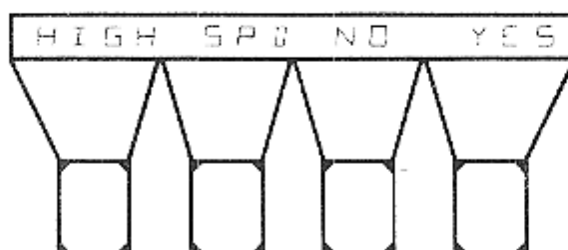
⁴ Letters are entered by pressing and holding down the key on which they appear. First the number will be displayed. As the key is held down, the letters on that key will be displayed one at a time. Release the key when the appropriate letter is displayed. Use the back arrow to erase any erroneous entries.

The new time should now be entered. Example; if the new automatic recall time is 2:45 a.m., the following keys should be pressed:



This time is now stored in memory and the system will dial each day at this time and transmit the automatic recall message. If this feature is not wanted, press 'DELETE' and enter 15:00 p.m.

- 2.10 The next selection to be made is high speed pulsing. The **COMMAND PROCESSOR** normally transmits data at 10 pulses per second. By choosing high speed pulsing this rate can be increased to 20 pulses per second. Following the entry of the automatic recall time the **SECURITY COMMAND** will display "HIGH SPD" followed by the current condition of the system, "NO" or "YES". After a few seconds the display will read:



The **SECURITY COMMAND** is now asking you to select no or yes. If a selection is not made the pulsing speed will remain unchanged and the **SECURITY COMMAND** will cycle to the next selection. It should be noted that when the current programming is displayed both the "NO" and "YES" keys are ready to take entries. To keep the current programming, press the key that displays the current programming. To change, press the desired key.

- 2.11 After the pulsing speed selection the **SECURITY COMMAND** will ask if you would like to receive expanded reports from the **COMMAND PROCESSOR** to transmit more specific data. For example, account 123 transmits a trouble (specified as a 9) on a fire type loop (specified as a 2). Without expanded reports the report would be sent as "123 9". Using expanded reports it would be "123 9" "999 2". By repeating the trouble message followed by the type message the type of loop can be identified. The receiver being used must be capable of receiving an expanded report before this selection can be made. Following the "HIGH SPD" selection the **SECURITY COMMAND** will display "EXP RPTS" followed by the current condition of the system, "NO" or "YES". Use the same method of selection as you did for "HIGH SPD".

- 2.12 If "YES" was selected for expanded reports two additional selections must be made. The two options are User Detail and Area Detail. These two options are also "NO YES" selections.

USER DETAIL - When "YES" is selected the opening and closing reports will expand and include the user number of the individual who is operating the system. If the opening message for account 123 is 7 and the user number is 3 the report that is transmitted will be "123 7" "777 3". The total user numbers is limited to 15 on hexadecimal receivers and 10 on decimal receivers. Because user number zero is reported by 10 pulses, user number 10 should not be used. User number zero is reported when the system is armed or disarmed without a code number. User numbers are further described in Section 2.12 of each user's manual.

AREA DETAIL - When "YES" is selected the opening and closing reports will expand and include the area numbers that were armed or disarmed. If the closing message for account 123 is 8 and areas 1 and 2 were armed by user number 5 the report will expand four times. This report is shown in Figure 2-4.

Figure 2-4

123 8	Closing Report
888 5	User Number 5
123 8	
888 1	Area Number 1
123 8	
888 2	Area Number 2

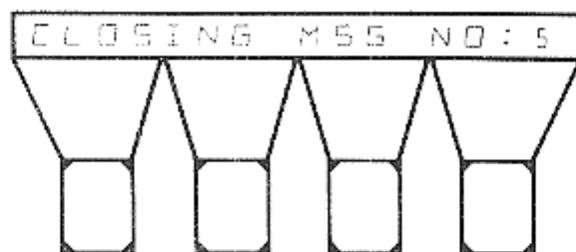
If User Detail is selected as "NO" and Area Detail is selected as "YES" the user report will be omitted. If both options are "YES" the user number is always given first. When selection of these options is completed proceed to Section 2.13.

- 2.13 If "NO" was selected for expanded reports in Section 2.11 the User Detail and Area Detail selection will be skipped. The **SECURITY COMMAND** will proceed directly to the last two sections of the communication programming, the System Messages and the Loop Messages. The message is the number of pulses that the **COMMAND PROCESSOR** will transmit following the account number. System Messages will be programmed first. The list of System Messages that may be programmed is shown in Figure 2-5.

Figure 2-5

Closing Message	Reset Message
Opening Message	Auto Recall Message
Restore Message	No Closing Message
System Trouble Message	Message Queue Overflow Message
Trouble Message	Ambush Message
Bypass Message	

If 5 pulses is currently specified for the closing message the **SECURITY COMMAND** will display:



To change this press "DELETE" and the display will read:



At this point the message should be programmed according to Figure 2-6.

Figure 2-6

Number of Pulses	Program
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A
11	B
12	C
13	D
14	E
15	F

Note: If a message is programmed as 0 the message will not be transmitted. This should be programmed for all messages you do not wish to receive.

Only program the number of pulses that your receiver can interpret. The **SECURITY COMMAND** will then step to the next message to be programmed. Below is a list of the System Messages to be programmed and a description of each.

CLOSING MSG - This message is sent each time an area is armed. Expansion of this message to include user and area numbers is obtained by selecting "YES" for User Detail and Area Detail.

OPENING MSG - This message is sent each time an area is disarmed. Expansion of this message to include user and area numbers is obtained by selecting "YES" for User Detail and Area Detail.

RESTORE MSG - This message is sent for all restorals.

SYSTEM TROUBLE MSG - This message is sent when any of the following occur: A.C. power fail, low battery, ground fault, panel tamper. When expanded reports are used, this is sent as an expansion of the trouble message.

TROUBLE MSG - This message is sent for all trouble conditions.

BYPASS MSG - This message is sent each time a loop is bypassed.

RESET MSG - This message is sent each time a loop is reset.

AUTO RECALL MSG - This message is sent to test the communication at the programmed automatic recall time. This message does not expand.

NO CLOSING MSG - This message is sent at the end of the closing check if the system is not armed or a temporary or permanent schedule is extended. This message does not expand.

MESSAGE QUEUE OVERFLOW MSG - This message is sent when the message buffer of the **COMMAND PROCESSOR** is overflowed. This message should be considered an alarm since some alarm messages may have been lost. This message does not expand.

AMBUSH MSG - This message is sent when the ambush code is used by the **COMMAND PROCESSOR**. The ambush code must be used by the **COMMAND PROCESSOR** to perform an operation. Simply entering the ambush code on the display will not send the ambush message. This message does not expand.

- 2.14 When entry of the System Messages is complete the Loop Messages must be specified. The Loop Messages specify what will be transmitted for all alarm conditions on a loop. There are two methods that may be used. Reporting by loop number (1-32) or by loop type (burglary, fire, panic, etc.). After the last System Message is selected the **SECURITY COMMAND** will display:

LOOP	NBR	NO	YES

The **SECURITY COMMAND** is now asking if you wish to receive loop alarms by loop number. If "YES" is the response the communication programming will terminate. Appendix A gives complete details of how loop alarms will be reported when using the loop number method. If "NO" is the response the loop alarms will be reported using the loop type method.

When using the loop type method an alarm on a loop is reported as the account number followed by the loop type message. The loop type is specified in the loop programming section, (section 6.3) of this manual. All expanded trouble, restore, bypass and reset messages are expanded to report the loop type, not the specific loop number.

- 2.15 **LOOP TYPE METHOD** - The possible loop types as described in Section 6.3 of this manual are listed in Figure 2-7. The associated Loop Type Message that will be transmitted for each type is listed to the right.

Figure 2-7

Loop Types	Loop Type Messages
Blank	Undefined message, do not use with "DD-X"
Night	Burglary message
Day	Burglary message
Exit	Burglary message
Fire	Fire message
Panic	Panic message
Emergency	Emergency message
Supervisory	Supervisory message
Auxiliary 1	Auxiliary 1 message
Auxiliary 2	Auxiliary 2 message

It will now be necessary to program what is to be transmitted by each Loop Type Message. This is done the same way System Messages were programmed in Section 2.13. It is important to remember that the Loop Type Message programmed here should be different from the System Messages since they will all report with the same account number. When the list of Loop Type Messages is programmed the communication programming will terminate.

- 2.16 Since most all of the options in Section 2.10 through 2.15 will be the same for each installation a separate programming sheet is not included in each **COMMAND PROCESSOR**. Instead the programming sheet on the next page should be filled out and should remain in this book for reference during programming.

DD-X Information

High Speed?	NO	YES
Expanded Reports?	NO	YES
If Expanded Reports Yes . . .		
User Detail?	NO	YES
Area Detail?	NO	YES

SYSTEM MESSAGES

Closing Message _____

Opening Message _____

Restore Message _____

System Trouble Message _____

Trouble Message _____

Bypass Message _____

Reset Message _____

Auto Recall Message _____

No Closing Message _____

Message Queue Overflow Message _____

Ambush Message _____

Loop Numbers?	NO	YES
---------------	----	-----

If Loop Numbers NO . . .

LOOP TYPE MESSAGES

Fire Message _____

Burglary Message _____

Supervisory Message _____

Panic Message _____

Emergency Message _____

Auxiliary 1 Message _____

Auxiliary 2 Message _____

System Options

3.1 This programming feature is provided so that each system may be custom designed to the users needs. Section 3.2 gives a brief description of each option. Section 3.3 gives the instructions for programming this information into the system.

3.2 The following list describes the function of each option.

OPENING AND CLOSING REPORTS - When selected, a report is communicated each time the system is armed or disarmed. When using area arming with disarm counts a report is sent only when an area is either armed or disarmed, not just turned "ON" or "OFF".

OPENING/CLOSING REPORTS TO OPERATOR - When selected, each opening and closing report will be displayed on the operator's CRT for acknowledgment in addition to being printed on the Activity Log. This option will function only when the **COMMAND PROCESSOR** is communicating to the DMP **SECURITY CONTROL** Receiver System.

RESTORAL - When selected, loop and system trouble restorals will be communicated.

CLOSING CODE - When selected, a code number will be required to turn the system on.

HOME AND AWAY - When selected, the system will operate as described in the Residential Operations Manual.

ALL AND PERIMETER - When selected, the system will operate as described in the Perimeter Arming Operations Manual. This option is not displayed if the Home and Away selection is "YES".

Note: If Home and Away and All and Perimeter are both selected as "NO" the system will operate according to the Area Arming Operations Manual.

CLOSING CHECK - When selected, the **COMMAND PROCESSOR** will alert the user when the system remains disarmed past the scheduled closing time. This check is made every hour at one minute past the hour. See Section 2.6 of the Perimeter Arming Operations Manual for the exact operation of the feature.

CLOSING WAIT - When selected, this option will cause the **SECURITY COMMAND** to wait for an acknowledgment from the central receiving unit before giving the "SYSTEM ON" message during the arming sequence. Opening and closing reports must be selected to allow this option to function. The **SECURITY COMMAND** will display "ONE MOMENT..." during this period.

ANY BYPASS - When selected, the user will be allowed to bypass a loop without a code number during the arming sequence. A code number is always required to bypass a loop in the Bypass Loops feature described in Section 2.8 of each operations manual.

DISARM COUNTS - When selected, the **COMMAND PROCESSOR** will count all "OFF" selections for each area in a system. It will require the same amount of "ON" selections before rearming the area. This counting feature is only an option of the Area Arming System. If the system is not an area system this option will not be displayed for selection.

This completes the "NO" "YES" selectable options.

POWER FAIL DELAY - The power fail delay is used to time the duration of an A.C. power failure. The A.C. power to the system must remain off for the entire length of the delay before an A.C. power failure message is communicated. The delay can be from zero to 99 minutes.

COMMUNICATION FAILURE OUTPUT - This relay output will be turned on anytime a digital system fails to communicate on three successive tries. The relay is activated at the beginning of the fourth try. This output will also be activated when a multiplex system does not communicate with the receiver for 120 seconds. This output is turned off automatically when the system is disarmed. Any output from 1 to 16 may be used. If this output is not desired enter zero.

DAY/NIGHT OUTPUT - This relay output will be turned on when any area of the system is armed. Any output from 1 to 16 may be used. If this output is not desired enter zero.

CUTOFF OUTPUT - Any one relay output may be programmed to automatically turn off after a specified delay. Any output from 1 to 16 may be used. If this output is not desired enter zero.

CUTOFF TIME - This is the delay time the cutoff output will remain on before being automatically turned off. If zero is specified for the cutoff output this option will not be displayed for selection.

LOOP SHIFT - When selected, the loop number reporting on alarm messages will be shifted down one account number. This allows the main account number to be used for system messages. This option functions only when using loop number reporting on a "DD-X" type communicating system.

OPENING CODE - When selected, a code number will always be required to disarm the system regardless of any permanent or temporary schedule.

BYPASS REPORTS - When selected, all loop bypasses and resets will be communicated.

SCHEDULE CHANGE REPORTS - When selected, all permanent and temporary schedule changes will be communicated. This option functions only when the system is communicating to the DMP **SECURITY CONTROL** Receiver system.

CODE CHANGE REPORTS - When selected, all code additions and deletions will be communicated. This option functions only when the system is communicating to the DMP **SECURITY CONTROL** Receiver system.

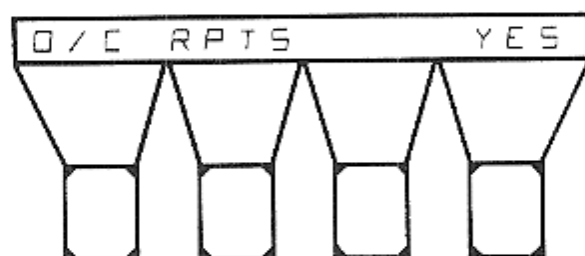
4 LOOPS PER KEYPAD ADDRESS - When selected, the locations of loops 17 through 32 will appear on the keypad addresses shown below:

SECURITY COMMAND Address		Loop Number
1	Loop 1	17
	Loop 2	18
	Loop 3	19
	Loop 4	20
2	Loop 1	21
	Loop 2	22
	Loop 3	23
	Loop 4	24
3	Loop 1	25
	Loop 2	26
	Loop 3	27
	Loop 4	28
4	Loop 1	29
	Loop 2	30
	Loop 3	31
	Loop 4	32

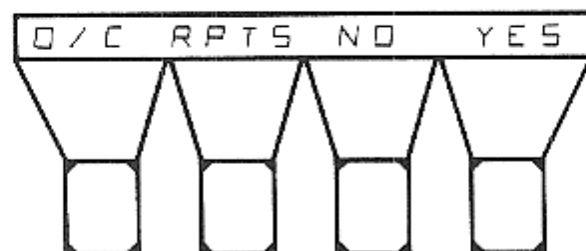
This option is selected when using the Model 704 **LOOP EXPANDER**.

3.3 The "NO YES" options will be displayed first with their current selection either "NO" or "YES".

Example: Opening/Closing reports is selected, the following is displayed:



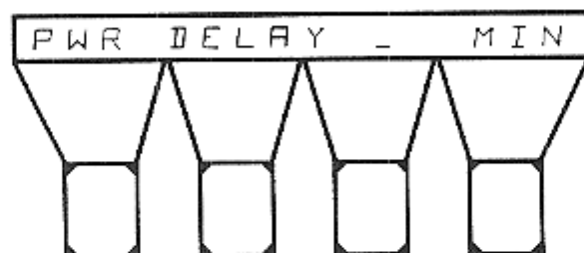
In four seconds the following is displayed:



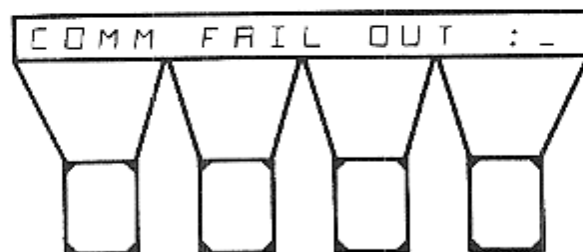
The **SECURITY COMMAND** is requesting whether or not this option will be used. Select the desired operation by pressing either "NO" or "YES". If a selection is not made, the option will remain unchanged.

It should be noted that when the current programming is displayed both the "NO" and "YES" keys are ready to take entries. To keep the current programming, press the key that displays the current programming. To change, press the opposite key. This procedure is the same for the first nine options.

The power fail delay will be displayed with its current time in minutes. To change this press "DELETE". The display will read:



The new delay can now be entered. The three output selections will all be displayed with their current outputs. To change this press "DELETE". Example, to enter a new output for communication failure the display should read:

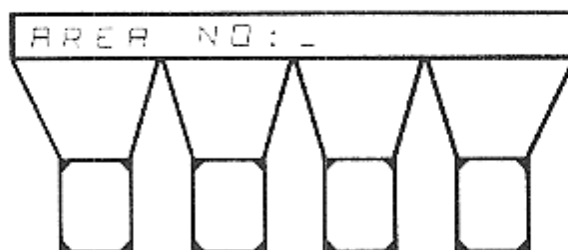


The new output can now be entered. The cutoff time is entered the same way that power fail delay is entered. After this, System Options will terminate.

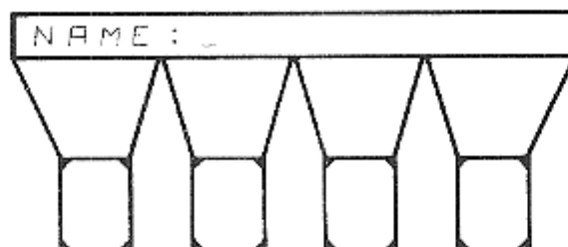
Area Information

- 4.1 This programming feature is used to give names to the various areas in a system. The individual loops which are programmed in Section 6, Loop Information, of this manual must be assigned to an active area. An area is activated when it is given a name. When a system is programmed as residential or all/perimeter the area names are programmed automatically, (Area 1: Perimeter, Area 2: Interior) and the loops in Section 6 are then assigned as either a perimeter loop or an interior loop. When a system is programmed as an area arming system, however, loops may be assigned to one of eight different areas. In this case the loops are assigned by area number. The instructions that follow will show how to give the area numbers a name. This name will be displayed to the user in the various arming and disarming procedures so that the user will not be required to memorize area numbers but can associate a name with a particular area of the system. It is important to note that only areas that will have loops assigned to them should be given names. All others should be marked unused.

- 4.2 When area information is selected, the following will be displayed:



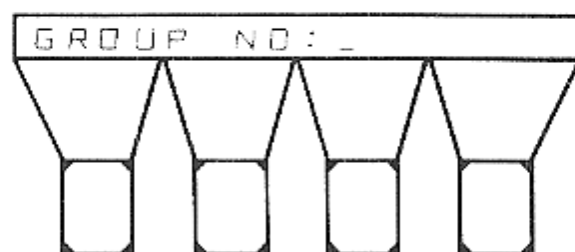
At this point, the area number to be named should be entered. Areas one through eight are available. Upon entering the number, the **SECURITY COMMAND** will display the current area name. To enter a new name, press "DELETE" and the following will be displayed:



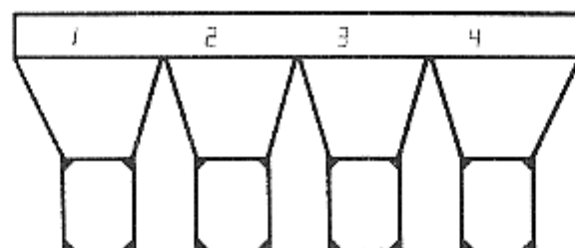
Now the area name may be entered. Letters and numbers may be used to enter an area name of up to ten characters. Letters and symbols are entered by pressing and holding down the key on which they appear. First the number will be displayed. As the key is held down, the letters on that key will be displayed. Release the key when the appropriate letter is displayed. Use the back arrow to erase any erroneous entries. A space is entered by pressing the 9 key and cycling past Y and Z to the space. After the name is entered, a new area number will be requested. If an area is to be marked "UNUSED" delete the old name and press COMMAND when the **SECURITY COMMAND** requests the new name. Be sure that the prompt has appeared before pressing COMMAND. The programmer will automatically program the name as "UNUSED". If no entry is made, the function will terminate.

Arming Groups

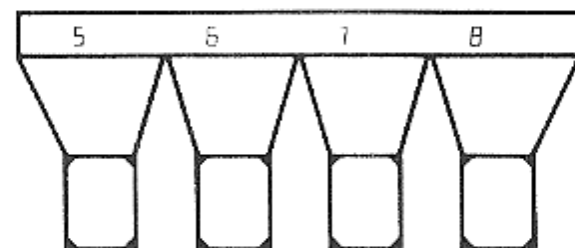
- 5.1 This programming function is used on systems that utilize area arming. The information entered in this section will be needed to complete Section 3, Permanent Code Numbers, of the Area Arming Manual. Each time a user programs a code number in an area arming system he will be able to place that code into a particular group. Up to nine different groups may be used. Each group in turn is programmed to allow access to a predetermined set of areas. A typical setup might include secretaries (Group 1) entering only the office area and reception area, engineers (Group 2) entering the plant area and office area, while the president of the company (Group 3) may have access to all areas. It is this set of areas that will be programmed by the following steps.
- 5.2 When the arming groups feature is selected, the **SECURITY COMMAND** will request the group number to be programmed.



Up to nine different groups may be programmed. Group zero will always have access to all areas. When the group number is entered the area numbers that are currently accessible by that group are displayed. If different area numbers are to be entered, press "DELETE". The following will be displayed:



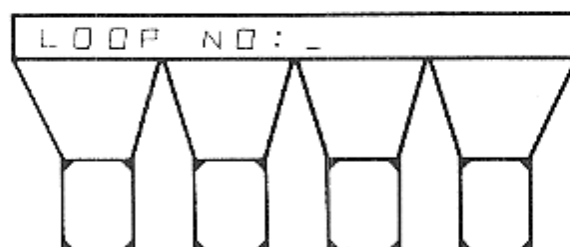
Any of the first four areas may now be made accessible to the group being programmed. Simply press the key below the desired area numbers. After five seconds, the last four area numbers will be displayed:



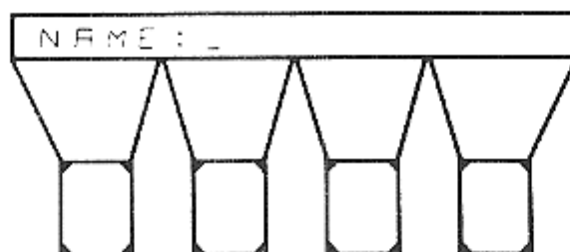
Now any of the last four areas may be made accessible to the group being programmed. After five seconds, the **SECURITY COMMAND** will ask for the next arming group to be programmed. If no entry is made, this programming function terminates.

Loop Information

- 6.1 This programming function allows entry of all loop information. All protection loops, whether located on the **COMMAND PROCESSOR** or **SECURITY COMMAND**, are programmed the same. Each protection loop being used must be programmed with the following information:
- 1) The loop name
 - 2) The loop type and action to be taken when the loop is violated
 - 3) The area to which the loop is assigned
- 6.2 The first part to be programmed on each loop is the loop name. This name will be displayed to the user during the various operations of their system so that the user will not be required to memorize loop numbers but can associate a name with a particular protection device in the system. When loop information is selected the **SECURITY COMMAND** will ask for the loop number to be programmed:



When a loop number is entered, its current name will be displayed. To enter a new name, press "DELETE" and the **SECURITY COMMAND** will request the new name:



Now the loop name may be entered. Letters and numbers may be used to enter a loop name of up to ten characters. Letters and symbols are entered by pressing and holding down the key on which they appear. First the number will be displayed. As the key is held down, the letters on that key will be displayed one at a time. Release the key when the appropriate letter is displayed. Use the back arrow to erase any erroneous entries. A space is entered by pressing the 9 key and cycling past Y and Z to the space. If a loop is to be marked "UNUSED", delete the old name and press COMMAND when the **SECURITY COMMAND** request the new name. Be sure that the prompt has appeared before pressing COMMAND. The programmer will automatically program the name as "UNUSED". When a loop is marked "UNUSED" it is totally ignored by the **COMMAND PROCESSOR**.

- 6.3 After the loop name has been programmed the **SECURITY COMMAND** will display the current loop type. The loop type specifies what action should be taken by the **COMMAND PROCESSOR** when the loop is violated. This is called the Alarm Action. There are four different loop conditions that the **COMMAND PROCESSOR** will act upon.

Figure 6-1

- 1) Disarmed Open
- 2) Disarmed Short
- 3) Armed Open
- 4) Armed Short

An open condition exists on a loop when the end of line resistance exceeds 1300 OHMS. A shorted condition exists when the resistance falls below 600 OHMS. Both of these conditions must exist for a minimum of 200 milliseconds for action to be taken. Each of the four conditions listed above can call for four functions to be executed.

Figure 6-2

- 1) The message to be communicated
- 2) One relay output to be activated (1 to 16)
- 3) Steady or pulsing of the activated relay
- 4) The entry and exit delay (0 to 150 seconds)

There are three choices for the message to be communicated. They are: Alarm (A), Trouble (T) or if no message is to be communicated a dash (-). It should be noted that an Alarm Message of A or T must be specified for the loop name to appear in the Alarm Loops listing. If a relay output is activated it will be turned off automatically when the alarmed loop is listed during system disarming. If no relay output is to be activated a zero is specified. The last of the four functions, entry and exit delay, is the amount of time the **COMMAND PROCESSOR** will ignore a loop after the "SYSTEM ON" message is received by the user and the amount of time a user has to disarm the system once the delay loop has been violated. When a delay time is entered the **SECURITY COMMAND** that will sound its prewarn buzzer must be specified. Only one **SECURITY COMMAND** address can be specified. If no prewarn buzzer is desired a zero should be specified.

When a loop type is programmed all four of the alarm conditions, Disarmed open and short and Armed open and short will be automatically programmed according to that particular type specification. The available types are:

BLANK	PANIC
NIGHT	EMERGENCY
DAY	SUPERVISORY
EXIT	AUXILIARY 1
FIRE	AUXILIARY 2

Figure 6-3 gives a detailed list of the various type specifications.

LOOP TYPE SPECIFICATION

Figure 6-3

BLANK

Specifying a loop type as blank leaves the current Alarm Action programming the same, but no loop type message will be communicated. Use only with **SECURITY CONTROL** Receiver.

NIGHT

Alarm Action:	Disarmed Open:	A	T	⊖	Output	0	Steady	Pulse	Delay	0 0 seconds
	Disarmed Short:	A	T	⊖	Output	0	Steady	Pulse	Delay	0 0 seconds
	Armed Open:	(A)	T	—	Output	1	(Steady)	Pulse	Delay	0 0 seconds
	Armed Short:	(A)	T	—	Output	1	(Steady)	Pulse	Delay	0 0 seconds
Prewarn Number: —										

DAY

Alarm Action:	Disarmed Open:	A	T	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Disarmed Short:	A	T	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Armed Open:	(A)	T	—	Output	1	(Steady)	Pulse	Delay	0 0 seconds
	Armed Short:	(A)	T	—	Output	1	(Steady)	Pulse	Delay	0 0 seconds
Prewarn Number: —										

EXIT

Alarm Action:	Disarmed Open:	A	T	⊖	Output	0	Steady	Pulse	Delay	0 0 seconds
	Disarmed Short:	A	T	⊖	Output	0	Steady	Pulse	Delay	0 0 seconds
	Armed Open:	(A)	T	—	Output	1	(Steady)	Pulse	Delay	4 0 seconds
	Armed Short:	(A)	T	—	Output	1	(Steady)	Pulse	Delay	4 0 seconds
Prewarn Number: 1										

FIRE

Alarm Action:	Disarmed Open:	A	T	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Disarmed Short:	(A)	T	—	Output	1	Steady	(Pulse)	Delay	0 0 seconds
	Armed Open:	A	(T)	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Armed Short:	(A)	T	—	Output	1	Steady	(Pulse)	Delay	0 0 seconds
Prewarn Number: —										

PANIC AND EMERGENCY

Alarm Action:	Disarmed Open:	A	T	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Disarmed Short:	(A)	T	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Armed Open:	A	(T)	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Armed Short:	(A)	T	—	Output	0	Steady	Pulse	Delay	0 0 seconds
Prewarn Number: —										

SUPERVISORY, AUXILIARY 1 AND AUXILIARY 2

Alarm Action:	Disarmed Open:	A	T	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Disarmed Short:	(A)	T	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Armed Open:	A	(T)	—	Output	0	Steady	Pulse	Delay	0 0 seconds
	Armed Short:	(A)	T	—	Output	0	Steady	Pulse	Delay	0 0 seconds
Prewarn Number: —										

To enter the desired loop type the existing loop type must first be deleted. When the type is deleted the following abbreviations will be displayed four at a time.

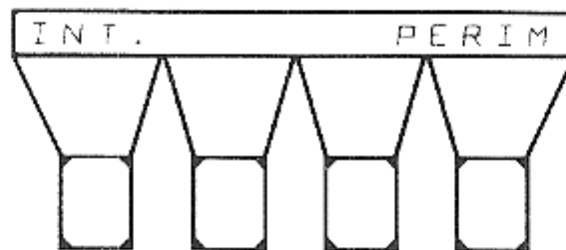
Figure 6-4

-- = Blank	FI = Fire	A1 = Auxiliary 1
NT = Night	PN = Panic	A2 = Auxiliary 2
DY = Day	EM = Emergency	
EX = Exit	SY = Supervisory	

Press the corresponding red key when the desired type is displayed.

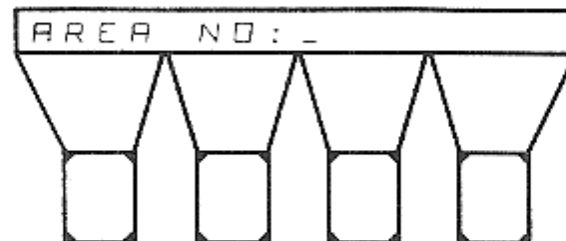
- 6.4 After the type selection has been made, the area in which the loop is assigned must be programmed. It should be noted that when a loop type is entered the loop is automatically assigned to the perimeter (or area 1 if using area arming). For most 24 hour loops, (fire, panic, emergency, supervisory) you will want to keep this since the Alarm Action is the same in both the armed and disarmed states. The burglary loops, (night, day, exit) however, should be assigned to their proper area for correct arming and disarming. The following procedures describe how to change the area assignment for any loop.

If this is a Residential or All/Perimeter system, the following method of entry will be used. The **SECURITY COMMAND** will display the current area in which the loop is assigned. If this is to be changed, press "DELETE". The **SECURITY COMMAND** will now request the new area assignment for the loop.



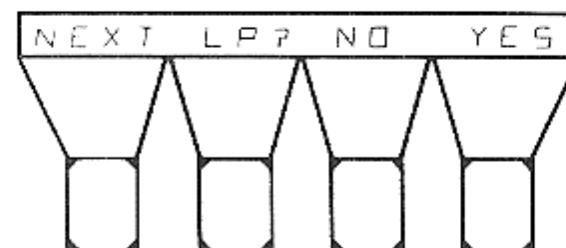
Interior or perimeter should now be selected.

If this is an area arming system, the procedure will differ. First, the current area number will be displayed. If this number is to be changed, press "DELETE" and the following will be displayed:



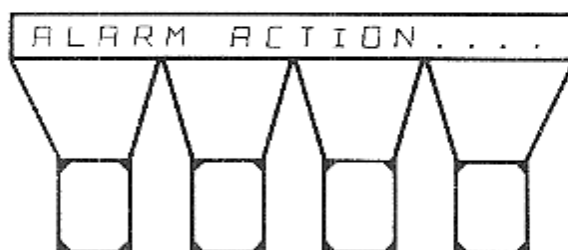
The new area number should now be entered.

- 6.5 After the area assignment has been made the **SECURITY COMMAND** will display:

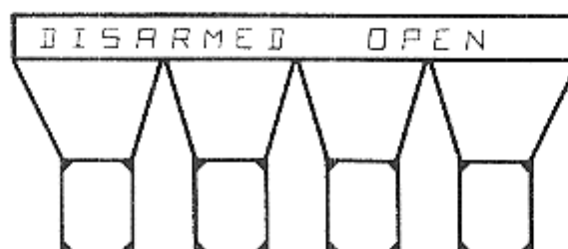


At this point it must be decided if the current Alarm Action programming for this loop is to be used. If "YES" is selected the loop will operate according to the current Alarm Action programming and will return to Section 6.2 for the next loop number. The Alarm Action for each loop is programmed as soon as the type selection is made. A "NO" response will allow alteration to any part of the Alarm Action programming for this loop. Section 6.6 provides a detailed procedure for altering the standard Alarm Action programming.

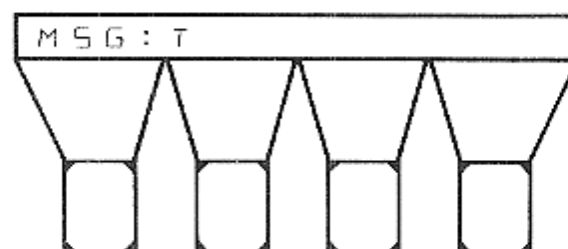
6.6 If the answer to the "NEXT LP?" question is "NO" the following will be displayed:



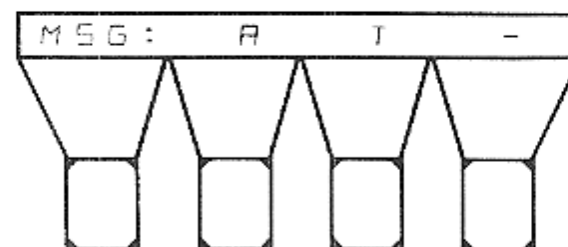
The **SECURITY COMMAND** will then display the first loop condition to be programmed. All programming will be completed for the first condition before stepping to the next one. The first condition to be programmed is:



This will be followed by the message that will be communicated when the loop is in this condition. There are two messages that can be communicated: Alarm (A) or Trouble (T). If no message is to be sent, dash (-) should be selected. If the message currently in memory were a trouble message, the following would be displayed:



To change this, press "DELETE". The following will be displayed:



Select the new message to be communicated by pressing the corresponding red key.

After the message has been selected, the output that will be activated is displayed. To change this number, press "DELETE". The following will be displayed:

OUTPUT NO: _			

The new output number may be entered. If no output is to be activated enter zero.

If any output is activated, it can be steady or pulsed. If zero has been entered for the output number this step will be skipped. After the output number is entered, the output function will be displayed. To change this press "DELETE". The following will be displayed:

STEADY		PULSE	

Select the appropriate output function by pressing the desired red key.

Next the entry and exit delay time will be displayed. This can be from zero to 150 seconds. To change this delay, press "DELETE" and the following will be displayed:

DELAY: _ 0 SEC			

The new time may be entered. It is entered in tens of seconds.

The **SECURITY COMMAND** will now display the next loop condition and Section 6.6 is repeated until all four loop conditions have been programmed. When all four conditions are completed the **SECURITY COMMAND** will go to Section 6.7 if any delay times have been entered. If no delays have been entered the **SECURITY COMMAND** will return to Section 6.2 for the next loop number to be programmed.

- 6.7 At the completion of the last loop condition, if any delays have been selected, the display will show the address of the **SECURITY COMMAND** that will sound its prewarn buzzer during an entry delay. To change the number, press "DELETE". The following will be displayed:

PREWARN NO: _			

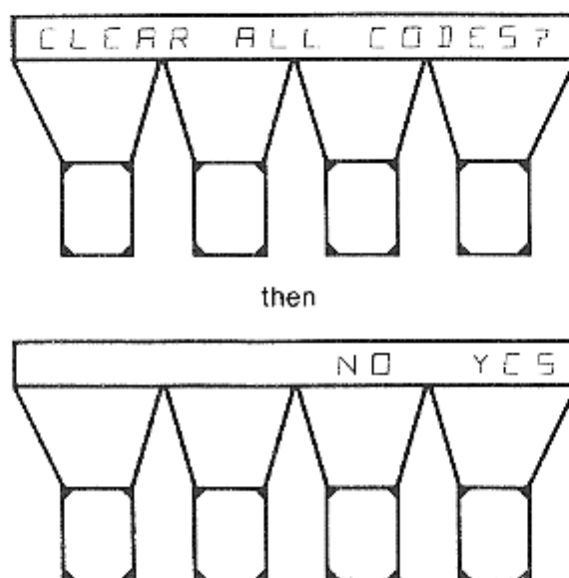
Any number from one to eight may be entered. Only one prewarn **SECURITY COMMAND** may be selected for each loop. The prewarn buzzer will pulse for the duration of the delay until the system is disarmed. If it is not disarmed by the end of the entrance delay, the buzzer will be silenced and the programmed Alarm Action for that loop will be executed by the **COMMAND PROCESSOR**. If no prewarn buzzer is desired, enter zero.

Stop

- 7.1 When all of sections two through six have been programmed into the system's memory, the programming function is ready to be terminated. During the termination step three additional selections will be made:

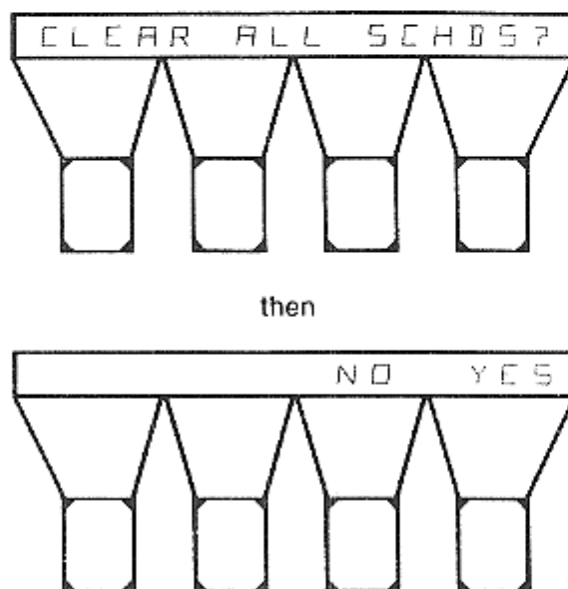
- 1) Clear all codes
- 2) Clear all schedules
- 3) Total number of **SECURITY COMMANDS**

- 7.2 When "STOP" is selected, the **SECURITY COMMAND** will display:



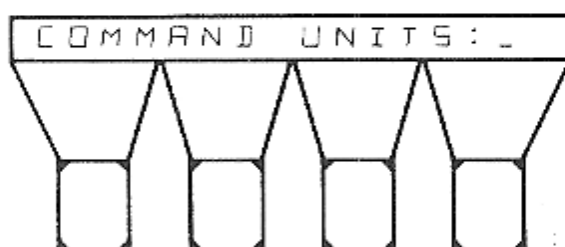
If "NO" is selected, all code numbers will remain unchanged. If "YES" is selected, all code numbers will be cleared and code number 99, group zero, will be placed in the user 50 position. "YES" is selected during initial programming to prepare the system for user orientation.

- 7.3 Following the clear all codes selection the display will read:



If "NO" is selected, all schedules will remain unchanged. If "YES" is selected all opening and closing times for all temporary, permanent and relay output schedules will be set to 00:00 a.m.

- 7.4 Following the clear all schedules selection, the total number of **SECURITY COMMANDS** used in the system will be displayed. This will be followed by the "DELETE KEEP" message. If the number displayed is incorrect, press "DELETE" and the following will be displayed:



Any number from one to eight may be entered.

- 7.5 At this point the **SECURITY COMMAND** will display the proper termination sequence.

"JUMPER RESET TO GROUND. REMOVE PROGRAMMER - THEN REMOVE JUMPER."

Complete the above steps and the system is ready to be used. Proceed now to the appropriate operations manual.

Appendix A

REPORTING ALARMS BY LOOP NUMBER - When an alarm condition occurs on a loop the account number followed by the loop number will be transmitted. This will require the use of up to four consecutive account numbers. Figure A-1 illustrates the reports that will be sent for account number 123.

Figure A-1

loop 1 123 1	loop 9 124 1	loop 17 125 1	loop 25 126 1
loop 2 123 2	loop 10 124 2	loop 18 125 2	loop 26 126 2
loop 3 123 3	loop 11 124 3	loop 19 125 3	loop 27 126 3
loop 4 123 4	loop 12 124 4	loop 20 125 4	loop 28 126 4
loop 5 123 5	loop 13 124 5	loop 21 125 5	loop 29 126 5
loop 6 123 6	loop 14 124 6	loop 22 125 6	loop 30 126 6
loop 7 123 7	loop 15 124 7	loop 23 125 7	loop 31 126 7
loop 8 123 8	loop 16 124 8	loop 24 125 8	loop 32 126 8

The account numbers required can be reduced by use of lower numbered loops. All trouble, restore, bypass and reset message are expanded on the appropriate account number to report the specific loop number.

The option to select loop number reporting is made right after the last System Message selection is made in Section 2.13. A "YES" response to the "LOOP NBR" question in Section 2.14 will cause loop alarms to be reported by specific loop number.

Appendix B

USING A BACKUP COMMUNICATOR - As indicated by Section 2.2, two communication modules may be used on one **COMMAND PROCESSOR**. This appendix explains the operation of the two communicators for two specific examples. The first example is with digital communicators in both main and backup positions. When the **COMMAND PROCESSOR** has a message to be communicated it will begin on the main communicator and the first number. It will then continue to dial according to Figure B-1 until it receives an acknowledgment.

Figure B-1

	<u>Communicator</u>	<u>Phone Number</u>
1st and 9th try	Main	First Number
2nd and 10th try	Main	First Number
3rd and 11th try	Main	Second Number
4th and 12th try	Main	Second Number
5th and 13th try	Backup	First Number
6th and 14th try	Backup	First Number
7th and 15th try	Backup	Second Number
8th try	Backup	Second Number

The **COMMAND PROCESSOR** will try a total of 15 times to communicate a message. After the 15th failure the **COMMAND PROCESSOR** will no longer attempt to communicate. Should another event occur which requires a message to be communicated the dialing process will be restarted.

A second example of communication is polling type communication (MPX, DSAS) in the main position and digital in the backup. It should be noted that polling type communication can never be used in the backup position. In this second example the **COMMAND PROCESSOR** should receive a poll from the **SECURITY CONTROL** Receiver system at least every 90 seconds. If the **COMMAND PROCESSOR** does not communicate with the receiver for 120 seconds it will switch to the backup communication until the main polling communication is restored.

When a backup communicator is specified the associated communication information required by both types must be specified. If any information overlaps (account number, phone number, etc.) the **COMMAND PROCESSOR** will use the same information for both types. You do not enter it twice.