

## PREFACE

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Software Version 6.1AM  
DPM Version 3.6G

Printed: April 1997



## System 10 Exception List

- S** Option 38, selection 2 - *Set Relays to Monitor Zones*: The relays set in this option do not operate. They will however display as though they have operated.

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## CHAPTER 1

# ACCESS CONTROL AND SYSTEM 10

## What is Access Control?

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Access Control is a means to limit entry into a secured area only to authorized individuals at a particular location and time. Access Control systems accomplish this task by maintaining a list of authorized individuals, identifying those individuals by codes, cards, or other methods, and securing doors or other portals until an authorized individual requests entry. Many, if not all, Access Control systems also maintain a record of authorized access events and unauthorized attempts as well as other data concerning the secured area.

The most important function of an Access Control system is to allow access to authorized individuals while denying access to those unauthorized. Like a lock-and-key system, an Access Control system can allow individuals access to particular doors and deny them access to others, but an important advancement is its ability to limit access to certain times as well. For example, a secretary can be allowed to enter through the front door only from 9:00 AM to 5:00 PM and a maintenance man can be limited to entering the service entrance only from 6:00 AM to 12:00 PM. Another powerful tool provided by an Access Control system is its reporting capabilities. The security manager can be provided with a list of every individual entering the secure area, as well as where and when they entered.

An Access Control system can control doors as well as the access of individuals. A public access door can be automatically unlocked and locked at programmed times of the day. This is most commonly used in situations such as retail shops where anyone can enter the front door during business hours, but only authorized individuals can enter after hours. The open / close status of a door can also be monitored. If a secured door is propped open longer than a specified time, the Access Control system can notify security that this event has occurred. Like all other Access Control events, door-related activities are recorded for future reference.

How does an authorized user actually enter a secured area? A number of technologies are employed to this end. The most common is the use of a card similar to a credit card. The user simply inserts the card into a reader and if that user is authorized, the door is opened. Another means is a keypad on which the user enters a unique code. Newer technologies use proximity cards and Data Chips. With a proximity card, the user simply holds the card near a reader and the information on the card is transmitted via radio waves. Data Chips are coin shaped devices containing 64 bits of digital data which is transferred when touched to a simple reader.

Regardless of how the user opens a door, the door must somehow be locked and unlocked by the Access Control system. An electro-mechanical device called a door strike is often used to accomplish this task. When power is applied to the door strike, the door is free to open; in the absence of power, the door is held shut by a bolt mechanism. A recent trend is to replace the traditional door strike with a magnetic door holder. This device creates an intense magnetic field that holds the door shut. The power of this magnetic field can range to many thousands of pounds, insuring that the door is virtually impossible to force open.

Access Control systems can generally do more than just lock and unlock doors. Most, like Corby's System 10, can also monitor the status of various devices. For example, zone inputs allow the system to monitor when a door is open or closed, when a smoke detector is activated, or an alarm panel is armed. Virtually any device that provides a voltage output can be interfaced to an Access Control system for monitoring and recording. Just as it can monitor inputs, an Access Control system can also provide outputs to control the on / off state of a host of electrical devices. It can, for example, turn a photocopier on in the morning and off in the evening. Control can also be extended to heating and air conditioning systems. This is the control part of Access Control.

## What is System 10?

---

Corby's System 10 is an advanced Access Control system capable of monitoring and controlling from 1 to 2,000 access codes, 128 doors, and a host of inputs and outputs. It is based around a PC as a central computer and an expandable group of Access Control modules. Each of these modules controls four doors / ports as well as providing four zone inputs. Supported Access Control technologies include Keypads, Wiegand cards, Proximity cards, Bar Code cards, Magnetic Stripe cards and Data Chips.

System 10 is a user oriented system which can, on an individual basis, control where and when a user may enter as well as provide a complete report of the comings and goings of each user - where that user entered or exited and when. Additional features include duress codes, antipassback and temporary codes.

### Duress Codes

A duress code is a special code to be entered if a user is in a hostage situation. When a duress code is entered, the door opens as usual, but, in addition, an output is provided for a silent alarm or other device to signal this condition.

### Antipassback

If enabled, antipassback requires that a user alternately enter and exit. This feature prevents a user from entering, sliding his or her card under the door to another individual, and allowing that unauthorized individual to enter. The unauthorized individual will not be given access because the first individual has not yet exited.

### Temporary Cards

A third powerful feature of the System 10 is temporary codes and cards. A code or card can be issued which has a specified start time and end time. For example, if an outside contractor is to be employed for a two week period, a code or card can be assigned which will become active at the beginning of the contractors employment and then automatically deactivate at the end of employment. Together, all of the features provide a powerful framework from which individual's access to a secured area can be controlled.

### Door Ajar

As discussed earlier, an Access Control system can also control doors as well as the access of individuals. The System 10 can also monitor door ajar conditions. If a door is propped open "too long", a time period which is programmable on a door-by-door basis, the system will record this event and can optionally provide an output to control whatever device is used to signal this event.

### Automatic Door Control

The most important door control feature of the System 10 is automatic time control of doors. By using this feature, the specified door can be automatically unlocked and locked at a programmable time of day or day of week.

## **Event Storage**

As previously stated, an important function of an Access Control system is to provide information concerning who is entering a secure area, where they are entering it, and when they are entering it. In many systems this information is limited to a simple printout of events as they occur. An important distinction of the System 10 is its ability to report specific system events as prescribed by the operator. The System 10 permanently records all system events for further reference. The operator can specify which type of events are of interest and retrieve only those events from the database. For example, if an operator wanted to know who entered the stockroom in the hours before a theft, he or she would specify the stockroom door and the time period of interest. The System 10 would then compile a report of all pertinent events.

## **Modular Design**

In addition to providing all common Access Control functions, the System 10 is extremely efficient and cost-effective. This is because the system is modular in design. The system can be configured to be as large or as small as required, thus there is very little of the overhead found in many other systems. Specifically, this means that a door / port module (DPM) is added to the system for every four doors that need to be controlled. Not only does this allow the installer to purchase only what is needed, but the system can grow as future needs arise. For a complete overview of the modularity of the system, see block diagram 1.

## **Reliability**

Modularity also plays a key role in the high reliability of System 10. Each door / port module (DPM) stores all data necessary to its own operation and is capable of performing all processing on its own. Thus, if other modules of the system are damaged, surviving components can continue to operate uninterrupted.

The preceding is only a general overview of Access Control and the System 10. In following chapters, the topics discussed will be explained in detail.

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## CHAPTER 2

**PROGRAMMING OVERVIEW****Introduction**

The System 10 is programmed by an easy-to-use menu driven user interface. The user interface is a computer program that helps you to enter information in a simple and intuitive fashion. The menus are arranged in a pyramid fashion with a main menu at the top and sub menus below the main menu.

At the top of the pyramid is the main menu. This menu divides the programming options of the System 10 into seven major areas. The main menu is illustrated in Figure 2.1. Choosing any one of the main menu's options is accomplished by entering its number. Some of the options on the main menu have, in turn, sub menus. The sub menus list a detailed range of options for the general option chosen from the main menu. For example, if you choose Option 1 TIME - DATE, TIME SCHEDULES, HOLIDAY LIST from the main menu, a sub menu will be displayed listing options concerning times and dates.

```

SYSTEM 10 ACCESS CONTROL
You may work in any of the following areas:

  1 TIME - DATE, TIME SCHEDULES, HOLIDAY LIST
  2 USER DATA AND ACCESS LEVELS
  3 DOOR - PORT - RELAY CONFIGURATIONS
  4 CHANGE PASSWORDS AND PRIVILEGE LEVELS
  5 SYSTEM 10 DATABASE REPORTS
  6 MONITOR CURRENT EVENTS
  7 SYSTEM 10 UTILITIES
  8 LOG OUT OF SYSTEM 10

[1] [2] [3] [4] [5] [6] [7] [8]
[1] [2] [3] [4] [5] [6] [7] [8]
F1 for help      Hard disk 19% full      System 10 version 5.1A

```

Figure 2.1 - Main Menu

## Time, Date, and Time Schedules

The sub menu for main menu Option 1, entitled TIME - DATE, TIME SCHEDULES, HOLIDAY LIST is illustrated in Figure 2.2.

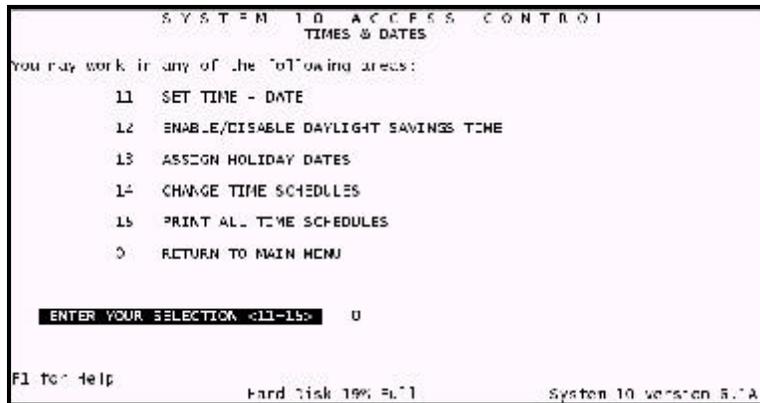


Figure 2.2 - Sub Menu 1

Option 11, SET TIME - DATE allows you to set the time and date on your system. This is important because system events are reported with a time and date stamp. In some parts of the U.S., daylight savings time changes the standard time in fall and spring. Option 12, ENABLE / DISABLE DAYLIGHT SAVINGS TIME configures the system to automatically adjust for daylight savings time.

As discussed in chapter 1, the System 10 provides time schedules which can be applied to users to restrict the times that they may access a protected area. Time schedules may also be used to program doors to open and close at specified times of day. However, you may want to apply a special schedule on holidays. Option 13, ASSIGN HOLIDAY DATES allows you to specify up to sixteen holidays on which special schedules will be applied. Figure 2.3 illustrates the screen that is displayed when you choose Option 13.

HOLIDAY #	DATE	DESCRIPTION	HOLIDAY #	DATE	DESCRIPTION
1	01/01/97	NEW YEARS DAY	9	/ /	
2	05/29/97	MEMORIAL DAY	10	/ /	
3	07/04/97	JULY FOURTH	11	/ /	
4	09/01/97	LABOR DAY	12	/ /	
5	11/27/97	THANKSGIVING	13	/ /	
6	12/25/97	CHRISTMAS	14	/ /	
7	12/31/97	NEW YEARS EVE	15	/ /	
8	/ /		16	/ /	

Holiday # to change (0 to quit): 7 F1 HELP F2 ABORT/EXIT F3 SAVE & EXIT  
UP DATE OF DOWN DESCRIPTION OF

Figure 2.3 - Holiday Screen

The programming of System 10's eight time schedules is performed in Option 14, CHANGE TIME SCHEDULES. Figure 2.4 illustrates the screen which is displayed when you choose Option 14. Should you want a printed copy of the schedules that you have programmed, choose Option 15, PRINT ALL TIME SCHEDULES.

SYSTEM 10 ACCESS CONTROL								
TIME SCHEDULE								
DAY	START	END	START	END	START	END	START	END
1 SUNDAY	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
2 MONDAY	09:00	17:00	00:00	00:00	00:00	00:00	00:00	00:00
3 TUESDAY	09:00	17:00	19:00	22:00	00:00	00:00	00:00	00:00
4 WEDNESDAY	09:00	17:00	00:00	00:00	00:00	00:00	00:00	00:00
5 THURSDAY	09:00	17:00	19:00	22:00	00:00	00:00	00:00	00:00
6 FRIDAY	09:00	17:00	00:00	00:00	00:00	00:00	00:00	00:00
7 SATURDAY	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
8 HOLIDAYS	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00

Enter DPM for Schedule Change: 1

F1 help      F5 Next Schedule      F7 Next Page      DOWN Next Cell      F10 Save  
 F2 Exit/Abort      F6 Last Schedule      F8 Last Page      F9/DG Last Cell      F10 Copy

Figure 2.4 - Time Schedule Screen

## Users and Access Control

The area in which you will probably do the most programming is the sub menu for main menu Option 2, titled DATA AND ACCESS LEVELS. This sub menu is illustrated in Figure 2.5. This is the area in which you program who can enter the secured area, where they can enter, and when they can enter. In addition to entering users, this is the area in which users are deleted.

SYSTEM 10 ACCESS CONTROL	
USER CODES & DATA	
You may work in any of the following areas:	
21	CLEAR A RANGE OF USERS (restricted)
22	USER DATA AND ACCESS CODES
23	PRINT USER AND ACCESS CODE DATA
24	SOFT CREDENTIAL FACTILITY CODES
25	PRINT NUMBER OF USERS PER SYSTEM 10 CODE
26	PRINT TEMPORARY CODES
0	EXIT TO PREVIOUS MENU
ENTER YOUR SELECTION: 22-26	
F1 for help	Hard Disk 19% Full
	System 10 version 5.1A

Figure 2.5 - Sub Menu 2

Option 21, CLEAR A RANGE OF USERS deletes a range of users from the System 10's database. In general, you won't want to do this, so the option is labeled "restricted". Later, we will discuss ways that you can prevent certain individuals from performing this or other sensitive functions.

Users are entered into the system via Option 22, USER DATA AND ACCESS CODES. The screen for this option is illustrated in Figure 2.6. In this option you enter the user's name, employee number, code or card number, and schedules, as well as general miscellaneous descriptions of the individual. In addition, you can enter temporary codes or cards which function for only a specific time interval. A complete list of all information concerning each of the users entered into the system can be obtained in Option 23, PRINT USER AND ACCESS CODE DATA.

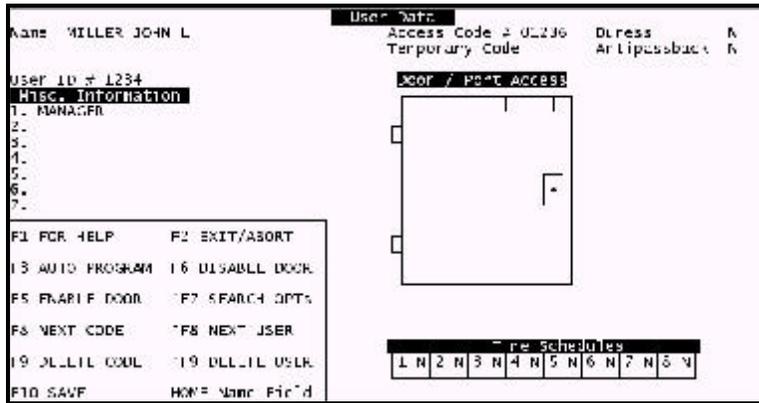


Figure 2.6 - User Data & Access Codes Screen

Option 24, SET CORBY CARD FACILITY CODE, allows you to change the facility code of cards used by the System 10. This feature will be described in detail later.

Each of System 10's Door / Port Modules (DPMs) can hold up to 2,000 users. Option 25, PRINT NUMBER OF USERS PER SYSTEM 10 DPM tells you how many users are on each DPM at a given time.

Option 26, PRINT TEMPORARY CODES prints information concerning temporary users in System 10's database.

## Door and Relay Configuration

Doors are controlled by relays on the System 10's DPMs. The options contained in main menu Option 3, labeled DOOR - PORT - RELAY CONFIGURATIONS, allow you to configure the operation of these relays in a variety of ways. In addition, this sub menu allows you to program the port inputs for keypads, card readers, or both. This sub menu is illustrated in Figure 2.7.

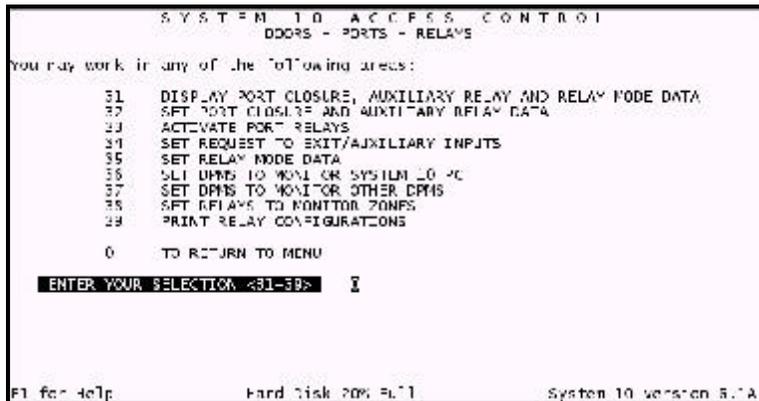


Figure 2.7 - Sub Menu 3

Option 31, DISPLAY PORT CLOSURE, AUXILIARY RELAY AND RELAY MODE DATA displays the current configuration of each of the ports of the system. The information displayed for each port is the card reader / keypad status of the port input, the momentary / latching status of the port relay, the time schedules (if any) controlling the port relay, the text description of the port, and whether that port will close the auxiliary relay of its DPM in the event of a door ajar condition. Option 32, SET PORT CLOSURE AND AUXILIARY RELAY DATA allows you to change any of the information displayed in Option 31.

Option 33, ACTIVATE PORT RELAYS, displays the open / close status of each of the system's relays and allows you to change the status of any relay.

Each DPM in the system can provide either a request-to-exit input for each door or a single general purpose auxiliary input. Option 34, SET REQUEST-TO-EXIT / AUXILIARY INPUTS, allows you to select, on a DPM-by-DPM basis, which of the two options is in effect.

Normally, if a valid code or card is entered on a given port, only that port's relay will activate. It is possible, however, for a valid code or card entered on a given port to close another port's relay. Option 35, SET RELAY MODE DATA enables this mode of operation on a specified DPM or group of DPMs.

Option 36, SET DPMS TO MONITOR SYSTEM 10, programs any relay or relays in the system to close in the event that the controlling computer fails. Similarly, Option 37, SET DPMS TO MONITOR OTHER DPMS, programs any relay or relays in the system to close in the event that any DPM in the system fails.

The system can be programmed to activate a relay or relays if certain zone input conditions are met. Option 38, SET RELAYS TO MONITOR ZONES allows you to program the zone input conditions to be met and the relays to be closed for each condition.

Option 39, PRINT RELAY CONFIGURATIONS prints all data displayed by Options 32 through 38, Display Port Closure, Auxiliary Relay, and Relay Mode Data.

## Passwords and Privilege Levels

---

For security reasons, only a small number of individuals should be authorized to program the System 10. Further, it may be necessary to limit which of the programming options an individual can access. The sub menu for main menu Option 4, labeled CHANGE PASSWORDS AND PRIVILEGE LEVELS allows you to assign a password to an individual and to limit what the individual logging in under that password can do. This sub menu is illustrated in Figure 2.8. Each password has assigned to it a privilege level. The privilege level designates which options can be performed. Privilege levels from 0 through 9 are supported. Each programming option has a programmable privilege level which must be held by an individual in order to use that option.

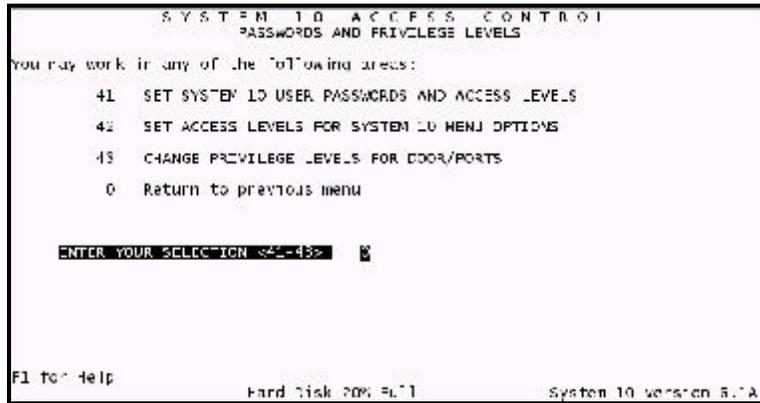


Figure 2.8 - Sub Menu 4

Option 41, SET SYSTEM 10 USER PASSWORDS AND PRIVILEGE LEVELS allows you to define a password, assign its privilege level, and record its owner. This option works in conjunction with Option 42, SET ACCESS LEVELS FOR SYSTEM 10 MENU OPTIONS which allows you to set the privilege level required by each menu option. The screen for Option 41 is illustrated in Figure 2.9 and the screen for Option 42 in Figure 2.10.



Figure 2.9 - User Passwords

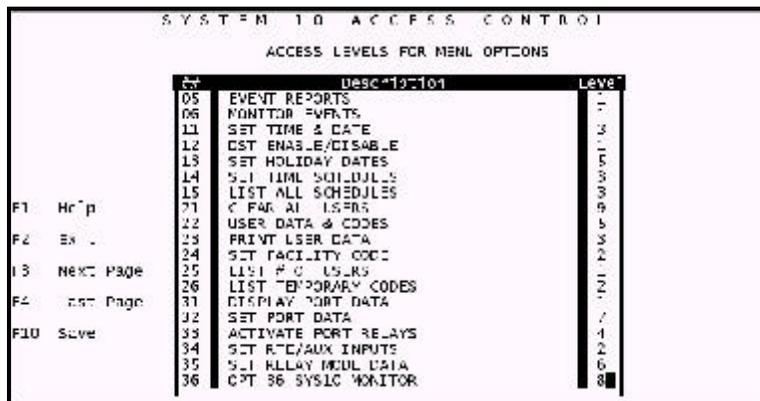


Figure 2.10 - Privilege Levels

Option 43, CHANGE PRIVILEGE LEVELS FOR DOORS / PORTS, restricts a System 10 operator to only change the position of a port relay depending on a preset privilege level. This option works in conjunction with Option 33, ACTIVATE PORT RELAYS.

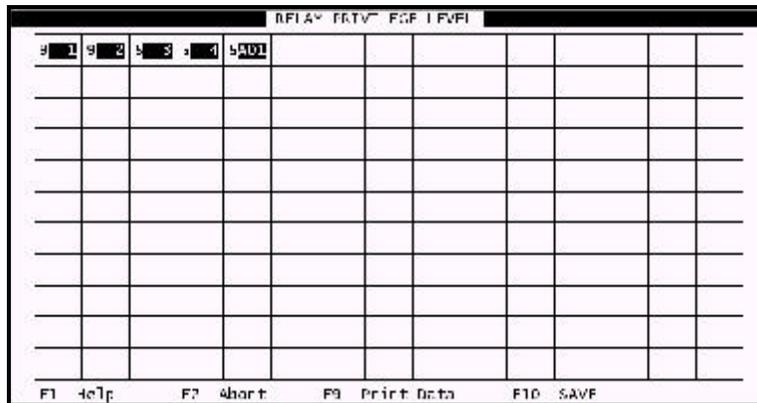


Figure 2.11 - Relay Privilege Level Screen

## Reporting Functions

Option 5, titled SYSTEM 10 DATABASE REPORTS, allows you to search through all recorded system events and retrieve only those in which you are interested. Figure 2.12 illustrates the screen in which you designate the types of events that you want to retrieve. On the right side of the screen is a list of event types. On the left of the screen is a table of user, door, date, and time parameters. Events which meet the criteria entered on the left and right sides of the screen will be retrieved. The report generated by the screen is illustrated in Figure 2.12 is shown in Figure 2.13.

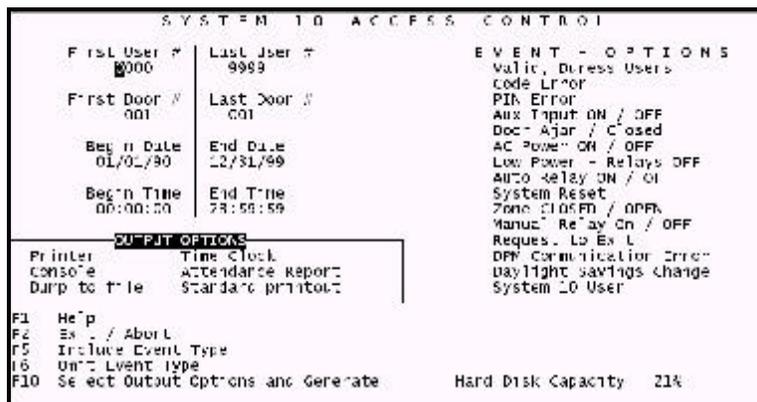


Figure 2.12 - Database Report Screen

SYSTEM 10 DATABASE REPORT  
 printed: 04/09/97 09:03:34

Event Types: Valid User, Code Error, Auto Relay, Request-To-Exit, System User Info

Name Or Event	Type door / Port	DPM	Time	Date	Data
SMITH ,MIKE S	FRONT OFFICE	2	08:32:12	04/08/97	MANAGER
Code Error 14937	KITCHEN DOOR	1	08:35:24	04/08/97	
JONES ,LENNY E	KITCHEN DOOR	1	08:35:30	04/08/97	CHEF
Auto Relay ON	DELIVERY DOOR	3	08:45:00	04/08/97	
System Administrator	LOGON SYSTEM 10		09:01:02	04/08/97	
System Administrator	EVENT REPORTS		09:01:20	04/08/97	
System Administrator	USER DATA & CODES		09:03:45	04/08/97	
System Administrator	LOGOFF SYSTEM 10		09:10:34	04/08/97	
Request-To-Exit	FRONT OFFICE	2	12:03:56	04/08/97	
PRICE ,DEBI H	STAFF ENTRANCE	4	13:55:03	04/08/97	HOSTESS
COLE ,STEVE J	STAFF ENTRANCE	4	14:45:38	04/08/97	WAITER
Auto Relay OFF	DELIVERY DOOR	3	17:00:00	04/08/97	
Request-To-Exit	KITCHEN DOOR	1	18:23:29	04/08/97	
JONES ,LENNY E	KITCHEN DOOR	1	18:25:47	04/08/97	CHEF

Figure 2.13 System 10 Data Base Report

## On-line Monitoring

Main menu Option 6, MONITOR CURRENT EVENTS allows you to display system events as they occur. A sample screen is illustrated in Figure 2.14. This screen has a timeout feature which will return the system to the main menu in fifteen minutes. This timeout can be toggled off to allow continuous monitoring.

NAME OF EVENT CODE	DOOR/PORT #	DPM	TIME	DATE	DATA
SYSTEM 10 ADMINISTRATOR	MONITOR EVENTS	-	10:12:20	04/08/97	
SMITH LOGON	FRONT DOOR	1	10:12:26	04/08/97	
PTC	BACK DOOR	02	10:12:28	04/08/97	
SMITH LOG OFF	COMPUTER ROOM	3	10:12:31	04/08/97	SALES
SMITH LOG ON	OFFFLY ROOM	4	10:12:33	04/08/97	MANAGER
SMITH LOG OFF	COMPUTER ROOM	03	10:12:35	04/08/97	
Door Closed	COMPUTER ROOM	03	10:12:37	04/08/97	
SMITH LOG ON	BACK DOOR	02	10:12:39	04/08/97	ACCOUNTING
ADAMS LOG ON	FRONT DOOR	1	10:12:39	04/08/97	ENGINEER
PTC	FRONT DOOR	01	10:12:39	04/08/97	
RECEIVED DOC	OFFFLY ROOM	4	10:14:20	04/08/97	SALES
SMITH LOG ON	COMPUTER ROOM	3	10:14:26	04/08/97	MANAGER
PTC	OFFFLY ROOM	04	10:14:44	04/08/97	
SMITH LOG ON	OFFFLY ROOM	4	10:14:53	04/08/97	ACCOUNTING
ADAMS LOG ON	BACK DOOR	2	10:15:02	04/08/97	ENGINEER
SMITH LOG ON	COMPUTER ROOM	3	10:15:24	04/08/97	
Door Open	OFFFLY ROOM	04	10:15:42	04/08/97	
SMITH LOG OFF	OFFFLY ROOM	04	10:15:57	04/08/97	
RECEIVED DOC	FRONT DOOR	1	10:17:00	04/08/97	SALES
SMITH LOG ON	BACK DOOR	2	10:17:43	04/08/97	MANAGER

Figure 2.14 - Monitor Current Events screen

## System 10 Utilities

Option 7, titled UTILITIES includes system tools. This sub menu is illustrated in Figure 2.15.

Option 71, BACK UP DATABASES, stores all hard-drive data on floppy disks for future use. All system events are stored on the hard disk drive memory of the controlling computer. In order to insure the integrity of this database, it is important that copies are made periodically and stored for safe-keeping. This process is known as "back up". Likewise, Option 72, RESTORE DATABASES FROM BACK UPS, copies all data on a set of back up floppies back onto the hard-drive.

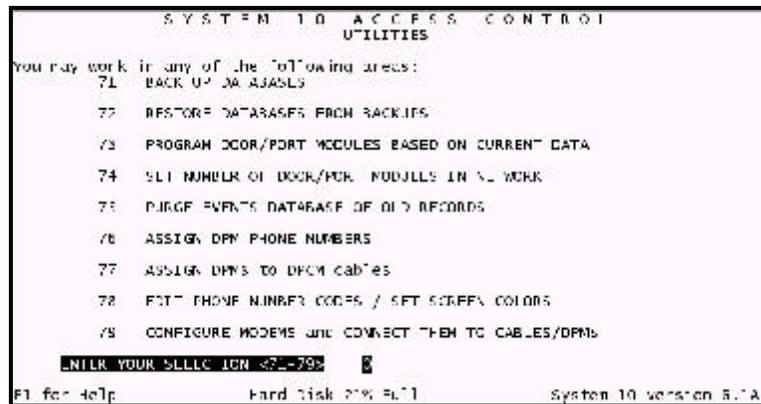


Figure 2.15 - Sub Menu 7

It is unlikely that a Door / Port Module (DPM) on the system will lose its internal memory, but since a copy of each DPM's memory is maintained by the controlling computer, Option 73, PROGRAM DOOR/PORT MODULES BASED ON CURRENT DATA re-programs system DPMs with the correct data.

Option 74, SET NUMBER OF DOOR/PORT MODULES IN NETWORK, allows the System 10's controlling computer to be programmed with the number of DPMs that are currently part of the system.

Option 75, PURGE EVENTS OF OLD DATABASE OF OLD RECORDS, allows you to remove old system event records from storage to make room for new events. This is similar to throwing away obsolete paper files from a filing cabinet.

Option 76, ASSIGN DPM PHONE NUMBERS, allows a phone number to be assigned to a DPM when modems are used for a remote communication link. The screen sets up a schedule with five dial out times for each DPM.

Option 77, ASSIGN DPMS TO DPCM CABLES, is used along with screen 76 to assign multiple DPMs, connected by modems, to a single dial out modem channel of the DPCM of the PC. This screen is also useful if a DPCM cable/channel fails since it allows a DPCM channel to be switched to another that is not being used.

Option 78, EDIT PHONE NUMBER CODES, allows prefix and suffix modifications to the phone number(s) set in Option 76. This allows longer numbers to be used in PBX phone systems or to operate line sharing devices.

Option 79, CONFIGURE MODEMS and CONNECT THEM TO CABLES/DPMS, allows you to choose a modem for the DPCM channel that you are using for remote communications.

## Help

---

If at any time during the programming process you have questions about what to do, simply press function key number 1 (often labeled F1) and the appropriate instructions will appear on the screen. This feature can often save you the time and trouble of looking up a particular topic in the manual.

## Status Window

---

Often during programming, a small block of text known as a window will briefly appear on the screen of the controlling computer. This is called a status window. The status window serves two purposes: first, it shows you that the controlling computer is actively communicating with the DPMs, and secondly, it contains information that is important to technicians at Corby should you ever have to call for technical support.

In the case where the DPM is connected to the PC via modem connection, a message will display "DPM is Off-Line". This informs you that you must first ensure that the modem connection has been made via Option 76 before attempting to program the DPM.

The Attempts line indicates how many times the PC has sent the message to the DPM before the DPM acknowledged the message. If the Attempts exceeds 3, the message, the DPM and the time and date are printed to the printer. Immediate action should be taken to restore the communications link to the DPM.

Programming DPMs 2 (indicates which DPM it is sending the message)  
 Attempts 1 (indicates how many times it has sent the message)  
 Sent: S7101000800 (the message)  
 Rcvd: (the DPM's response)

## CHAPTER 3

# TIME, DATE AND SCHEDULES

## Overview

Chapter 3 describes setting the system time and date, assigning holiday dates, Daylight Savings Time, using and assigning time schedules, and printing all time schedules. These are all sub options of main Option 1, "TIME - DATE, TIME SCHEDULES, HOLIDAY LIST". To select main Option 1, log on to the System 10 and press the number 1 followed by the Enter key. Option 1 has five sub Options, numbers 11-15, which will be described in the following sections.

## Set Time - Date (Option 11)

The System 10 has a real time clock and calendar that uses a military (24 hour) time format, example 17:00:00 is 5 PM. The system date is valid up to the year 2086. Setting the system time and date is performed in Option 11, "SET - TIME - DATE", which is under main Option 1. Select Option 11 by typing number 11 followed by the Enter key. The Option 11 screen will replace the main Option 1 screen, as illustrated in Figure 3.1.



Figure 3.1 - Time & Date Screen

Press F7 to enter the system time. The cursor will move to the time block. Enter the time in 24 hour format. When the time block displays the correct time, press the F10 or the Enter key, this will update the DPM's.

Press F8 and the cursor will move to the date block. Enter two digits for the month, day, and year. When the correct date is displayed, press the F10 or the Enter key, this will update the DPM's.

If you need help press F1. The help window will appear on the time/date screen. Exit the help screen by pressing the Esc key. The time/date screen will return to normal. If you only wish to view the current time or date without changing any data, select Option 11, view the data and press F2 when you are finished. The F2 key allows you to exit without saving any new data.

## Functions keys used in Option 11

- F1 Press this key for instructions and information regarding this section.
- F2 Exits Option 11 without saving any new data.
- F7 Press this key to enter new time.
- F8 Press this key to enter new date.
- F10 Press to save and download new data to DPMs.

## Enable / Disable Daylight Savings Time (Option 12)

The System 10 real time clock and time control software can be programmed to automatically set the clock one hour ahead on the first Sunday of each April, and set the clock one hour back on the fourth Sunday in October. This feature is called Daylight Savings Time. The Daylight Savings Time function is in the default mode, disabled, until it is enabled in Option 12.

When you are in the "SET- TIME - DATE" screen there are five Options numbered 11 thru 15; number 12 will allow you to change the Daylight Savings mode. Type number 12 followed by the Enter key to select Option 12. The "SET - TIME - DATE" menu will stay on the screen, but Option 12 will appear directly below the words "Enter Your Selection <11-15>", as shown in Figure 3.2.

```

SYSTEM 10 ACCESS CONTROL
TIMES & DATES
You may work in any of the following areas:
  11 SET TIME - DATE
  12 ENABLE/DISABLE DAYLIGHT SAVINGS TIME
  13 ASSIGN HOLIDAY DATES
  14 CHANGE TIME SCHEDULES
  15 PRINT ALL TIME SCHEDULES
  0  RETURN TO MAIN MENU

ENTER YOUR SELECTION <11-15> 12
DAYLIGHT SAVINGS TIME ENABLED
Type <spacebar> to toggle, <10> to save, <12> to abort
F1 for help          Hard disk 18% full          System 10 version 5.1A

```

Figure 3.2 - Daylight Savings Time

To enable Daylight Savings Time, press the space bar and the word "Disabled" will change to "Enabled". After the desired mode has been selected, press the F10 key to save the displayed configuration in internal memory. If you only want to view the current configuration without changing it, go into Option 12, look at the data, then press the F2 key when you are finished. F2 exits this option without saving.

Function keys used in Option 12

F2 Exits without saving any new data.

F10 Saves all new settings for Daylight Savings Time.

NOTE: The Daylight Savings Time will change the time at 01:59:59 in April directly to 03:00:00. This also means that on this day the system will ignore any time that begins with 02:xx:xx. If you are using time schedules in your application, 02:xx:xx will not be a valid time that one day of the year. In October 01:59:00 changes to 01:00:00. Any time zone that begins with 01:xx:xx will repeat on this Sunday in October once a year. Time schedules that are assigned to users or relays may be affected by the Daylight Savings Time change-over. A time schedule start or end time cell for days or holidays will be ignored if that cell occurs at the daylight savings time change over.

### Assign Holiday Dates (Option 13)

The System 10 has 16 programmable holiday dates that can be programmed up to the year 2086. A holiday date is used in conjunction with time schedules. Time schedules are management tools that allow time restricted access to users. Time schedules may also be used for automatic relay activation and deactivation (see *Schedules to Control Relays*). In each time schedule there are eight time zones. Time zones correspond to the seven weekdays and one holiday. A holiday is a time zone that will take precedence over the normal daily access or auto relay activation time zone whenever a preset holiday occurs. This holiday can occur on any day of the week.

Holiday dates and time schedules must be programmed to utilize the holiday time zone feature. Holiday dates are recognized by their calendar date and by a 16 character alpha numeric data field associated with each one. The holiday date can be any date you select, although the System 10 will not allow an invalid date to be entered.

To program holiday dates into the System 10, enter into the main Option 1, "TIME - DATE, TIME SCHEDULES, HOLIDAY LIST". There will be five options listed, numbers 11 through 15 in main Option 1. " ASSIGN HOLIDAY DATES" are in Option 13. Select Option 13 by typing number 13 followed by the Enter key. The Option 13 screen will replace the Option 1 screen, as illustrated in Figure 3.3.

SYSTEM 10 ACCESS CONTROL					
HOLIDAYS					
HOLIDAY #	DATE	DESCRIPTION	HOLIDAY #	DATE	DESCRIPTION
1	01/01/97	NEW YEARS DAY	8	/ /	
2	05/29/97	MEMORIAL DAY	10	/ /	
3	07/04/97	JULY FOURTH	11	/ /	
4	09/01/97	LABOR DAY	12	/ /	
5	11/27/97	THANKSGIVING	13	/ /	
6	12/25/97	CHRISTMAS	14	/ /	
7	12/31/97	NEW YEARS EVE	15	/ /	
8	/ /		16	/ /	

Holiday # to change (0 to quit) ? 1 HILLP 12 2086/1/1 10 5AVL & LX11  
UP DATE CFI DOWN DESCRIPTION OF I

Figure 3.3 - Holiday Screen

To change the data for any of the 16 holidays, enter the number of the holiday you wish to change under "Holiday # to change (0 to quit)", at the bottom of the screen, followed by the Enter key. The cursor will then move to the date section of the selected holiday. Enter the holiday date, the description associated with that holiday, followed by the Enter key. The new date and description will appear in that holiday block. Repeat this for every holiday your application requires. Once you have the correct holiday dates programmed, the information must be saved in to PC memory and the DPMs. To do this, the F10 key must be pressed. The PC will then download the newly programmed or changed holiday dates into memory and to the DPM(s).

The holiday screen uses three of the function keys and two of the arrow keys for controlling movement and utilities. The Up Arrow key will move the cursor up to the date cell and the Down Arrow key will move the cursor down to the description cell. The F2 key will abort and exit back to the sub-menu. Any data entered or changed WILL be lost if the F2 key is pressed before the F10 key. The F10 key saves any changes made and downloads the new data to the DPMs. Holiday dates can be viewed without changing any data by entering into Option 13, looking at the data, and pressing F2 to exit. No data will change or be erased.

Function keys used in Option 13

F2 Exits without saving any new Holiday dates.

F10 Saves the newly entered Holiday dates and downloads the new dates to the DPMs.

**Print Holiday Dates**

Holiday dates can be printed by using the print screen function found on the Controlling Computer's keyboard. To print the holiday dates you must first make sure the printer is turned on. Enter into Option 13, when the data is displayed on the screen, press the shift and print screen keys simultaneously. The printer will print any data displayed on the Controlling Computer's screen. Most of the System 10 screens can be printed in this manner.

**Change Time Schedules (Option 14)**

This option allows you to enter, change, or view time schedules used in the System 10. System 10 has a variety of applications for time schedules which are explained in the following sub-sections.

Option 14 can be accessed from sub menu 1 by pressing 14 and "Enter". This will display the time schedule screen, Figure 3.4. At this point the program prompts you with "Enter DPM for Schedule Change:". Because of the System 10's modular design, it is possible to have different schedules for each DPM. This offers a greater flexibility. If you do not need different time schedules for each DPM the software provides the option to copy schedules from one DPM to another.

SYSTEM 10 ACCESS CONTROL							
TIME SCHEDULE							
	1	2	3	4	5	6	7
DAY	START	END	START	END	START	END	START
1 SUNDAY	00:00	00:00	00:00	00:00	00:00	00:00	00:00
2 MONDAY	09:00	17:00	00:00	00:00	00:00	00:00	00:00
3 TUESDAY	09:00	17:00	18:00	22:00	00:00	00:00	00:00
4 WEDNESDAY	09:00	17:00	00:00	00:00	00:00	00:00	00:00
5 THURSDAY	09:00	17:00	18:00	22:00	00:00	00:00	00:00
6 FRIDAY	09:00	17:00	00:00	00:00	00:00	00:00	00:00
7 SATURDAY	00:00	00:00	00:00	00:00	00:00	00:00	00:00
8 HOLIDAYS	00:00	00:00	00:00	00:00	00:00	00:00	00:00

Enter DPM for Schedule Change: 1

F1 Help	F5 Next Schedule	F7 Next Page	DPM Next Cell	F10 Save
F2 Exit/Abort	F6 Last Schedule	F8 Last Page	F9/Alt Last Cell	F10 Copy

Figure 3.4 - Time Schedule Screen

## What are Time Schedules?

The System 10 has eight fully-programmable time schedules per DPM which act as user selectable time clocks. When a schedule is assigned to a user, access will be limited by that schedule. When a time schedule is assigned to a relay, that relay will activate and deactivate automatically according to that schedule. In each time schedule there are eight time zones, which consist of seven weekdays and one holiday. In a time zone there are two time cells, one start time and one end time, total of 64 time zones. Start time refers to the time of day a user code/card becomes valid or a relay automatically activates. The end time refers to the time of day when the user code/card becomes invalid or a relay automatically deactivates.

The eight time zones in a schedule correspond to the seven days of the week and one holiday. Each day is numbered with Sunday as day #1, Monday as day #2, ..., Saturday as day #7, and any holiday as day #8. There are 16 programmable holidays in the System 10, (see *Assign Holiday Dates*).

When a time schedule is assigned to a user or group of users, those user codes/cards will only be valid between the start and end time of the schedule(s) associated with that user or group. If the user enters a code/card outside the time zone, the System 10 will not activate the port relay and a user error event will be generated. Both valid and invalid entries will be recorded in memory. A printed report can be generated at any time to recall these or any events. Time schedules repeat every week of the year.

A Typical System 10 user time schedule is shown in figure 3.5.

DAY	START	END	(tells day start and end time)
1 SUNDAY	00:00	00:00	(no access on Sundays)
2 MONDAY	09:00	17:30	(access from 9 AM to 5:30 PM
3 TUESDAY	09:00	17:30	Monday thru Thursday)
4 WEDNESDAY	09:00	17:30	
5 THURSDAY	09:00	17:30	
6 FRIDAY	09:00	18:00	(access from 9 AM to 6 PM)
7 SATURDAY	00:00	00:00	(no access on Saturdays or Holidays)
8 HOLIDAY	00:00	00:00	

Figure 3.5 User Time Schedule

This example and description shows a typical user schedule which could be any one of the eight schedules available within the DPM. Access is allowed Monday thru Thursday from 9 AM until 5:30 PM, and on Friday from 9 AM until 6 PM. On Saturdays, Sundays, and holidays user codes assigned to this schedule are not valid to access the door port.

When a time zone has a start time of 00:00 and an end time of 00:00, codes/cards assigned that schedule will not be valid for that time zone. When a time zone has a start time and end time equal to each other, except 00:00, codes/cards assigned that time zone will have 24 hour access. For example, a start time of 17:00 and an end time of 17:00 is a 24 hour time zone.

When a time schedule is assigned to a door/port relay, the relay will automatically activate at the start time and deactivate at the end time. Relay activation occurs when the relay is energized and the contacts change state. Relay deactivation occurs when the relay is de-energized and the contacts change back to their original state. Auto relay activation is useful to operate door or gate controls, or any devices, without user involvement.

A typical System 10 relay time schedule is shown in figure 3.6.

DAY	START	END	(tells day start and end time)
1 SUNDAY	00:00	00:00	(door will be locked all day)
2 MONDAY	08:00	17:00	(door will open at 8 AM and
3 TUESDAY	08:00	17:00	lock at 5 PM Monday thru Thursday)
4 WEDNESDAY	08:00	17:00	
5 THURSDAY	08:00	17:00	
6 FRIDAY	06:00	21:00	(opens at 6 AM closes at 9 PM)
7 SATURDAY	12:00	17:00	(opens at noon closes at 5 PM)
8 HOLIDAY	00:00	00:00	(door will be locked all day)

Figure 3.6 Relay Time Schedule

This example and description shows a typical auto relay schedule which could be any one of the eight schedules available. On Sunday and holidays the door will remain locked all day unless a valid code/card is presented. Monday through Thursday the System 10 will automatically unlock the door at 8 AM, disable the input lines, and store this as an event in memory. At 5 PM, Monday through Thursday, the System 10 will automatically lock the door, enable the input lines, and generate an event. On Friday the door is unlocked at 6 AM and locked at 9 PM. On Saturdays the door will unlock at noon and lock at 5 PM, any time after that only a valid code/card will activate the main relay when entered.

**CAUTION:** When using auto relays and a schedule is programmed for a 24 hour time zone, the door will be unlocked for the full 24 hour time period. If there is a card reader or keypad connected to the port input, it will not function for that 24 hour period. Please be sure to assign user schedules under user data Option 22 and auto relay schedules under port closure data Option 32.

### Schedules To Restrict Users

Time restriction is a very useful management tool used to restrict user access at preset times of the day or week. When a user enters a code/card at a port, the system looks to see if the code is valid at that port at that time. You will learn more about port restriction in Chapter 4. User schedules allow the code/card to be valid only between the start time cell and end time cell. Together these two time cells make up one time zone. There are eight time zones available in each of the eight time schedules to give you a total of 64 time zones per DPM.

The start time is the time of day when the System 10 will accept a code/card as a valid one. The end time is the time of day when the System 10 will not allow the code/card to activate the relay. If a schedule has a start time of 9 AM, and an end time of 5 PM the code will not be valid before 9 AM or after 5 PM. The user code/card will be valid any time between 9 AM and 5 PM. If a schedule has a start and end time of 00:00 the code/card will not be valid during that time zone. If a schedule has a start and end time equal to each other, except 00:00, the code/card will work for a 24 hour period. Example: a time zone has a start time of 17:00 and an end time of 17:00 the code/card would be valid 24 hours for that time zone.

Users may have more than one schedule assigned to them. Access will be limited by the schedules assigned to the code/card. When using two or more schedules for any user or group of users, time zones may overlap. If the code/card is entered during any valid time in any schedule its relay will activate.

If a schedule was required to allow access at 7 AM and deny access after 3:30 PM Monday thru Friday, the schedule's start time cells, Monday thru Friday would be 07:00. The end time cells would be 15:30, Monday thru Friday. If a user enters a code before 7 AM the system will generate and store a user error event. The main relay will not activate because the user is not within a valid time zone the user is restricted to. The same will happen if a user tries to enter a code/card after 3:30 PM. The schedule to perform this is shown in Figure 3.7.

DAY	START	END	(tells day start and end time)
1 SUNDAY	00:00	00:00	(no access on Sundays)
2 MONDAY	07:00	15:30	(access from 7 AM to 3:30 PM Monday thru Friday)
3 TUESDAY	07:00	15:30	
4 WEDNESDAY	07:00	15:30	
5 THURSDAY	07:00	15:30	
6 FRIDAY	07:00	15:30	
7 SATURDAY	00:00	00:00	(no access Saturdays or Holidays)
8 HOLIDAY	00:00	00:00	

Figure 3.7 User Time Schedule

If a user schedule crosses through midnight, time zones require different programming than if they do not cross midnight. The 11 PM to 7 AM work shift is one example. Sunday's start time will be 23:00 and end time will be 00:00, because Sunday does not have a valid end time, only a valid start time late in the evening. The start time Monday through Thursday would be 23:00, and the end time would be 07:00. Friday's time zone will have a start time of 00:00 and an end time of 07:00. Friday does not have a start time only an end time. Friday gets its start time from Thursday night. The schedule is shown in figure 3.8.

DAY	START	END	(tells day start and end time)
1 SUNDAY	23:00	00:00	(access starts Sunday through Thursday 11 PM and ends 7 AM the following morning)
2 MONDAY	23:00	07:00	
3 TUESDAY	23:00	07:00	
4 WEDNESDAY	23:00	07:00	(Thursday access start at 11 PM and ends Friday at 7 AM)
5 THURSDAY	23:00	07:00	
6 FRIDAY	00:00	07:00	(no access on Saturdays or Holidays)
7 SATURDAY	00:00	00:00	
8 HOLIDAY	00:00	00:00	

Figure 3.8 Time Schedule that Crosses Midnight

User time schedules can be assigned to a single or group of users. For most applications a time schedule will be associated with groups of users, usually reflecting their work schedules. If time schedules are selected to follow different work times, it is possible to use most or all of the schedules.

DPMs can have different sets of 8 time schedules. When programming users that will have access to more than one DPM controlled area, special steps must be taken to ensure access for these users. For example, User 1234 has been assigned schedule 1 as in Figure 3.7 within DPM 1; however, schedule 1 for DPM 2 has been assigned the schedule in figure 3.8. This means that User 1234 can only access DPM 1 between 07:00 and 15:30 and can only access DPM 2's doors between 23:00 and 07:00. This tool is very useful when certain areas require different access times. For example, a factory has an enclosed parking area with entrance gate and a data chip reader at all the building entrance/exit doors. Management requires that no employee is allowed into the building more than 15 minutes before their schedule starting time (07:00); however, they can enter the parking area up to 1 half hour before their shift starts. Their access to the gate would start at 06:30, schedule 1 of DPM 1. Their access to the building would start at 06:45,

schedule 1 of DPM 2.

NOTE: DPM versions 3.6E or less: If Daylight Savings Time is enabled, the system clock automatically jumps ahead in April 1 hour from 01:59:59 to 03:00:00, SKIPPING any time that begins with 02:xx:xx. Any time zones that contain 02:xx:xx as a time cell will be SKIPPED; the time cell will NOT see this time. If a user start time cell contains 02:xx:xx as a start time, the code/card will not become valid on this day. If a user end time cell contains a time of 02:xx:xx the code/card will stay valid until the next valid time zone. The clock jumps back one hour in October from 01:59:59 to 01:00:00, so any time zone with a time cell of 01:xx:xx will occur twice that one night of the year only.

## Schedules To Control Relays

The System 10 can automatically activate and deactivate any one of the relays on a door/port module (DPM). This is called auto relay activation. Auto relay activation is a very powerful security management tool that can automatically lock/unlock doors and gates, arm/disarm alarm systems, and control energy management systems without any user involvement.

The term “port” refers to a relay's input and output. The input could be a card reader, keypad, both, Request-To-Exit (RTE), or Door Ajar. The output could be either momentary (1-250 seconds) or on/off relay contacts.

**When a port is automatically activated, any activity on that particular port's input lines will be ignored. The input lines are turned off by the software when a auto relay schedule is active. RTE, Door Ajar, and card/keypad inputs will not function during the on time of the schedule.**

Suppose you wanted to set up a port to automatically hold the Front Lobby door open from 10 AM to 9:30 PM Monday thru Friday. On Saturday, Sunday, and holidays you want the door locked unless a valid code/card is presented. To perform this operation the selected port needs a time schedule assigned to it. The schedule must be programmed according to the start and end times for the daily auto operations required. The auto schedule is shown in Figure 3.9.

DAY	START	END	(tells day start and end time)
1 SUNDAY	00:00	00:00	(door will be locked all day)
2 MONDAY	10:00	21:30	(door will be unlocked at 10
3 TUESDAY	10:00	21:30	AM and lock at 9:30 PM
4 WEDNESDAY	10:00	21:30	Monday thru Friday)
5 THURSDAY	10:00	21:30	
6 FRIDAY	10:00	21:30	
7 SATURDAY	00:00	00:00	(door will be locked Saturday & Holidays)
8 HOLIDAY	00:00	00:00	

Figure 3.9 Relay Time Schedule

When start and end times are programmed in the holiday time zone, the relay will follow the holiday time zone whenever a programmed holiday date occurs. Remember, holiday dates take precedence over normal weekday time zones. If Saturday or Sunday require auto relay operation, assign times to Saturday and/or Sunday's time zones. Saturday and/or Sunday will then function as a weekday in that all input lines will be ignored, and an event will be generated and stored in memory. Remember, using time schedules for automatic relay operation will cause the relay to activate and deactivate automatically without any user involvement.

When a time zone has a start and end time of 00:00, any relay assigned that time zone will NOT activate or deactivate automatically. On the other hand, if a start and end time have the same time, the relay WILL be automatically activated for a full 24 hour period. If you desire a relay to be activated for a 24 hour period, it can be...but remember the inputs WILL NOT function.



If an auto relay schedule crosses midnight the schedule will look somewhat different than a normal schedule. Example: you need a port to automatically activate at 11 PM and deactivate at 7 AM. The schedule to perform a activation at 23:00 and a deactivation at 07:00 the next morning, Sunday thru Thursday is shown in Figure 3.10.

DAY	START	END	
1 SUNDAY	23:00	00:00	(tells day start and end time)
2 MONDAY	23:00	07:00	(door will be unlocked at 11
3 TUESDAY	23:00	07:00	PM every week night, stay
4 WEDNESDAY	23:00	07:00	open until 7 AM the next morning)
5 THURSDAY	23:00	07:00	
6 FRIDAY	00:00	07:00	
7 SATURDAY	00:00	00:00	(door will be locked Saturdays & Holidays)
8 HOLIDAY	00:00	00:00	

Figure 3.10 Time Schedule that Crosses Midnight

The relay will automatically activate every week night at 11 PM, disable the port input lines, generate and store an auto relay event, and stay activated through midnight. The relay will deactivate every morning Monday thru Friday the following day at 7 AM. The deactivation will generate and store an event. Sunday's end time is 00:00 because there is not a start time crossing through from the night before. Friday's start time is 00:00 because the relay stays active through early Friday morning and deactivates Friday mid-morning. The start time is taken from Thursday night. The time zones use the start time cell of one schedule, cross midnight and use the end time cell of the following day.

**NOTE:** For DPM versions 3.6E or less: If Daylight Savings Time is enabled, the clock automatically jumps ahead in April at 01:59:59 to 03:00:00, SKIPPING over 02:xx:xx. Any start or end time cell with 02:xx:xx will be ignored for that one night, the on or off time of an auto relay time zone will NOT activate or deactivate. In October the clock automatically jumps back at 01:59:00 to 01:00:00 on the Daylight Savings Time day. Any time zone with a start or end time cell of 01:xx:xx will repeat.

### Schedules To Control Auxiliary Relays

Each DPM contains one auxiliary relay. An auxiliary relay does not have any provisions for card reader, keypad, RTE, or Door Ajar input devices. When the auxiliary relay is assigned to a time schedule it functions differently than a port relay. A port relay latches on at the start time and stays on until the end time. At the end time the relay latches off. The auxiliary relay maintains its momentary operation when activated by a time zone. The auxiliary relay turns on twice in a time zone, once at the start time and once at the end time. The time that the auxiliary relay stays activated at each time cell depends on the programmed momentary closure time.

If you wish to arm and disarm an alarm system with an automatic relay schedule, the auxiliary relay on each DPM is the only relay that should be used. The auxiliary relay maintains its momentary status during the on time of a schedule. If the auxiliary relay is set for a 3 second activation and has a schedule for auto relay functions, the relay will activate only for three seconds at the start time cell and then deactivate. The auxiliary relay will stay inactivated all day or night until it is run through the end time of that time zone. When the auxiliary relay sees the end time the relay will then activate for three seconds, deactivate, and wait for another time zone to repeat this function. If the auxiliary relay is programmed for latching it will act like the port relays.

**NOTE:** If using the auxiliary relay for automatic arming/disarming you cannot use it for duress or door ajar.

## Removing An Auto Relay Time Schedule

It is recommended that you do not assign schedules to port relays before you test the relay input lines for full operation. Input lines can be connected to card readers, keypads, RTE, or Door Ajar devices. If you do assign a schedule before testing port input lines and the schedule runs through its start time, it will appear that your input devices are non functional. This occurs because the port input lines are ignored during the ON time of the schedule.

If a time schedule has been mistakenly assigned to a port and you wish to remove the schedule from the relay, you must be careful that the relay has not already been activated by that schedule before you remove the schedule. If the relay has already been activated by a start time cell, you must let the relay be deactivated by an end time cell BEFORE you remove the schedule from the relay data. For DPM versions 3.6F of greater, you have the option to toggle the Relay On/Off using Option 33. This option will cause the relay state to toggle OFF and the keypad/reader inputs to be returned to normal operation. Chapter 5 describes how to program relay data and how to manually toggle relays.

**WARNING: If a schedule is removed in the middle of its cycle, keypad, card reader, RTE and Door Ajar input lines WILL BE IGNORED on that port until the system clock passes through an end time cell.**

## Relay Schedules With Momentary Or Latching Operation

Any of the four DPM relays can be programmed to give either a momentary or latching (on/off) activation from a valid code/card entry. A relay can be programmed for momentary operation when a valid code/card is entered, and have a schedule assigned for automatic activation. Auto relay timing will make the main relay perform as an on/off relay during the time zone. Regardless if the relay time is momentary, the relay will become latching ONLY during the time zone it follows. The relay will latch on at the start time and stay on until the end time. At the end time it will latch off and resume its momentary operation. If a long momentary time period (60-250 seconds) is assigned to a relay from a code/card entry and a schedule is assigned to that relay, the schedule can cut the momentary time short. This means if the relay was activated by the code/card seconds before the start time cell begins and the relay start time activates, any remaining time from a code/card entry will be cut off at the start time.

A port relay can be programmed for on/off(latching) operation when a valid code/card is entered, and have a schedule assigned for auto relay activation. Latching relay operation is: each time a code/card or RTE is presented, the relay's contacts change states. When the system passes through the start time, the relay will latch on and stay on until the end time. At the end time the relay will deactivate and resume its latching operation.

Note: If a latching relay is currently in the activated state and a valid start time cell occurs from any schedule assigned to that relay, the relay will stay in the activated state. The start time will not deactivate the main relay, however it will generate and store a valid auto relay event.

If you are entering data into schedules at 2 PM, and you complete entering the data by 2:15 PM, but a start time is at 9 AM, when you have saved the data, the schedule will activate at the start of the next minute. DPM version 3.6F and older would not activate the schedule until the start time was reached, i.e. the next day.

## Holiday Schedules

There are 16 programmable holiday dates in the System 10. A holiday is a time zone that takes precedence over a normal week day time zone. Holiday time zones effect either users for door access, or relays for automatic timed operation. A holiday date will only be useful if time schedules are being used to restrict users or control relays. Each time schedule has eight days or time zones. The first seven zones refer to the weekdays, and the eighth zone refers to the holiday. In each time zone there are two time cells, the start time and end time.

When the internal clock and calendar reach midnight, a new day starts, hence a new time zone. If the new day happens to be a programmed holiday date, the System 10 will follow the holiday time zone for that day rather than the normal time zone. If a holiday date falls on a Wednesday, the normal Wednesday time zone will be replaced with the holiday time zone. The holiday time zone will only replace the normal time zone for a 24 hour time period.

## Entering Schedule Data

Entering data into time schedules is done in Option 14, "CHANGE TIME SCHEDULES", which is a sub option of main Option 1. If you have not read through Sections *What are Time Schedules* and *Schedules to Control Relays*, PLEASE go back and read them BEFORE trying to enter time schedule data. Time schedules are very useful management tools to allow or restrict access to users at selected times.

Option 14 is accessible by first, selecting main Option 1 (type number 1 followed by the Enter key), then type number 14 followed by the Enter key. Option 14 will then appear on the screen initially requesting you to enter a DPM number. Once you have typed in the DPM whose schedule you are going to change, press the Enter key. After you have selected a DPM, the screen responds by listing the first four time schedules for that DPM. The last four time schedules are on the next page.

Option 14 will display the current time schedule data, and if you have not programmed any times into any schedules, all the times will be 00:00. Time cells require a xx:xx 24 hour military time format, without using seconds.

There are eight function keys associated with the Option 14.

- F1        Puts the help screens in the lower right hand corner of the monitor
- F2        Allows you to exit Option 14 without saving any changes.
- F5        Moves you to the next schedule
- F6        Moves you back a schedule
- F7        Take you to the next page of schedules. If you are in the 1-4 schedule screen, pressing F7 will move you to the 4-8 screen. F8 does exactly the opposite of F7
- F8        Move you from schedules 4-8 to schedules 1-4.
- ↓        Will move you to the next time cell. If you are in the start time cell, pressing the Down Arrow will move you to the end time cell.
- ↑        Does the opposite of the Down Arrow, moving you to the last time cell.
- F10      Will save any new data, store it in memory, and download the new information to the selected DPM. If the F10 key is shifted (SHIFT F10 for future references), a window will appear on the screen to allow you to copy schedules from 1 DPM to another. This is very useful when multiple DPMs are have similar access restrictions. The Option 14

screen is shown in Figure 3.4.

Take note that when you first enter the time schedule area, the cursor is located in time schedule one at Sunday's start time cell. You should have a good idea of how the time schedules should be set up before you assign times. If time schedule one is required to automatically activate a relay Monday thru Friday from 9 AM to 5 PM you already have the data for schedule one. Monday thru Friday's start time cell will be programmed for 09:00, notice no seconds are displayed. The end time Monday thru Friday will be 17:00, no seconds here either. Sunday, Saturday, and holiday dates will contain 00:00 for both start and end time cells.

To enter the data for the application described in the previous paragraph, move the cursor to day number 2 for Monday, enter 09:00 into the start time cell followed by the enter. The start time cell for Monday will now display 09:00 and the cursor will be in the end time cell for Monday. Tuesday is done the same way. Continue to enter the selected start and end times into all the time cells needed to complete schedule one.

Enter any other times in any of the other schedules you want to have assigned to either a user or relay. When you have entered all the data, review the data, then press F10 to save all the newly programmed or changed data to the Controlling Computer and DPM. Remember, each DPM has its own set of 8 schedules - make sure all DPMs are programmed correctly before leaving this screen. To ensure the accuracy of the time schedule data you just entered, print the data to the printer with Option 15.

Remember any time a schedule has a start and end time of 00:00, the time zone will not activate the relay or allow a user to activate the relay from a code/card entry. And, any schedule having a start and end time equal to each other, except 00:00, will allow 24 hour access to users or keep the relay activated for a 24 hour period through auto relay functions.

Copying a schedule from 1 DPM to another is done by pressing the Shift key and the F10 key simultaneously. This will display the "SCHEDULE COPY" window Figure 3.11. This option was designed in order to save you time in entering similar schedules. After the appropriate information is entered, it will quickly copy the selected schedule data to the designated DPM's specified schedule. All schedule data previously entered for that schedule will be over written and the schedule data is sent to the DPM. It is advisable to print out all schedules using Option 15 before executing the copy option.

SYSTEM 10 ACCESS CONTROL								
TIME SCHEDULE								
DAY	1		2		3		4	
	START	END	START	END	START	END	START	END
1 SUNDAY	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
2 MONDAY								
3 TUESDAY								
4 WEDNESDAY								
5 THURSDAY								
6 FRIDAY								
7 SATURDAY	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
8 HOLIDAYS	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00

SCHEDULE COPY

Enter source DPM : 01

Enter source schedule:

Enter destination DPM :

Enter destination schedule:

Enter DPM for schedule change: 1

F1 help	F5 Next Schedule	F7 Next Page	DN/Up Next Cell	F10 Save
F2 Exit/Abort	F6 Last Schedule	F8 Last Page	RL/LL Last Cell	F10 Copy

Figure 3.11 - Schedule copy screen

### Function keys used in Option 14

- F1 Press this key for instructions and information regarding this section.
- F2 Exits without saving any new schedule data.
- F5 Moves the cursor to the next schedule.
- F6 Moves the cursor to the previous schedule.
- F7 Changes screen to show schedules 4-8.
- F8 Changes screen to show schedules 1-4.
- F10 Saves any new data and downloads new data to the selected DPM.

SHIFT F10 Allows you to copy one schedule from one DPM to another.

### Testing Schedules

Time schedules contain a start and end time, which could be viewed as an on and off time for user access or auto relay activation. For the start or end time to take effect, that specific time cell must be pass through its time. Pass through occurs when the system clock cycles through the exact time of a time cell. If a time cell is 07:00 the system and DPM must see the clock time of 07:00 to be valid.

If you enter time schedule data in Option 14, in the middle of what would be a valid time zone, that time zone will not activate until the next valid time zone comes about. If you are programming a schedule for auto relay functions at 2 PM, but the schedule starts at 9 AM, that relay will not activate when you exit to the view event screen, because it did not see the start time.

The testing of time schedules should not be started until all information in the schedules and relay data have been reviewed and programmed.

A 9 AM to 5 PM user time schedule will allow access at 9 AM until 5 PM and not before or after. To test the allowable time, set the system time in Option 11 to 08:59:00 and press F10 to save the new time, then exit to the MONITOR EVENTS screen (main Option 6). When the time reaches 09:00, try to enter a code/card assigned to that schedule at a port where it is allowed to access, it should work. If you change the time again in Option 11 to 13:00, save and exit to the MONITOR EVENTS, and enter the same code/card as you did at 9 AM. The code/card should still activate the port. To test the end time at 5 PM, set the system time to 16:59:00, save and exit to the view events screen, and wait until the time changes to 17:00 or later. The code/card that worked before will not work now if you enter that code/card at the same port.

A 9 AM to 5 PM relay time schedule will activate the relay at 9 AM and deactivate the relay at 5 PM. Remember the card reader/keypads do not work during the on time of the relay. To test the start time, set the time to 08:59:00 the same as above, save and exit to the view events screen. When it appears, wait for "auto relay XX on" to appear at 09:00. The relay has now activated, and the input devices, if any, will not work on that port(s). To test the end time, set the clock to 16:59:00, save and exit to the MONITOR EVENTS screen, and wait for "auto relay x off" at 17:00. Also, test the input devices, if any. The input devices will work now that the relay is done with the days time zone.

## Print All Time Schedules (Option 15)

---

Option 15 allows you to print out all time schedules. It will print a set of 8 time schedules for each DPM in the System 10. A printout could also be given to a department supervisor for reference to time schedules assigned to employees in that department. Option 15 is a sub option of main Option 1. Option 1 has five sub Options 11-15. Option 15 "PRINT ALL TIME SCHEDULES" will allow you to print the current time schedule. Option 15 does not contain a menu screen, it simply prints the data on the system printer.

If the printer is powered and the ready light is on, type number 15, followed by the Enter key to select Option 15. The current time schedule data will then be transmitted to the printer and the printer will give you a hard copy of the schedules on paper. To return to the main menu or option screen press number 0 followed by the Enter key.

# USERS AND ACCESS CONTROL

## Overview

In this chapter the topic of users and access control will be discussed. Sub topics in this chapter include adding, changing and deleting user accessibility to the doors/ports protected by the System 10. Additional topics include setting the facility code (for card users), printing the user access data, displaying the number of users currently installed at a given door/port module and printing the status of temporary codes. All these topics are options of the second sub menu of the main option menu (as illustrated in Figure 4.1) and will be addressed in the order they appear on the menu.

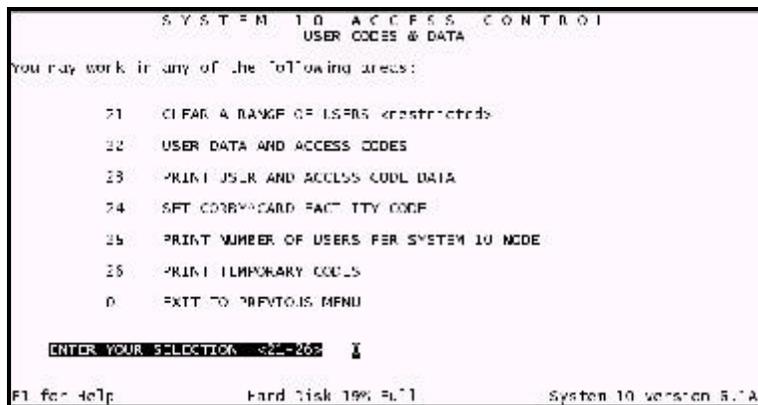


Figure 4.1 - Sub Menu 2

## Clear a Range of Users (Option 21)

Users are individual persons that are given access to one or more door/ports of the System 10. They are identified in the system by their name, a unique identification number and one or more access codes. At some time, it may become necessary to remove one or more of these users from the group authorized to access System 10's controlled door/ports. Option 21 of sub menu 2 will allow you to easily remove users' data from the System 10.

To invoke Option 21 from sub menu 2, just key in 21 followed by the Enter key to invoke this option. Figure 4.2 shows the screen that will appear. Please note the precautionary notice - Back up YOUR DATA! Having a back up copy of the data protects you against accidental losses. Use the F2 key to exit this screen and return to sub menu 2. See Chapter 9 for more information on backing up System 10's data. If you should accidentally clear user data the Restore Option (#72) can recover the data from the back ups made with Option 71 BACK UP DATABASE.

To begin clearing users from the System 10 database, you must be prepared with the user's four digit identification numbers. If you are not sure what the four digit identification numbers are for the selected group of users, press the F2 key to return to sub-menu 2 and select Option 23. This option will allow you to print the users' data by the identification number. More information on Option 23 PRINT USER AND ACCESS DATA.

```

SYSTEM 10 ACCESS CONTROL
DELETE A RANGE OF USERS

Invoking this option will cause a range of user information, including access
codes to be deleted from the System 10 access control system.

BEFORE STARTING THIS ROUTINE - MAKE A BACKUP COPY OF ALL DATA USING OPTION
#72 ON THE UTILITIES MENU! Then if deleting the codes was a mistake, the data
can be restored using option #72 on the UTILITIES menu.

ENTER FIRST USER ID IN RANGE TO BE DELETED:  2224
ENTER LAST USER ID IN RANGE TO BE DELETED:  2156
ARE YOU READY TO DELETE USER DATA      YES

F1 for help  F2 to abort

```

Figure 4.2 - Clear a Range of Users

Once you have the four digit identification number, determine the lowest user number and enter it on the line that reads ENTER FIRST USER ID IN RANGE TO BE DELETED. Make sure to enter all leading zeroes. Press the Enter key to advance to the next line, or the F2 key to abort this routine and return to sub menu 2.

Next, determine the highest user number and enter it on the line that reads ENTER LAST USER ID IN RANGE TO BE DELETED. Again, make sure to type all leading zeroes. Follow your entry with the Enter key (or F2 if you wish to abort and exit this screen). If you wish to change your first entry use the UP arrow key to move the cursor to that line.

Before the users are purged from the System 10 the next prompt requires confirmation of the entries. If you are not sure of the range or have decided not to go through with the deletions, simply type NO and press the Enter key to the question or even more simply press F2. Either NO or F2 will return control to sub menu 2. If you're ready to begin the deleting process type YES followed by the Enter key.

When the purging begins a small window will appear and then disappear from the upper left corner. This activity indicates the System 10 is sending the "delete user" message to the Door/Port Modules (DPMs). The DPM receives the message, deletes the users' access data and then sends a message back to the System 10 - indicating that the deletion took place. The System 10 will then continue this process until all the users' access data in the specified User Identification number range are deleted from all the affected DPM's.

If the System 10 does not display the window in the upper left corner of the screen and it returns control to Sub menu 2, there are several things you can check. First, double check the identification numbers that you selected. Is the first number you entered less than the second? (it should be). Secondly, have you picked a valid range? You can check the range by selecting Option 23 PRINT USER AND CODE DATA on sub menu 2 for more details.

Special function keys for this screen are:

- F1      Press this key for additional instructions and information regarding the prompt at which the cursor is located.
- F2      Press this key to exit this screen without deleting any codes.

## User Data and Access Codes (Option 22)

Access to one or more of the System 10's door/ports is controlled by the information entered in Option 22 of the second sub menu. This option, USER DATA AND ACCESS CODES, permits you to enter one or more users into the System 10's user database by simply typing the information requested on this screen (as illustrated in Figure 4.3). In the following paragraphs, instructions for entering each of the nine items on the screen, plus its purpose will be explained. The nine areas on the screen are: name, identification number, miscellaneous information, access code, temporary code indicator, duress indicator, antipassback indicator, door / port accessibility and time schedules. For each of these areas there is a description of the item's purpose, specifics for entering the item and special functions available for this item.

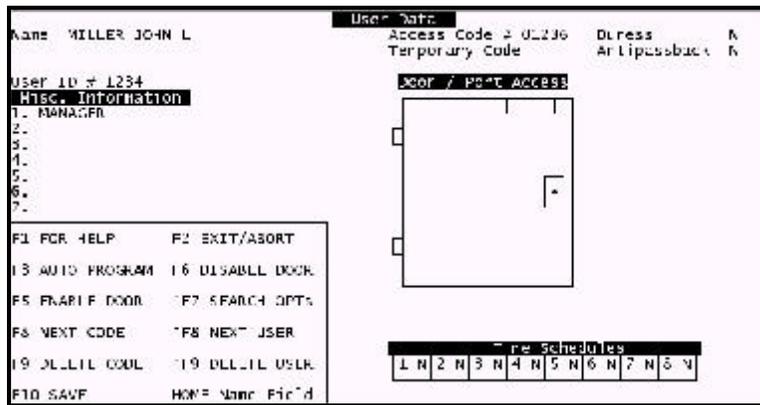


Figure 4.3 - User Data & Access Codes

Special function keys available for this screen are:

- F1 By pressing this key, information and instructions for the current area of the screen will be displayed.
- F2 This key will return control back to sub menu 2. Before returning control to the menu, System 10 first checks if any of the Door/Port Modules have received new or updated user information. If updates were sent to one or more of the DPM's, a window will appear in the upper left corner. This window indicates the System 10 is commanding the DPM's to re-sum their memory. This is a self testing mechanism used by the DPMs to ensure against memory glitches.
- ↑ Press this key to change the cursor position in the screen.
- ↑ Will return the cursor to the previous area.
- ↓ Press this key to change the cursor position in the screen. The Down arrow will advance the cursor to the next area.

## User Name

The name field is used to identify the user. It must be unique for each user entered. This name will appear when the user data is listed with Option 23 PRINT USER AND CODE DATA, or when the user accesses one of the System 10's door/ports.

Entering the name of the user into the System 10's user database is done by typing the first seven letters of the user's last name, followed by the first seven letters of the first name and then the user's middle initial. After entering the name press the Enter key. If the name already exists in the System 10 database, the existing information on that user will be displayed, otherwise the screens data areas will be reset for new information.

Deleting a user's name and all the associated data with it is accomplished by typing the name as it was originally entered. When this name and all the data appear on the screen, press and hold the Shift key then press the F9 key, then release both keys. This initiates the routine to delete the user. When the System 10 is deleting the user, a rectangular box may appear in the upper left corner. This box indicates the user had access to one or more doors of the System 10's DPMs, and this access is being removed.

Changing a name that exists in the database can be accomplished by first typing the name to be changed. This will display all the information pertaining to the user. Next press and hold the Shift key and then press the F9 key, then release both keys. This will delete the old name and all information associated with that name from the database. At this point the new name is entered as if it were a new user.

Special function keys available at this location are:

F1 Press this key for instructions and information regarding this area on the screen.

F2 Press this key and System 10 will return control to sub menu 2.

F3 Press this key to initiate the System 10's Auto-programming function.

Shift F8 These keys, when pressed simultaneously, will locate the next user alphabetically in the database. You can also use these keys to look up users' names whose names you can't remember the exact spelling. Simply type in several of the first letters of the last name you're looking for and press the Shift key then press the F8 key simultaneously, then release both keys. The System 10 will look up the first user that starts with the letters you typed - if the user you're looking for isn't the one displayed, press the Shift and F8 keys again to continue the search.

Shift F9 These keys when pressed simultaneously will cause the currently displayed user's information to be deleted from the System 10 and all Door/Port Modules.

## User Identification Number

The User Identification Number, or User ID #, is a number given to each user of the System 10 to uniquely identify them. This number must consist of four digits. Each digit being a number between 0 and 9, no letters or special characters are allowed. This number is used only for identification - it is not a code used to gain access to System 10's door/ports.

When entering this number, simply type in four digits. If the number is used by another individual in the database, the message NUMBER IS USED BY ANOTHER USER will appear at the bottom right corner of the screen. This message will disappear when you re-enter a new number that does not already exist in the System 10 database.

If you want to assign a one, two or three digit user number, you must use leading zeroes. For example: a User ID# of 5 must be entered 0005, 54 would be entered 0054 and 144 would be entered as 0144.

Special function keys available at this location are:

F1 Press this key for instructions and information regarding this area on the screen.

F2 Press this key and System 10 will return control to sub menu 2.

↑ This key will return the cursor to the Name position.

↓ This key will move the cursor to the Miscellaneous Information area.

Note: The Down arrow key will only advance the cursor if the digits entered are valid.

### Miscellaneous User Information

This area of the screen was provided to allow you to enter special comments or information regarding this user. The information listed in the first line of this area is displayed in Option 6, MONITOR CURRENT EVENTS, or Option 5 SYSTEM 10 DATABASE REPORTS, when the user attempts to enter one of System 10's door/ports.

Entering this information is accomplished by simply typing the text or numbers on any one of the seven available lines. Move to the next line by pressing the Enter or Down arrow keys. Press the Up arrow key to return to the previous line. Each line will accept ten characters. Remember, the information entered on line one will appear every time the user passes through, or attempts to pass through one of System 10's controlled door/ports.

Special function keys available at this location are:

F1 Press this key for instructions and information regarding this area on the screen.

F2 Press this key and System 10 will return control to sub menu 2.

↑ This key will move the cursor up to the previous information field, or if the cursor is at the first miscellaneous datum, an Up arrow will place the cursor at the User Identification section.

↓ This key will move the cursor to the next field. If the cursor is located on the last field, the cursor will move to the Access Code area.

### Access Codes

The Access Code is a five digit number assigned to the user. The user must enter this code at the System 10's controlled door/ports in order to enter or exit the secured area. For installations with keypads, this code is entered by the user at the door/port. For installations that have card readers, the code is pre-programmed into the card, the user simply uses the card at the readers door/port.

Entering a new access code is performed by typing a five digit number at the access code position on the screen. Like the User ID #, numbers that are less than five digits in length, such as 100, must be padded with leading zeroes, 00100. When all five digits are typed in press the Enter key or the Down arrow key, if the number you entered is valid and not used by another user, the cursor will move to the next position on the screen. If the keys you have entered are not all digits zero through nine, the cursor will return to the beginning of the Access Code field. If the code you entered is owned by another user the message CODE IS USED BY ANOTHER USER will appear at the bottom of the screen. This message will remain there until you enter a

code that is not already in the database for another user.

A user can have one or more access codes. Additional codes are assigned to the user by merely typing in a new five digit code and pressing the Enter key. After the new access code is entered, the Duress, Antipassback, Door/Port Permissions and Time Schedules will be set to their default values. At this point enter the correct values for these areas and press F10 to save the new code.

Changing an access code is a two step process. First delete the old access code by pressing the F9 key. Then, re-enter the new code. If you do not delete the old access code first, the user will have more than one access code, which may not be what you want.

Deleting the access code displayed on the screen is done by pressing the F9 key. When the F9 key is pressed the Door/Port Modules (DPMs) that the code has access to will be notified to delete the code from their memories. This action is indicated on the screen by a window appearing in the upper left corner of the screen. Inside this window will be the DPM number and the command to purge the access code. After the command has been sent and acknowledged by the DPM, the window will disappear.

Special function keys available at this location are:

- F1        Press this key for instructions and information regarding this area on the screen.
- F2        Press this key and System 10 will return control to sub menu 2.
- F8        Press this key to display the next access code owned by the user currently being displayed.
- F9        Press this key if you wish to delete the displayed access code from the database.
- F10      Press this key and all the information displayed on the screen for this code will be stored in the System 10's database. A window may appear in the upper left corner of the screen. This indicates that the access code data displayed is being transmitted to the DPMs. When this transmission is complete, the window will disappear and you will be able to move the cursor again.
- ↑         Pressing this key will move the cursor back to the Miscellaneous Information area.
- ↓         Pressing this key will place the cursor at the Temporary Code section of the screen.

### Temporary Codes

The System 10 has the ability to automatically activate an access code at a predetermined time and date; then at a later time and date, remove that access code from the database and DPMs. With this tool, the person administering access codes can set up access for individuals that will only be allowed to enter secured areas for a limited time. After this time expires these access codes will automatically be removed from the System 10. An example application would be:

XYZ Savings and Loan needs additional phone lines in its phone system. To install these phone lines, phone company workers must be permitted to enter normally restricted utility rooms. The job is expected to be completed in three days. You, as the System 10 administrator, enter user data for these workers indicating that their access is temporary. System 10 then requests starting and ending times. You enter a starting time and date and an ending time and date to cover this three day period. When the first day arrives, the System 10 activates the phone company workers' access codes. At the end of the third day, the System 10 deactivates these codes.

There are two responses that may be entered at the "Temporary Code" prompt. By pressing N and Enter the access code will remain in the System 10 until you remove it. If you type a Y and

Enter a small window will appear on the screen with additional information needed about the temporary code you are entering.

The first piece of information needed about this temporary code is the starting date. This date must be either today's date or a future date. The date must contain two valid digits for the month, 01 through 12; two valid digits for the day, 01 through 31 (or less for those months at 30 days or less); and two valid digits for the year, 00 through 99 (if the year entered is less than 88, the twenty-first century is assumed). After the information is entered press Enter. If the date entered is valid, the cursor will move down to the next prompt; however, if the cursor does not move down, verify that the date entered matches the criteria mentioned previously and re-enter the date.

The second piece of data needed for temporary codes is a starting hour. The hour is entered in 24 hour clock format - a number between 00 and 23. Type in the two digits indicating the starting hour and press Enter. If the hour you entered is valid the cursor will be positioned at the next prompt. If the cursor did not advance, the time you entered is incorrect. Note: if the starting date above is today's date, the hour you enter here must be greater than the current hour.

The third item is the ending date. Follow the same guidelines as the starting date for this item. Remember, the date entered **MUST** be valid before you can continue to the next item.

The last item is the ending time. Enter this time with the same considerations as the starting time. If the starting date and ending date are the same, then the ending time **MUST** be greater than the starting time.

Special function keys available at this location are:

- F1        Press this key for instructions and information regarding this area on the screen.
- F2        Press this key and System 10 will return control to sub menu 2.
- F10       Press this key and all the information displayed on the screen for this code will be stored in the System 10's database.

**NOTE:** This information will not be relayed to the DPMs at this time! The DPMs will be updated during the starting hour indicated for this code on the starting date. If the starting date and time are the same as the current date and time the code will be relayed to the DPMs after you have exited this screen - this is to avoid interfering with other codes you may be entering.

- ↑        Press this key to move the cursor back to the previous area.
- ↓        Press this key to place the cursor at the next section of the screen. Remember, if you incorrectly enter the data, the arrow keys will not work until you correct the error.

## **Duress Codes**

An Access Code can be configured as a duress code. A duress code is a special code given to a user in the event of a hostage situation. By entering this code at a door/port the user will indicate to the System 10 that emergency action must be taken. System 10 upon detecting a duress code will activate the normal door/port relay to allow normal access; however, the auxiliary relay on the DPM will also activate. This auxiliary relay can be used to signal a silent alarm.

**CAUTION:** The auxiliary relay of the Door/Port Modules can be used for other tasks. Make sure when configuring codes for duress that the auxiliary relay(s) has not been set up to activate under time schedule control, zone control or door ajar warning.

For door/ports with keypads, the user is assigned two codes. One code is for normal entry, the second is for duress entry. If Corby Cards are used, only one card is needed for both normal entry and duress entry. For normal entry the card is swiped through the reader with the face of

the card towards the user. For duress, the card is swiped with the back of the card facing the user.

Access codes can be set up to act as duress codes by simply typing a Y at the Duress area of the screen. For a normal access code, press N. After making your choice press the Enter key. Any other character other than a Y or N is incorrect and the cursor will not move from this section until the error is corrected. Remember: Duress and normal access with Corby Cards only requires one code and two different entry styles, if you want both for your Corby Card users select Y; for keypads there is one entry style and two different access codes; one normal, one duress.

Special function keys available at this location are:

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key and System 10 will return control to sub menu 2.
- F8 Press this key to display the first access code owned by the user currently displayed on the screen.
- F9 Press this key if you wish to delete the displayed access code from the database.
- F10 Press this key and all the information displayed on the screen for this code will be stored in the System 10's database. A window may appear in the upper left corner of the screen. This indicates that the access code data displayed is being transmitted to the DPMs. When this transmission is complete, the window will disappear and you will be able to move the cursor again. If no window appears this simply means there were no changes to the user's access code that affected the DPMs.
- ↑ Pressing this key will move the cursor back to the Temporary code area.
- ↓ Pressing this key will place the cursor at the Antipassback section of the screen.

### **Antipassback**

Antipassback, when enabled, forces the user of an access code to enter a secured area through one door/port and exit through another. If the access code is entered at an exit before it was presented at the entrance it will not allow the exit. Likewise, if the access code was not presented previously at the exit door/port before another entrance is attempted, the code will not operate.

This feature will prevent users from sharing their access codes with one another, since the user must enter then exit before another entrance is permitted.

Special considerations must be made when selecting antipassback. There are four door/ports on each of System 10's DPMs. For antipassback to work, both the entrance to the secured area and the exit door/ports must be controlled through the same DPM. The entrance must be one of the DPM's even ports and the exit must be one of the DPM's odd ports. The user must be given access to at least one even and odd port.

Antipassback can be assigned to an access code by pressing Y at the corresponding prompt. Press N if the antipassback restraint is not desired for this access code. A Y or N must be entered in this position; any other character is considered invalid. After a Y or N has been selected, press the Enter key.

Special function keys available at this location are:

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key and System 10 will return control to sub menu 2.
- F8 Press this key to display the first access code owned by the user currently displayed on the screen.
- F9 Press this key if you wish to delete the displayed access code from the database.
- F10 Press this key and all the information displayed on the screen for this code will be stored in the System 10's database. A window may appear in the upper left corner of the screen. This indicates that the access code data displayed is being transmitted to the DPMs. When this transmission is complete, the window will disappear and you will be able to move the cursor again. If no window appears this simply means there were no changes to the users access code that affected the DPMs.
- ↑ Pressing this key will move the cursor back to the Duress area.
- ↓ Pressing this key will place the cursor at the Door/Port Access section of the screen.

### **Door/Port Access**

With System 10, access to secured areas can be restricted to only specified door/ports. This feature gives you the ability to pick and choose which door/ports the user can enter or exit.

When the cursor enters this area of the screen, a rectangular grid will be displayed. Within this grid there are blocks containing numbers that represent the door/ports available to the user. The number can range from 4 to 128 blocks depending on the number of DPMs connected. The unnumbered blocks are reserved for future expansion. These blocks will become available when additional DPMs are connected to the System 10. Door/port access is symbolized by green or white highlighted blocks, depending on your display. Dark blocks indicate that the user does not have access to those door/ports.

Assigning door/port access to a user is done by positioning the cursor over the door/port number and pressing the F5 key. User access to a door/port is displayed on the screen by the block changing its display attribute to a green or white background (reverse video).

Removing access from a user is accomplished by positioning the cursor over the block corresponding to the door/port to be removed. After positioning the cursor press the F6 key. Pressing this key will change the block's color back to dark.

Special function keys available at this location are:

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key and System 10 will return control to sub menu 2.
- F5 Press this key to permit the user access to the door/port specified in the block.
- F6 Press this key to remove a user's access to the door/port specified in the block.
- F8 Press this key to display the first access code owned by this user.
- F9 Press this key if you wish to delete the displayed access code from the database.

- F10 Press this key and all the information displayed on the screen for this code will be stored in the System 10's database. A window may appear in the upper left corner of the screen. This indicates that the access code data displayed is being transmitted to the DPMs. When this transmission is complete, the window will disappear and you will be able to move the cursor again. If no window appears this simply means there were no changes to the user's access code that affected the DPMs.
- ↑ Pressing this key will move the cursor to the block directly above the current block on the screen. If the current position is within the top row, the cursor will move to the Antipassback section of the screen.
- ↓ Pressing this key will place the cursor at the block directly below the current block. If the current block is within the last row of door/ports, the cursor will move to the time schedule area of the screen.
- ← Pressing this key will move the cursor to the block just to the left of the current block; if the current block is at the beginning of a row, the cursor will move to last block of the row above; if the current block is block 1 then the cursor will move to the antipassback section of the screen.
- Pressing this key will move the cursor to the block just right of the current block; if the current block is at the end of a row, the cursor will move to first block of the row below; if the current block is the last numbered block then the cursor will move to the time schedule section of the screen.

## Time Schedules

System 10 provides time scheduled access for users. This capability furnishes you with the ability to limit a user's access code to preset times of the day. The most common usage of this feature is work shifts. Time schedules are set in Option 14 to the specified times, which can then be assigned to one or more users. A user's access can be restricted by more than one schedule as well. By not selecting any time schedules, the user will have unlimited access to the door/ports assigned in the previous section.

A time schedule consists of eight time periods. There is a time period for each day of the week and one for holidays. In each of the time periods, there is a starting time and an ending time. The starting time indicates the hour and minute when users assigned to this schedule will be allowed access. The ending time indicates the hour and minute when users assigned to this schedule are locked out of this door/port.

When more than one time schedule is assigned to a user, access to permitted door/ports is allowed if the current time is within at least one of the assigned time schedules. For example: time schedule one has been set up for morning workers, start time 07:00 - end time 12:00. Schedule two is set up for afternoon workers starting at 13:00 and ending at 18:00. Some workers work both time periods but are not permitted to wonder about during the lunch hour. Those individuals working both shifts would be given time schedules one and two. The System 10 scans each time schedule assigned to the user, allowing access when the current time and day are within the start and end time of that day of the week in the schedule. If the current date was set up as a holiday in Option 13 SET HOLIDAY DATES, the System 10 would scan the eighth time period to check valid access times.

To assign a user's access to a time schedule, first note in Option 14 which time schedule numbers pertain to this user's access, then press Y to assign the user's code to that time schedule or press N to indicate the user's code is not restricted to the time schedule. When Y is pressed, the time schedule will be assigned to the user and become highlighted, the N will remove this highlighting and not restrict the user by that time schedule.

Special function keys available at this location are:

- F1      Press this key for instructions and information regarding this area on the screen.
- F2      Press this key and System 10 will return control to sub menu 2.
- F8      Press this key to display the first access code owned by this user, the cursor will move back to the access code area.
- F9      Press this key if you wish to delete the displayed access code from the database. After the access code has been deleted the cursor will move back to the access code area.
- F10     Press this key and all the information displayed on the screen for this code will be stored in the System 10's database. A window may appear in the upper left corner of the screen. This indicates that the access code data displayed is being transmitted to the DPMs. When this transmission is complete, the window will disappear and you will be able to move the cursor again. If no window appears this simply means there were no changes to the user's access code that affected the DPMs.
- ↑        Will move the cursor back to the previous time schedule block or if the cursor is at block one it will move back to the door/port area.
- ↓        Pressing this key will place the cursor at the next schedule, or if the cursor is at the eighth block, the cursor will move to the Access Code section of the screen.

## Auto-Programming

Auto-programming provides the means to enter more than one user with a set of common access information. For example, there are 20 people given access to the research laboratory of a chemical company. The Laboratory has one entrance and one exit. All 20 of these personnel have access to the laboratory from 8 A.M. to 8 P.M. There are two ways to enter this group into the System 10. The first way is to enter 20 users one at a time. The second is to employ the auto-programming feature. Using this feature, you specify the number of users, the starting user identification number and the starting code. After this information is specified, set the other parameters for temporary codes, duress codes, antipassback, door/port access and time schedules. When all this information has been entered, press F10 to display the Names Window, names can be added to user identification numbers. Pressing the F10 key will start the actual programming process. You, as the operator can sit back and watch the computer do the remainder of the work.

NOTE: Auto programming cannot be used to change door or other parameters of existing users. You must first erase all users and start over using the same parameters that were used in the original installation.

When the auto programming session is complete a brief report will print. The information listed on this report will be the auto programming specifics, as illustrated in Figure 4.4. It is recommended that you keep this report with your other System 10 printouts of user, port and time schedule data.

```
Auto - Programming Run 05/07/1997 @ 15:05:15
Batch Name: R&D LABS
Starting User ID # 5760
Starting Access Code 56700
5 Codes Generated for Card Access
0 Errors Detected
```

PLEASE RETAIN THIS REPORT FOR YOUR RECORDS

Figure 4.4 The Auto-Programming Report

To start the Auto Programming function of the Option 22 screen, press the F3 key. After this key is pressed a window will appear on the left side of the screen as illustrated in Figure 4.5. The information in this block will determine the Batch Name, the method of access code generation and the starting user number.

As with previous sections of this screen, F1 will display information and instructions regarding the prompt at which the cursor is positioned. F2 will abort the auto programming session and return control to sub menu 2. The Up and Down arrow keys will move the cursor to the previous or next prompt providing the data on the current line is correctly entered.

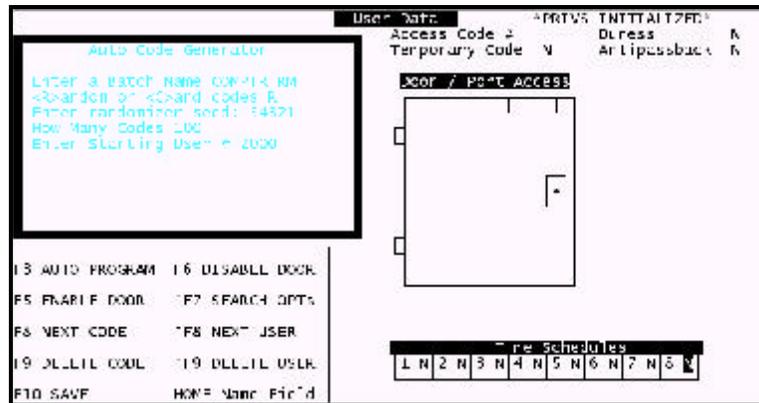


Figure 4.5 - Auto-Programming Screen

### Batch Name

Entering the information for auto-programming begins by typing up to a 10 character name that will be associated with all the users generated in this session. This name will appear when any of the codes generated in this session are entered at a door/port. The options which display this data are main Option 6, MONITOR CURRENT EVENTS and Option 5 SYSTEM 10 DATABASE REPORTS. After the text has been entered, press the Enter key. Because the text entered here will help identify the user, you may not leave this area blank.

Special function keys available at this location are:

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key and System 10 will return control to sub menu 2.
- ↓ This key can be used at this section of the screen to move the cursor. Pressing a Down arrow will move the cursor to the <R>andom or <C>ard codes prompt.

### Random or Card Codes

System 10 allows you to generate access codes in two ways, randomly or sequentially. When random code selection is chosen, all codes will be picked from the entire range of code numbers zero through 99,999. The random numbers are picked by the System 10 based on a seed value that you provide (a seed is a number which the System 10 uses to generate random codes). Sequential card codes are needed when programming groups of card holders into the System 10.

**NOTE:** Corby Cards are shipped in sequence, however, the card codes are not necessarily contiguous. For example: In an order of 1,000 cards it is possible they are numbered in order 1 to 1,000 or they could be numbered 1 to 500 and 1001 to 1500. These breaks in card numbers can be seen readily on the printed report included with every Corby Card purchase.

To pick the method of code selection, simply type R for random code numbers or C for sequential card codes; then, press the Enter key. Only R and C are valid choices, all other entries will not advance the cursor to the next prompt.

When random codes are selected, you will be asked to enter a randomizing seed. This is a five digit number the System 10 will use to generate the random codes. For more details on the "seed" value, please refer to the next section.

For card codes, you will be asked to enter the starting user identification number then a starting Card Code. The Card Code is the lowest five digit number in the batch of Corby Cards to be entered. Because Corby Cards are shipped in sequential order, all codes generated will be in sequence beginning with the starting code entered.

Function keys available at this area of the screen are:

- F1        Press this key to receive additional information and instructions regarding this topic.
- F2        Press this key to exit the Auto-Programming option and return to sub menu 2.
- ↑         This key, when pressed will move the cursor up to the previous area of the screen.  
Down Arrow Press this key to move the cursor to the next area of Auto-programming.

### **Randomizer Seed**

This section only applies to the auto-programming of random codes. If you are generating access codes for Corby Cards, please refer to the next section.

The randomizer seed is a five digit number used to generate a unique set of numbers between zero and 99,999. The same numbers will always be generated if you type in the same randomizer seed. By typing in an existing seed value, you can change access codes that were previously generated. Once you have used a seed value the System 10 remembers this seed and all the access codes generated. This makes changes to these codes much easier to do.

If the seed exists the program will respond with the prompt: This seed was already used. Change these codes? You may press the Y or N key. Pressing Y will allow you to change the access control configurations for the codes in this batch. It will not generate any new codes. If an access code in this group was removed from the database, this routine will not regenerate that code. Pressing N will return the cursor to the randomizer seed prompt.

### **Starting Card Code**

This section only applies to auto-programming for Corby Cards - if you are generating random access codes, please refer to the previous section.

The starting card code is a five digit number which corresponds to the lowest numbered Corby Card you are programming into the System 10 during this auto-programming session. This number appears on a label on the back of the Corby Card or on a printed list of all card codes from Corby. Type all five digits of the first Corby Card code at this prompt. Make certain the leading zeroes are also typed, then press Enter.

### How Many Codes

With the Auto-programming option, you can generate from one to 999 users and access codes in one session. Simply type the number of codes desired, and press the Enter key. If the cursor does not move to the next prompt, make certain that all the digits entered were numbers between 0 and 9.

Special function keys available at this location are:

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key and System 10 will return control to sub menu 2.
- ↑ Pressing this key will move the cursor up to the batch name section.
- ↓ Pressing this key will move the cursor to the <R>andom or <C>ard Code prompt.

### The Name Window

After entering all the access control data for the auto-programming session, press F10 to display the Name Window as illustrated in Figure 4.6.

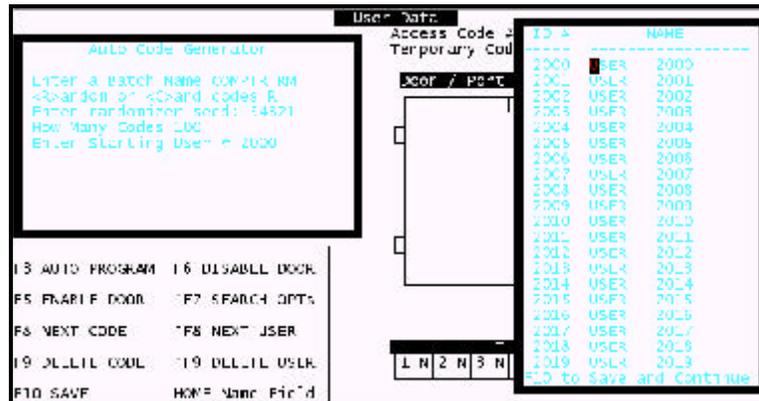


Figure 4.6 - Name Window & Auto-Programming Screen

This window allows you to change the default names assigned by System 10 to the users you will be auto-programming. The System 10 software will assign a name with "USER" as the last name and the User Identification number as the first name. You may change the names of these users by typing over the default names displayed. Users who are already in the System 10 database will have the name in the database displayed, NOT the default name mentioned above.

If you decide to change any of the names, remember these names must be unique. If the name you type in corresponds to another user in the database the message NAME BELONGS TO ANOTHER USER will appear at the bottom of the screen. This message will disappear when a unique name has been entered. If you duplicate a new name not yet in the database, an error will occur during the auto programming. This duplication will be indicated on the screen as an error and printed on the printer, the erroneous user will not be added to the database.

Special Function keys available within this window include:

- F1 Press this key to display addition instructions and information regarding the Name Window.
- F2 Press this key to abort the auto-programming session. Program control will be returned to sub menu 2.
- PgDn Press this key to display the next 20 names.
- PgUp Press this key to display the previous 20 names.
- F10 This key will begin the auto-programming process.
- ↑ Press this key to move the cursor to the previous name in the name window.
- ↓ Press this key to move the cursor to the next name in the name window.

## Print User And Access Code Data (Option 23)

After users have been entered into the System 10's database, it is always beneficial to print a paper copy or to quickly review the data entered on the screen. This printout and view screen are generated by Option 23. Option 23 provides the means to display the user data in user name sequence, user identification sequence or access code sequence. This option also allows you to limit the number of users to be printed by letting you select only user data that is greater or equal to a starting value and less than or equal to an ending value.

Option 23's screen is illustrated in Figure 4.7 The first section requires you to select one of the three formats in which the System 10 can print data: 1. For alphabetic listing by name, 2. For numeric listing by identification number and 3 for numeric listing by User's Access Code. After you have made your selection press the Enter key. Any number other than 1, 2 or 3 will not be accepted - the cursor will remain at this section until a valid selection is made.

```

SYSTEM 10 ACCESS CONTROL
PRINT USER DATA

PRINT LIST IN WHICH ORDER:
1 USER NAME      4 MISC DATA 1      7 MISC DATA 4
2 USER NUMBER    5 MISC DATA 2      8 MISC DATA 5
3 USER CODE      6 MISC DATA 3      9 MISC DATA 6

Your selection (1-9) :      1

Enter here to begin printing  DAMES, DOLF AS
Enter here to end printing   CONES, ALEX

F1 for help      F5 select door
F2 to exit/abort F6 Crit Door    F10 to start report
    
```

Figure 4.7 - Print User and Access Code Data Screen

The second section asks you to define a range in which you want the printed user data. The information entered in this section depends on the choice made in the section above. By selecting 1 for a report by users' names this section will ask you for a start and end user name. If you selected 2 or 3 for a report in user ID # or access code order, this section will prompt you for a starting and ending number.

If the list is to be printed in alphabetic order by name, the first prompt will ask you to enter the starting name. Simply type the first user name you want printed followed by the Enter key. The cursor then moves down to the next line and prompts you for the last name you want printed. Type in the name of the last user you wish printed and press the Enter key. You do not have to type in the entire name. For example, by typing AAA then pressing Enter for the starting name and ZZZ then pressing Enter for the ending name, a list including all names will be printed. Another example: type SMITH AAAA then press Enter for the start name and type SMITH ZZZZ then press Enter for the ending name. These entries will generate a list of user names beginning with SMITH.

For lists printed in either user ID# or access code order, type in the four digit user ID# or the five digit access code, then press the Enter key. Remember for these numbers you must type all digits - 0000 or 00000. When the cursor prompts for the ending number, simply type in the four or five digit number that will be the highest number in the printout and press the Enter key. To print a list containing all users in access code order, the starting number would be 00000 and the ending number would be 99999.

After making your ending selection and pressing the Enter key, the user database is searched for all users within the specified starting and ending values. Those users that are found to be within the limits are then printed. The screen will display a count of all users found and sent to the printer. If no count appears at the bottom of the screen and control is returned to sub menu 2, verify your starting and ending values. Make sure the starting value is less than or equal to your ending value. It is also possible that there were no users within the specified range.

At this point the screen will ask you either to Print the list or send it to the Screen. Select either S or P and press Enter. Figure 4.8 shows the users listed to the screen rather than to the printer.

```

          S Y S T E M   I O   A C C E S S   C O N T R O L
          P R I N T   U S E R   D A T A

          P R I N T   L I S T   I N   W H I C H   O R D E R :

          1  USER NAME      4  MISC DATA 1      7  MISC DATA 4
          2  USER NUMBER    5  MISC DATA 2      8  MISC DATA 5
          3  USER CODE      6  MISC DATA 3      9  MISC DATA 6

          Your selection (1-9) :      1

          Enter name to begin printing AAA
          Enter name to end printing   ZZZ

          Printer <P> or Screen <S> 

          F1 for help      F5 select door
          F2 to exit/abort F6 Exit Door      F10 to start report
  
```

Figure 4.8 - Print User Data Screen

Special function keys available at all prompts on this screen include:

- F1 Press this key and additional instructions and information will be displayed on the screen regarding the current prompt.
- F2 Press this key to exit this screen and return to sub menu 2.
- ↑ Press this key to move the cursor to the previous prompt.
- ↓ Press this key to move the cursor to the next prompt or if the cursor is on the last prompt the report will begin to print.

## Set Corby Card Facility Code (Option 24)

---

Corby Cards are encoded with a facility or site code. This code is used by the System 10 to restrict another system's cards being accepted by your system. Because the codes on the Corby Cards are never duplicated, the cards that you purchased are one of a kind.

The System 10 is designed to allow one or more facility codes if needed. To limit the system to only one type of facility card, enter the specific facility code. If the Corby Cards have several different facility codes, enter 00 for the facility code.

**NOTE:** Selecting a 00 is basically disabling the purpose of the facility code. With a 00 facility code it is possible for any facility coded card to work on your card readers. Please be certain this is what you want.

**ALSO:** You must go into Option 24 and select a facility code when using cards. DPM values, including defaults, are not valid in the DPM until this option is exercised.

Setting the facility code for your Corby Cards is done by first typing 24 Enter from sub menu 2. The screen will then display the prompt Enter Facility Code for Corby Cards (00 - 31). At this prompt type the facility code that appears on the back of your Corby Cards. This code is a two digit number between 01 and 31. Type this two digit number and press the Enter key. If you decide not to change the facility code after entering this option, press the F2 key to exit this option without changing anything.

By pressing the Enter or F10 keys, you have set the System 10's facility code. A window will appear in the upper left corner indicating the new facility code is being transmitted to the Door/Port Modules.

## Print Number Of Users Per System 10 DPM (Option 25)

---

Option 25 of sub menu 2 provides a quick reference to the number of users that have access to one or more of the Door/Port Modules. The first column lists the current number of DPMs connected to the System 10. The second column provides a count for each DPM of the number of users currently given access to one or more of the door/ports on the DPM. Each DPM has the capacity for 2,000 user access codes as indicated in the third column. The screen for Option 25 is illustrated in Figure 4.9.

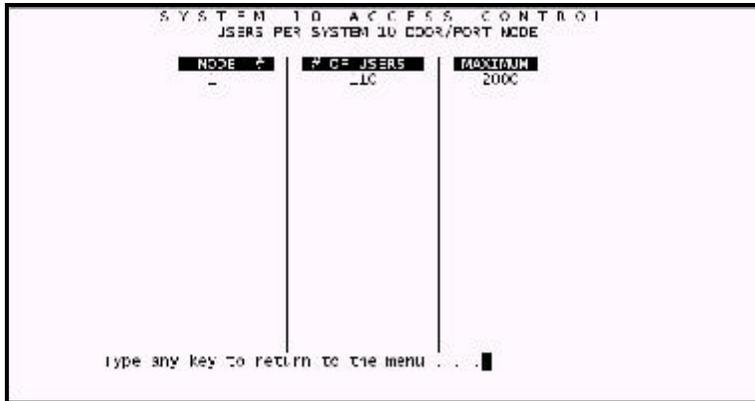


Figure 4.9 - Number of Users Per DPM screen

## Print Temporary Codes (Option 26)

Option 26 of sub menu 2 provides a printout of all temporary codes currently programmed into the System 10. This report will indicate if the code has been activated. The printout will also indicate when the code will activate or when it activated. The report also lists when the codes will be deactivated.

If there are no temporary codes currently in the system a window will appear with a message indicating NO TEMPORARY CODES IN DATA BASE press any key to continue. Otherwise the window will appear indicating the report is being printed. A sample of this report is illustrated in Figure 4.10.

### SYSTEM 10 TEMPORARY CODE REPORT

Page 1

CODE#	ACTIVATED	START TIME	END TIME
04977	NO	03/07/89 16:00	03/07/89 23:00
12345	YES	03/07/89 15:00	03/07/89 17:00
23456	NO	03/07/89 17:00	03/09/89 15:00
34567	NO	03/09/89 15:00	03/12/89 15:00
44331	NO	03/07/89 16:00	03/07/89 23:00
62593	YES	03/07/89 14:00	03/07/89 23:00
83870	NO	03/07/89 16:00	03/07/89 23:00
89546	NO	03/07/89 16:00	03/07/89 23:00

Figure 4.10 Temporary Code Report

# DOOR AND RELAY CONFIGURATION

## Introduction

This chapter describes how to program the ports of the Door / Port Modules (DPMs). A port is a collection of an input for a keypad or card reader, a relay to control door locking hardware, a Request-To-Exit input, and a door ajar input. Each DPM has four ports. In addition to ports, each DPM also has four zone inputs and an auxiliary relay. These inputs and outputs can be configured to operate in a variety of ways. The sub menu in which this configuration can be done is Option 3 of the main menu entitled, Door - Port - Relay Configuration.

## Display Port Closure and Aux Relay Data (Option 31)

Option 31, DISPLAY PORT CLOSURE AND AUXILIARY RELAY DATA, shows the current configuration of each port of the system. The screen for Option 31 is illustrated in Figure 5.1. It is divided into six columns.

RELAY #	KEYPD/CARD MODE	MOMENT	TIME	SCHEDULES	DESCRIPTION	AUX ON/AJAR
01	CARD	005	1-----		FRONT DOOR	NO
02	CARD	010	-2-----		BACK DOOR	YES
03	CARD&KEYPD	005	-----		COMPUTER ROOM	NO
04	KEYPAD	007	-----	5	CLIPBY ROOM	YES
A01	AUXILIARY	002	-----			

Relay 0 to change <C> to exit 0

Figure 5.1 - Port Closure and Aux Relay Data screen

The first column lists the port number for which information is displayed. Port numbers including the letter "A" indicate auxiliary relay ports.

The second column shows whether the port is configured for keypad input, card reader input, or both. In the case of an auxiliary relay port, input data does not apply.

NOTE: Data Chip readers ports are configured as keypad inputs.

The third column shows whether the port relay is momentary or latching. If the relay is programmed to be momentary, the closure time for the relay will be displayed.

The fourth column displays which of the eight time schedules are assigned to the port. As described in chapter 6, a time schedule consists of a start and end time for the seven days of the week as well as a holiday. If a time schedule is assigned to a port, the relay of that port will activate at the start time listed in the assigned schedule for the current day of the week and deactivate at the end time. More than one schedule can be assigned to a port. In this way, the relay can be programmed to activate and deactivate up to eight times per day.

The fifth column displays the user-programmable description of the door or port. This description appears in reports to identify the door by name, as opposed to only by number. Port descriptions may be up to 15 characters in length.

Finally, the sixth column shows if the auxiliary relay has been selected to indicate a door ajar condition. This means that, if enabled, a door ajar condition on any port of a DPM will cause the closure of that DPM's auxiliary relay.

On the right side of the screen are instructions for the use of function keys. As is the case with all screens, pressing F1 will display the appropriate help information should you be uncertain what to do. Because there can be as many as 128 ports on a system, not all port data can fit on one screen. Pressing F5 displays the next "page", or next 16 ports. Similarly, pressing F6 displays the last "page", or last 16 ports.

- F1        Press this key for instructions and information regarding this area on the screen.
- F2        Press this key to exit this screen..
- F5        Press this key to display the next "page" of relay information.
- F6        Press this key to display the last "page" of relay information.

## Set Port Closure and Auxiliary Data

---

Option 32, SET PORT CLOSURE AND AUXILIARY DATA similar to Option 31, except that it allows you to change any of the information displayed. Option 32 screen is displayed in Figure 5.1.

When you first access Option 32's screen, there will be a prompt at the bottom left corner of the screen requesting the port you want to change. After entering the port number, all information for that port can be programmed. The information you will be prompted to enter will be in the order of the columns on the screen from left to right.

**NOTE:** The default setting of the PC's software is for card operation, but the DPM's default is set to keypads. You must choose the proper setting for your application **and you must use the enter key to step through each parameter from left to right even if no changes are necessary.** A communication window will confirm that the changes are being sent to the DPM when you complete each port.

### Port Mode Selection

The first item you will be prompted to program is whether the port input will accept a keypad, card reader, or both. To do this, simply press the space bar until the type you want appears in the second column labeled "Keypad / Card Mode". After selecting the appropriate mode, press the Enter key.

**NOTE:** When you are using Wiegand, Barcode or Magstripe cards, configure the port for card readers. If you are using the Data Chip, set the port mode as a keypad.

### Relay Closure Time

Each port's relay can be configured to be latching or momentary. If the relay is to be latching, a valid code or card will cause the relay to change states and stay in that position until another valid code or card is entered. In other words, if the relay is on, it will be turned off; likewise, if the relay is off, it will be turned on. In the momentary mode, the entry of a valid code or card will cause the relay to close for a programmed time period. This period can be from 1 to 250 seconds. When prompted for the relay's closure time, select 0 for latching or the time, in seconds, that you

## DOOR AND RELAY CONFIGURATION

want for momentary closure. The entry you provide will be displayed in the third column labeled "Moment. Time". Please refer to the Figure 5.1 to illustrate where this column is located on the screen.

## Relay Time Schedules

As discussed earlier in this chapter, port relays can be controlled by time schedules. After programming the relay's momentary time or latching status, you will be prompted to enter the time schedules, if any, that control the port's relay. If no schedules are to be used, enter a 0. Otherwise, enter the number or numbers of the time schedules to be used. Please ensure that you have entered the correct time schedule number according to the DPM of the relay you are programming. When finished, press the Enter key.

## Port Descriptions

When an event concerning a port is reported, the port's number as well as its programmer defined name is referenced. When prompted, enter the description of the port and press Enter. The description can be up to fifteen characters in length.

## Assigning Door Ajar to Auxiliary Relay

The system can monitor for a "door ajar" condition on each port. The auxiliary relay of each DPM can be programmed to close if a door ajar condition is present on any of the DPM's four ports. To enable this feature, press the space bar until "YES" appears in the column labeled "Aux On Ajar", to disable look for "NO". When the proper option appears, press the Enter Key. Finally, when all ports are programmed as you want them, press F10 to send the information to the system's DPMs.

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key to exit this screen.
- F10 Press this key to send all auxiliary relay information to the DPMs.

## Activate Port Relays (Option 33)

Option 33, ACTIVATE PORT RELAYS allows you to manually control the system's relays individually. The screen for this option is illustrated in Figure 5.2. When the screen is first displayed, it shows the state of each relay on the grid at the center of the screen. Highlighted blocks indicate that the corresponding relay is activated, similarly, blocks not highlighted indicate deactivated relays. To activate or deactivate a relay, first move the flashing cursor to the corresponding relay's block number on the grid using the arrow keys. If the relay is to be active press F5, to deactivate press F6. It is important to note that when a relay is manually activated or deactivated, it will stay in its position until moved by some other event. When you have set the relay states as you want them, press F10 to send this information to the DPMs.



Figure 5.2 - Manual Relay Screen

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key to exit this screen.
- F5 Press this key to manually activate relay.
- F6 Press this key to manually deactivate relay.
- F10 Press this key to send relay status to DPMs.

## Set Request-To-Exit / Auxiliary Inputs

Each DPM on the system can have either an auxiliary input or a Request-To-Exit feature, but not both. Option 34, SET REQUEST-TO-EXIT / AUXILIARY INPUT allows you to configure each DPM. By default, each DPM is in the Auxiliary Input mode. The screen for this option is illustrated in

Figure 5.3. To configure a DPM, first use the arrow keys to move the flashing cursor to the corresponding block. If you want the DPM to have the Request-To-Exit feature press F5. Otherwise, if you want the DPM to have the auxiliary input feature, press F6. When you have configured each DPM as desired, press F10 to send this information to the DPMs.

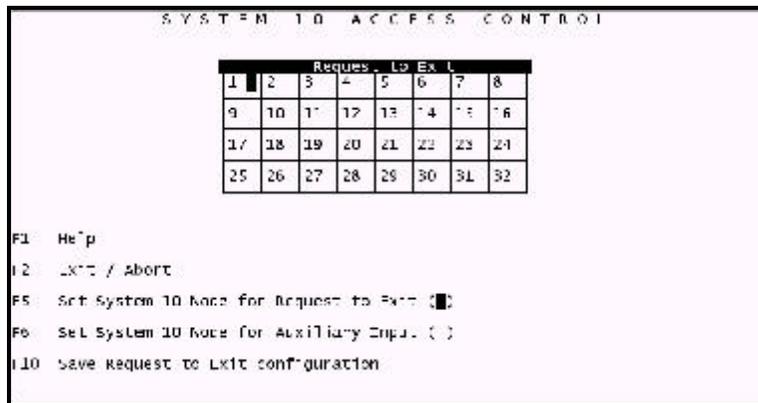


Figure 5.3 - RTE and Auxiliary Input Screen

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key to exit this screen.
- F5 Press this key to enable Request-To-Exit.
- F6 Press this key to enable Auxiliary Input
- F10 Press this key to send enable data to DPMs.

## Set Relay Mode and Enable Antipassback (Option 35)

---

Setting the relay mode will determine how the door permissions will be acted upon when a valid code is received by the DPM. For example, normal mode means a valid code presented at a keypad or reader will energize only the relay associated with that keypad/reader. Independent mode means the relays energized by a valid code are determined by the doors/ports assigned to the access code. Independent mode is primarily used for elevator mode. Antipassback enabled on a DPM will force all access codes with antipassback selected to enter and exit through specific portals in a specific order i.e. they must go through door 2 before they can go through door 3. Antipassback disabled allows these same access codes to enter/exit through any assigned portal in any order.

### Relay Mode

A port is comprised of an input for a keypad or card reader and a relay output. Normally, if a valid code or card is entered at a port input, the relay for that port will be activated. In other words, there is normally a one-to-one correspondence between port inputs and port relays. In some instances, however, it is desirable for the entry of a valid code or card to close the relay or relays of another port or ports. This alternate mode of operation is known as independent mode. Independent mode is available on a DPM by DPM basis, hence some of the system's DPMs can be configured for independent mode while others are not. This means that if DPM 1 is configured for independent mode, a valid code or card on port 1 could, for example, close the relays of ports 2 and 3. It could not, however, close relays for ports on other DPMs.

Let's assume, for example, that code 12345 has been programmed to have access to ports 2 and 4 on DPM 1. Normally, if that code is entered on ports 2 or 4 it will cause the corresponding relay to close. If, on the other hand, it is entered on ports 1 or 3, it will not cause a relay closure because it does not have permission to operate on these ports. If, alternately, DPM 1 is configured for independent mode, entering code 12345 on any of DPM 1's four input port devices will cause relays 2 and 4 to close. This would also be true if the ports in question were 6 and 8 on DPM 2, 10 and 12 on DPM 3, and so on, assuming that these DPMs were in independent mode. Thus, the meaning of the door permissions entered in Option 22 is very different if a DPM is configured for independent mode.

### Antipassback Enabled/Disabled

This option works in conjunction with the antipassback switch used in Option 22. If an access code user has the antipassback switch set to "Y", then that code can be restricted in that entry to a secured area must be made through specific portals before exiting through designated portals is possible. With Option 35, this restricting action can be turned on or off within a installation depending on the security requirements of the particular area.

For example, a DPM used to control access to the perimeter of a building would have antipassback enabled. This would require employees to log in to as well as log out of the building. Once in the building there would be several DPMs restricting access to the different corridors and rooms; however, once in these restricted areas an employee simply uses a Request-to-Exit mechanism to leave the area. The DPMs within the inside of the building would have Antipassback disabled to allow access without entry/exit type restrictions.

### Option 35 Screen Operation

Option 35, SET RELAY MODE DATA, allows you to set each of the system's DPMs for their normal mode - designated as "Keypads / Readers Follow Relays" - or independent mode. The screen for Option 35 is illustrated in Figure 5.4. When you enter the screen, a prompt at the bottom will request which of the DPMs you wish to update. Type the DPM's number you wish to update then press the space bar to toggle the relay mode option. Toggling means that if the selected DPM is in normal mode, it will be changed to independent mode. If in independent mode, the DPM will be changed to normal mode. Press the Enter key when you have selected the desired relay mode. Once again, press the space bar to toggle the antipassback enable/disable selections, then press the Enter key when you have made your selection. At this point the selections you have made are transmitted to the DPM. The software will then return to ask for the next DPM to update. If the System 10 is configured for more than 16 DPMs, pressing F5 will display the next "page" or group of 16 DPMs. Pressing F6 will display the last "page".

NODE #	RELAY MODE	ANTIPASSBACK ENABLED	NODE #	RELAY MODE	ANTIPASSBACK ENABLED
01	NORMAL MODE	NO			

Type DPM # to update, 0 to quit: 0      Spacebar Toggle option  
 F1 for help    F2 Exit / Abort    F5 Next Screen    F6 Last Screen    F10 Save

Figure 5.4 - Relay Mode Screen

- F1      Press this key for instructions and information regarding this area on the screen.
- F2      Press this key to exit this screen.
- F5      Press this key to display next "page" of relay mode data.
- F6      Press this key to display last "page" of relay mode data.
- F10     Press this key to send relay mode data to DPMs.

### Set DPMs to Monitor System 10 (Option 36)

Because it is possible that the System 10's controlling computer may fail, it is desirable to be able to program a DPM or group of DPMs to monitor for and signal computer failure. Option 36, SET DPMs to MONITOR SYSTEM 10, allows you to designate any of the system's DPMs as "watchdog" units which will activate a designated relay in the event of a loss of communications with the controlling computer. The screen for Option 36 is illustrated in Figure 5.5. A prompt at the lower right corner of the screen asks which DPM you want to set. After entering a DPM number, press F5 to enable it as a "watchdog" or F6 to disable it. If you have enabled a DPM, use the right and left arrow keys to move the word "YES" to the column headed by the number of the relay you want to activate on that DPM. When programming is complete, press F10 to send the information to the DPMs.

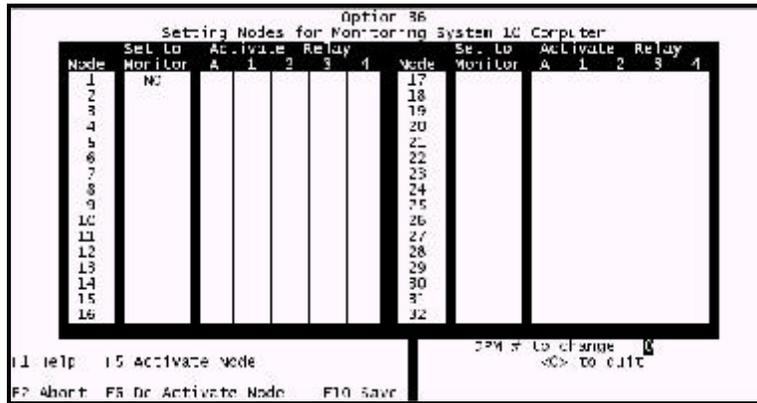


Figure 5.5 - DPM's to Monitor System 10 Screen

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key to exit this screen..
- F5 Press this key to enable "watchdog" function.
- F6 Press this key to disable "watchdog" function.
- F10 Press this key to send "watchdog" data to DPMs.

### Set DPMs to Monitor Other DPMs (Option 37)

You may also wish to have a DPM or group of DPMs serve as "watchdogs" in the event that other DPMs in the system fail. Option 37, SET DPMs TO MONITOR OTHER DPMs is identical in appearance to the screen for Option 36, and all programming is the same.

### Set Relays to Monitor Zones (Option 38)

Each DPM has 4 zone inputs. The numbering for these zone inputs is sequential, with zones 1 through 4 on DPM 1, 5 through 8 on DPM 2, and so on. The zones will automatically report any changes in their status. In addition to this, you may wish to activate specified relays in response to particular zone input conditions. Option 38, Set Relays to Monitor Zones allows you to specify which relays are to what conditions.

Option 38 is 5.6.

The screen for illustrated in Figure

MONITORING ZONES		CASE 01		Description:			
Zone #	Status Open / Closed	Zone #	Status Open / Closed	Zone #	Status Open / Closed	Zone #	Status Open / Closed
RELAYS TO ACTIVATE WHEN ZONE CONDITIONS ABOVE ARE MET							
RELAY #		RELAY #		RELAY #		RELAY #	
F1 HELP		F5 LOOK FOR ZONE OPEN					
F2 EXIT / ABORT		F6 LOOK FOR ZONE CLOSED					
F3 NEXT CASE		F10 SAVE DATA					
F4 PREVIOUS CASE							

Figure 5.6 - Relays Monitor Zones Screen

## Assign Names to Zones

---

Individual zones may be named for ease of identification. These names will be displayed when the zone is activated. It is not a requirement to name all the zones in use; however, it is a recommended practice. To name zones, select Option 38 and choose Option 1, ASSIGN NAMES TO ZONES. To name a particular zone, move the cursor to the field next to the appropriate zone number and type the new name. To move to the next available zone name, press the DOWN ARROW. Likewise, to move to the previous zone name, press the UP ARROW. To move to the next page of zone names, press the PAGE DOWN key. Likewise, to move to the previous page of zone names, press the PAGE UP key. The name can be up to fifteen characters in length.

F1	Press this key for instructions and information regarding this screen.
F2	Press this key to exit this screen.
↑	Press this key to move the cursor to the previous zone name.
↓	Press this key to move the cursor to the next zone name.
PAGE UP	Press this key to move the cursor to the previous page of zone names.
PAGE DOWN	Press this key to move the cursor to the next page of zone names.
F10	Press this key to save zone the current zone names.

### Zone Cases

A zone case is group of one to 16 zone conditions which if all selected and true can active one to four relays. To specify a zone case, select Option 38, SET RELAYS TO MONITOR ZONES, and choose Option 2, Set Relays to Monitor Zones. This screen is illustrated in Figure 5.6. There are three pieces of information that need to be entered: a description for the case, the zone conditions, and the relay(s) to active.

The top line of the screen will be highlighted and prompt you to enter a description for the zone case. Type the description and press the Enter key. The cursor will move to the zone number of the first zone condition. Type the zone number and press the Enter key. The cursor will move to the zone status of the first zone condition. Press F5 if the zone is open to make the condition true or Press F6 if the zone is closed to make the condition true, then Press the Enter key. Repeat this for all the zone conditions for this case. All 16 zone conditions do not have to be used. Use the Up Arrow key to go back and make any changes if needed. Use the Enter or Down Arrow keys to skip over any unused zone conditions to get to the first "RELAY #" prompt. At the "RELAY #" prompts enter the number of the relay or relays that need to be activated if all the zone conditions are true. All four relays do not have to be used.

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Press this key to exit this screen.
- F3 Press this key to display the next case.
- F4 Press this key to display the last case.
- F5 Press this key to set zone for open.
- F6 Press this key to set zone for close.
- F10 Press this key to send zone data to DPMs.
- ↑ Press this key to move the cursor to the previous zone condition.
- ↓ Press this key to move the cursor to the next zone condition.

### **Zone Case Example**

Let's say that you've installed a System 10 in an office building with four floors, each floor having four offices. Each office has a smoke detector. The goal is to have a relay close if any of the four smoke detectors on floor 1 are tripped, another relay activate if any of the smoke detectors on floor 2 are tripped, and so on. In this system there are five DPMs. DPMs 1 through 4 control the doors of the offices, and DPM 5 with relays 13 through 16 is used to signal active smoke detectors on any of the floors.

## **Print Relay Configurations (Option 39)**

---

Option 39, PRINT RELAY CONFIGURATIONS, prints the relay configurations: Keypad/card mode, activation time, time schedules and aux on ajar. To run this option, type 39 at the sub menu 3 prompt and press the Enter key. Please check the printer before starting this report. The program will return control to sub menu 3 when the report has been completely sent to the printer.

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## CHAPTER 6

# PASSWORD AND PRIVILEGE LEVELS

## Introduction

Passwords and privilege levels can be set to protect the integrity of the System 10's data base. This feature allows only authorized persons to access or change data in the System 10. There are 38 passwords in the System 10, each having a privilege level from zero through nine. Persons with a privilege level of nine (the highest level) have access to everything. Persons who have a privilege level of four can access any menu option that has a level of four or lower.

When the system is first powered up, the operator is asked for a password. The only password that will work is System 10 followed by the Enter key. This is the factory set password, it has a privilege level of nine. Once any new password is assigned, the System 10 password will no longer be valid. For this reason, it is advisable to assign at least one new password with a privilege level of nine. If this is not done, it is possible to lock yourself out of your own system.

## Set User Passwords and Access Levels (Option 41)

First, Select the Passwords and Privilege Level main option, press number 4 followed by the Enter key while the main option menu is displayed on the screen. The Passwords and Privilege Levels screen will replace the main menu screen, as illustrated in Figure 6.1. To select Option 41, type 41 followed by the Enter key.

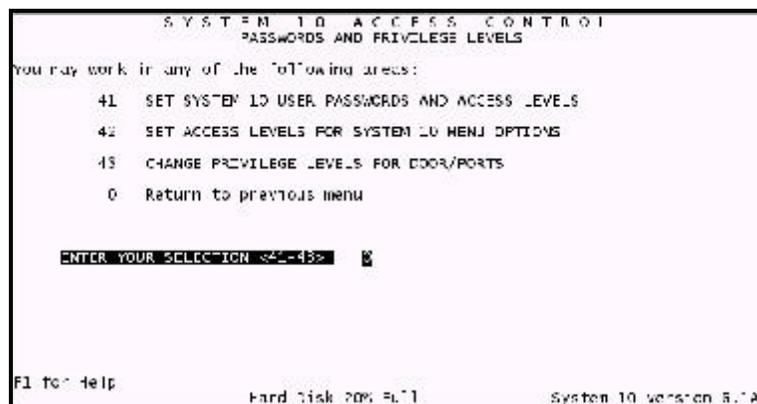


Figure 6.1 - Sub Menu 4

Option 41 allows you to enter passwords and their associated privilege levels. This sub menu provides the means to restrict operators of the System 10 to certain sub menu options. The screen for Option 41 is illustrated in Figure 6.2. It is divided into four columns. The first column is the number of the password this is already set by the system. The second column is the password. This is what you will type in at the log in screen. The third column is the owners names. This name will be recorded in the systems event log as the user moves from option to option. The fourth column is the privilege level of the password. This password will allow access to menu options with privilege levels of equal or lower value.

Column	Password	Owner Name	Level
01	SHADES	SYSTEM ADMINIS TRATOR	9
02	R-D-F-I-A-G	S-E-C-U-R-I-T-Y M-A-N-A-G-E-R	9
03	WHEELS	O-F-F-I-C-E M-A-N-A-G-E-R	5
04	BARREL	P-R-O-G-R-A-M-M-E-R	3
05	HORSE	P-R-O-J-E-C-T C-O-O-R-D-I-N-A-T-O-R	1

Function Key Instructions:

- F1 Help
- F2 Exit
- F3 Next Column
- F4 Last Column
- F8 Next Page
- F9 Last Page
- F10 Save

Figure 6.2 - Passwords Screen

Type in the first password. The password is not case sensitive and can be a maximum of eight characters. Press the F3 or the Enter keys to move to the “Owner Name” column. Type in the name or job title of the password holder. Press the F3 or the Enter keys to move to the “Level” column. Type in the privilege level for this password 0 to 9. Press the F3 or the Enter keys to move to the next password in “Password” column. If you make a mistake, use the F4 key to go back one column. Use the Arrow keys to move up and down among the passwords. To delete a password, fill the three columns with spaces and press the F3 or Enter key. When you are finished entering or changing passwords Press F10 to save the data.

- F1 Press this key for instructions and information regarding this area on the screen.
- F2 Allows you to exit Option 41 without changing any data.
- F3 Moves the cursor to the next Column.
- F4 Moves the cursor to the last Column.
- F8 Moves the cursor to the next and last page. (there are 19 passwords per page.)
- F10 Saves all the changes made.
- ↑ Moves up one password
- ↓ Moves down one password

## Set Access Levels for System 10 Menu Options (Option 42)

This option allows you to assign a number from zero to nine to any sub menu option of the system. As stated earlier, sub menu options with an access level of nine can be accessed by anyone who has a privilege level of nine. Those with lower privilege levels can only access those options with matching or lower access levels.

While the Passwords and Privilege Levels sub menu is displayed, (Option 4 of the main menu) type 42 followed by the Enter key. The Access Levels for Menu Options screen will be displayed, as illustrated in Figure 6.3.

Opt	Desc #10-101	Level
05	EVENT REPORTS	1
06	MONITOR REPORTS	1
11	SET TIME & DATE	2
12	DST ENABLE/DISABLE	2
13	SET HOLIDAY DATES	2
14	S-L HHL SCHEDULES	2
15	LIST ALL SCHEDULES	2
21	C FOR ALL USERS	3
22	USER DATA & CODES	3
23	PRINT USER DATA	3
24	SET FACILITY CODE	3
25	LIST # OF USERS	3
26	LIST TEMPORARY CODES	3
31	DISPLAY PORT DATA	4
32	SET PORT DATA	4
33	ACTIVATE PORT RELAYS	4
34	SET R/C/AUX INPUTS	4
35	S-L HLLAY MENU DATA	6
36	CPT 36 SYSIC MONITOR	8

F1	Help	05
F2	Exit	06
F3	Next Page	13
F4	Last Page	31
F10	Save	36

Figure 6.3 - Privilege Levels Screen

There are three columns of data. The number to the left designates the sub menu option number; the center column is the sub menu description and the last column is where the access level is set.

To set an access level, use the arrow keys to move the cursor up or down to select an access level from one to nine. Pressing the Enter key will also move the cursor down to the next menu option. There is more than one page of sub menu options, use the F3 key to go to the next page and the F4 key to go to the previous page. Press the F10 key to save the changes.

- F1        Press this key to bring up the help screen.
- F2        Press this key to exit this menu without changing any data.
- F3        Moves the cursor to the next page.
- F4        Moves the cursor directly to the last page.
- F10      This key saves the new data and exits to main menu Option 4.
- ↑        Moves up one sub menu option
- ↓        Moves down one sub menu option

## Change Privilege Levels for Door/Ports (Option 43)

First, Select the Passwords and Privilege Level main option, press number 4 followed by the Enter key while the main option menu is displayed on the screen. The Passwords and Privilege Levels screen will replace the main menu screen, as illustrated in Figure 6.4. To select Option 43, type 43 followed by the Enter key.

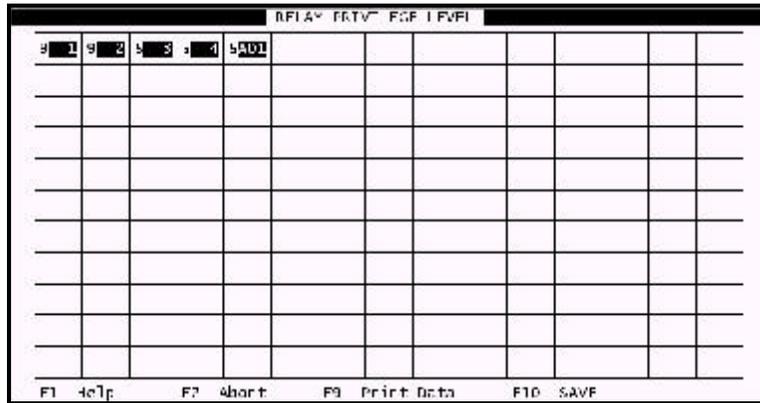


Figure 6.4 - Relay Privilege Screen

Option 43 allows you to enter the privilege level for each Door/Port. This sub menu provides the means to restrict operators of the System 10 from manual opening/closing specific Doors/Ports in Option 33 and from giving or changing access to Doors/Ports in Option 22. The arrow keys are used to move between each of the Door/Port relay numbers. Position the cursor next to the appropriate relay number and type the number of the new privilege level for that relay. When you are finished making changes Press the F10 key to save the data. To print the relay privilege level information press the F9 key. Please make sure the printer is ready before pressing the F9 key.

- F1      Press this key to bring up the help screen.
- F2      Press this key to exit this menu without changing any data.
- F9      Print the data contained on this screen.
- F10     This key saves the new data.
- ↑       Moves up
- ↓       Moves down
- Moves right
- ←       Moves left

## CHAPTER 7

# DATABASE REPORTS

## Introduction

---

All activities that occur on the Door/Port Modules (DPMs) as well as activities on the System 10 computer are recorded in this database. Reports can be generated for all events, or for specific types of events. Access reports for specific doors and/or users for any time frame can be filtered from the database and reported. Reports can be sent to the system printer or can be scanned quickly on the console. By setting a few parameters, virtually any report can be generated within minutes.

## Event Types

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Events stored in the database fall into one of the following categories: User events, Relay events, Door/Port Module events, System 10 user events and System 10 status events. User events include Valid Personal Identification Number (PIN) entry and User and Code errors. Relay events include automatic relay operations (relays set to activate at a specific time) and manual relay operations (relays toggled from the System 10 PC). Door/Port Module events include DPM resets, AC power On/OFF events, door ajar messages, users' Request-To-Exit messages and zone status changes. On the System 10, all user activity is recorded: log in time, entry into specific menu options, and log out time. System 10 status events include Daylight Savings time / standard time changes, Door/Port Module communications failures and relay activation due to a series of zone status changes on the Door/Port Modules (DPM).

## Selecting Report Parameters

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Generating an access control report with System 10 is done by specifying the starting and ending parameters as well as the types of events. These parameters include starting and ending times, dates, user numbers(or code numbers), door/port range and event types. By setting these parameters, virtually any access control event report can be generated. The report generated can be displayed on the System 10 screen for quick reference or printed on the System 10's printer.

To generate a report, select option five from the main option menu. From the main options menu, press 5 and the Enter key to display the System 10 Database Report screen. The screen displays three regions which contain the report parameters, as illustrated in Figure 7.1. The upper left region contains the code, door/port, time and date parameters. The lower left region contains output option parameters. The right region contains the available event types. Moving the cursor to the various parameters is accomplished by using the Enter, Up or Down arrow keys. Additional help is available at each parameter. Press F1 to access this help. Press F10 when you have finished your parameter selections and wish to begin generating the report. Exit or Abort this screen by pressing the F2 key.



Figure 7.1 - Database Report Screen

### First and Last User Numbers

The user number parameters will determine the range of user events to be selected for reporting. These parameters only apply to those events that contain either a User Identification Number or an Access Code. The user number range is checked for the Valid and Duress User, Code Error and PIN Error events. For all other events the First and Last User # parameters are ignored. For Code Error events the first and last user numbers represent the most significant digits of the access code. For example, if the first user number is set to 1234 and the last user number is set to 1234, all code errors listing an access code between 12340 and 12349 would be listed.

To select the first and last user numbers, simply type the four digits representing the lowest and highest user identification numbers. Each digit must be a number between zero and nine, all other characters will not be accepted. For these parameters to be effective, the first user number must be less than or equal to the last user number. After you have made your selection, press the Enter key. If a valid selection has been entered, the cursor will move to the next parameter.

Special function keys available at these locations on the screen are:

- F1 Press this key to display additional information and instructions regarding this area of the screen.
- F2 Press this key to exit the report generator screen. This key will cause program control to be returned to the main option menu.
- F10 Press this key to begin searching the database for access control events that match the currently selected parameters.
- ↑ Press this key to move to the previous area on the screen.  
NOTE: The ↑ will not work if the current value of the parameter is not a valid selection.
- ↓ Press this key to move to the next area on the screen.  
NOTE: The ↓ will not work if the current value of the parameter is not a valid selection.

## First and Last Door Numbers

The door number parameters will determine which Door/Port Modules events will be selected for the report. All events, except Daylight Savings changes and System 10 User events, are screened by the door parameters. For Valid User, Duress User, Code Error, Request-To-Exit and Door Ajar events, the door parameters signify the first and last door numbers to be printed. Any entries or attempts at entry at doors other than those within the specified range will be ignored. For the Auxiliary Input, AC Power, Low Power, System Resets and DPM Communications events, the door range that you enter will be evaluated as to which Door/Port Modules contain the specified door range. For example, if the first door number equals 005 and the last door number equals 028, events generated on DPMs 2 through 7 will be selected for reporting; if the first door number equals 001 and the last door equals 004 then only the events generated on the Door/Port Module 1 will be selected. For Auto-Relay ON/OFF and Manual Relay ON/OFF messages, these parameters represent the relay numbers. The auxiliary relay messages for these two event types will print only for the DPMs whose doors are selected. An example: With the First Door Number of 001 and the Last Door Number of 006, the auxiliary relay messages for DPMs 1 and 2 will be displayed.

To select the first and last door numbers, simply type a three digit number for each parameter. Each digit must be a number between zero and nine - all other characters are not valid. In order for these parameters to be effective, the first door number must be less than or equal to the last door number. The lowest door value is 001 and the highest value allowed is four times the number of DPMs connected to the System 10. For example, a one DPM system has a maximum of 004, a two DPM system's maximum door number is 008, etc. Numbers lower than 001 or higher than the last door number are not valid. After typing your three digit selection, press the Enter key. If the cursor fails to move to the next parameter, check your selection for errors and re-enter it.

Special function keys available at these locations on the screen are:

- F1        Press this key to display additional information and instructions regarding this area of the screen.
- F2        Press this key to exit the report generator screen. This key will cause program control to be returned to the main option menu.
- F10       Press this key to begin searching the database for access control events that match the currently selected parameters.
- ↑         Press this key to move to the previous area on the screen.  
NOTE: The ↑ will not work if the current value of the parameter is not a valid selection.
- ↓         Press this key to move to the next area on the screen.  
NOTE: The ↓ will not work if the current value of the parameter is not a valid selection.

## Begin and End Date

The begin and end date parameters specify the area in the database where the search will begin for events matching the listed parameters. This set of parameters, combined with the begin and end time, determine which events in the database will be screened for possible listing.

To enter the begin date or end date, type the month, day and year for each date followed by an Enter key. The month must be a two digit number between 01 and 12. The day must be a two digit number between 01 and the last day of the corresponding month. The year must be a two digit number representing the last two digits of the year (example: for 1997, 97 would be typed). If the year selected is between 88 and 99 the twentieth century is implied; for years between 00 and 87, the twenty-first century is implied. After the Enter key is pressed, the date is verified. If the selection is valid the cursor will move to the next parameter; otherwise check your selection

## DATABASE REPORTS

and re-enter. In order for any report to be generated the begin date must be chronologically before or equal to the end date.

Special function keys available at these locations on the screen are:

- F1      Press this key to display additional information and instructions regarding this area of the screen.
- F2      Press this key to exit the report generator screen. This key will cause program control to be returned to the main option menu.
- F10     Press this key to begin searching the database for access control events that match the currently selected parameters.
- ↑        Press this key to move to the previous area on the screen.  
NOTE: The ↑ will not work if the current value of the parameter is not a valid selection.
- ↓        Press this key to move to the next area on the screen.  
NOTE: The ↓ will not work if the current value of the parameter is not a valid selection.

### **Begin and End Time**

The begin and end time parameters, in association with the begin and end date, specify the area in the database where the search will begin for events matching the listed parameters. The begin time is linked with the begin date to derive the exact starting point in the database. The events are scanned chronologically starting at the begin time on the begin date and ending at the end time on the end date.

To enter the begin time or end time, type the hour, minutes and seconds for each time followed by an Enter key. Because the System 10 uses the military or 24 hour format, the hour must be a two digit number between 00 and 23. The minute must be a two digit number between 00 and 59. The second must be a two digit number between 00 and 59. After the Enter key is pressed, the time is verified. If the selection is valid the cursor will move to the next parameter; otherwise check your selection and reenter.

Special function keys available at these locations on the screen are:

- F1      Press this key to display additional information and instructions regarding this area of the screen.
- F2      Press this key to exit the report generator screen. This key will cause program control to be returned to the main option menu.
- F10     Press this key to begin searching the database for access control events that match the currently selected parameters.
- ↑        Press this key to move to the previous area on the screen.  
NOTE: The ↑ will not work if the current value of the parameter is not a valid selection.
- ↓        Press this key to move to the next area on the screen.  
NOTE: The ↓ will not work if the current value of the parameter is not a valid selection.

## Event Types

The System 10 Access Control System captures all access control events. An event has several components. All events contain a time and date stamp. User events include the user's name or identification numbers and the name and number of the door/port. Relay events indicate the type of relay operation and the relay number. Door/Port Module events indicate the type of event and the DPM number. System 10 user events will list the user logged onto the System 10 along with the menu option they accessed. System 10 status events indicate the type of event and where the event took place. Below is a list of all event types generated by the System 10.

**Valid or Duress User** - This event is generated after users present their access code at an allowed door/port during an authorized time period. When this event is printed or displayed, the user's name will be displayed as well as the door/port's description. If the user has since been deleted from the database, the words Valid User or Duress User and the four digit User Identification Number will print.

**Code Error** - This event occurs when an incorrect Access Code is presented at a door/port. If the user has presented a valid code, but has presented it at an unauthorized door and/or at an unauthorized time, the report will list the user's name and the word ERROR. If the code entered does not exist in the database the words Code Error will appear along with the erroneous code.

**PIN Error** - This event occurs when a door/port is configured for both card reader and keypad access code entry. The error occurs when a valid card is presented but the five digit code at the keypad is incorrectly entered. The card number is looked up in the database and the user's name is printed or displayed along with the word ERROR. If the user is no longer in the database the words PIN Error and the card access number will be displayed or printed.

**Aux Input ON/OFF** - This event occurs when a Door/Port Module (DPM) is configured to monitor the auxiliary input terminals. The message Aux Input ON will display or print when the contacts across the auxiliary input terminals are closed and Aux Input OFF will display or print when the contacts are opened. The event will also indicate the DPM at which the event took place.

**Door Ajar/Closed** - The Door Ajar message occurs when a controlled door is open five seconds longer than the configured relay momentary time allows. This message only applies to door/port relays configured for momentary closures NOT latching. The door/port must also have a door contact across the door ajar terminals. The Door Closed message indicates that the ajar door is closed.

**AC Power ON/OFF** - This event occurs on the DPM when AC power is lost or restored. The message AC Power OFF indicates that standard AC power was lost and battery back up was used to power the DPM. The message AC Power ON indicated that power was then restored to the DPM. This event also includes the DPM number affected.

**Low Power - Relays OFF** - This event occurs on the DPM when an AC power lasts longer than 16 hours. At this time the relays are deactivated in order to conserve power for DPM memory. The DPM sends this event to the System 10 PC if AC power is restored before the battery is completely discharged, otherwise all data in memory, events and access data, are lost in that DPM. The event includes the message Low Power - Relays OFF and the DPM number.

**Auto Relay ON / OFF** - This event is generated when relays under the control of designated time schedules activate or deactivate. Auto Relay ON is displayed or printed when the relay is activated at the starting time and Auto Relay OFF is displayed or printed when the relay is deactivated at the end time. The relay number and its description are also displayed or printed.

**System Reset** - This event occurs when the reset button on the DPM is pressed or when the watchdog circuit on the DPM circuit board does not receive the proper signal pulses from the

microprocessor and automatically pulls a reset. The message displayed or printed will be System Reset and the DPM number.

**Zone CLOSED/OPEN** - This event occurs when one of the zones on the DPM changes states. The Zone OPEN message indicates that there is no contact between the zone terminals. The Zone CLOSED message indicates that the terminals for that zone have been connected. The message and the zone number are displayed or printed.

**Manual Relay ON/OFF** - This event occurs when the System 10 user selects Option 33 to toggle one or more of the DPMs' relays. The message Manual Relay ON will indicate that the relay number listed has been activated. Manual Relay OFF indicates that the relay number listed has been deactivated.

**Request-To-Exit** - This message is generated from a DPM with its ports configured for RTE and the R TE terminals are shorted. The message RTE and the door number is listed.

**DPM Communications Error** - These events are generated when the System 10's PC cannot establish communications with one or more of the DPMs. The message DPM Communications Failure, along with the DPM's number, are displayed or printed when communications are severed. When communications are reestablished, the message DPM Communications Restored and the DPM number are displayed or printed.

**Daylight Savings Time Changes** - These events occur if the automatic daylight savings time correction option has been invoked. The message Daylight Savings! will be displayed for the April time change and Standard Time is displayed for the October time change.

**System 10 User** - This category of events is generated whenever someone has logged onto the System 10 PC. After a valid password has been entered, the name associated with that password is then listed along with each menu option's name that is accessed while the user is logged onto the System 10.

## Selecting Events

To select one or more of these events to be listed on the report, position the cursor using the Up or Down arrow keys, then press the F5 key. The selected event type will be highlighted. To omit one or more event types from the report, do not highlight them. If you already highlighted an event type and you want to omit it from the report position the cursor at the event type you want to omit and press the F6 key. These omitted event type will not be displayed.

Special function keys available at these locations on the screen are:

- F1        Press this key to display additional information and instructions regarding this area.
- F2        Press this key to exit the report generator screen. This key will cause program control to be returned to the main option menu.
- F5        Press this key to select one or more of the event types for this report. A selected event type will be displayed on the screen in reverse video.
- F6        Press this key to omit one or more event types from this report. Events not selected for the report will be displayed in normal video.
- F10       Press this key to begin searching the database for access control events that match the currently selected parameters.
- ↑         Press this key to move to the previous event type on the screen.  
NOTE: If the cursor is located at the first event type when the ↑ is pressed the cursor will move to the End Time parameter.
- ↓         Press this key to move to the next event type on the screen.

NOTE: If the cursor is located at the last event type when the ↓ is pressed the cursor will move to the First User Number parameter.

## Output Options

After all parameters are selected and finalized and you have pressed F10 to begin, select the output options. The output options are broken up into two groups. The first group selects where the report is going to be sent; the printer, the console, or dumped to a file. The second group selects what type of report is being generated; a time clock report, an attendance report, or a standard report.

The *Time Clock* report is used to generate a data file that can be used by a third party time clock software package. There are two time clock software packages that the System 10 will work with: Time Clock Plus and Time Data Systems. When you have pressed F10 the Printer output option will be selected with an arrow. The time clock report can only be dumped to a file. Press a <D> to select the Dump to file option. The Standard printout output option will then be selected with an arrow. Press a <T> to select the Time Clock option, the Time Clock Output Options screen will be displayed. There are six options which may be set on the Time Clock Output Options screen which is illustrated in Figure 7.2. The cursor will be initially positioned at the last option "Format". You can select which of the two Time Clock software packages the data should be formatted for. Use the Up and Down Arrows to make your selections. To move backwards to change the other options use the Up Arrow key when it is already at the top selection, it will move the cursor backwards one option. You can use the Down Arrow key when it is already at the bottom selection to move the cursor forward one option. Also the Enter key will move the cursor forward one option. Use the arrow keys to select the field you want for the job code and the field you want for the user ID. There are default filenames for each data format "timeclock.dat" for Time Clock Plus and "TC05" for Time Data Systems. By typing over the existing name you can change the default file name. The directory in which the file will be created can be changed by typing over the default directory. The drive on which the file will be created can be set to either a: or c:; c: is the default. Use the Arrows keys to select the drive. Press the F10 key to generate the file then press any key to return to the main menu.

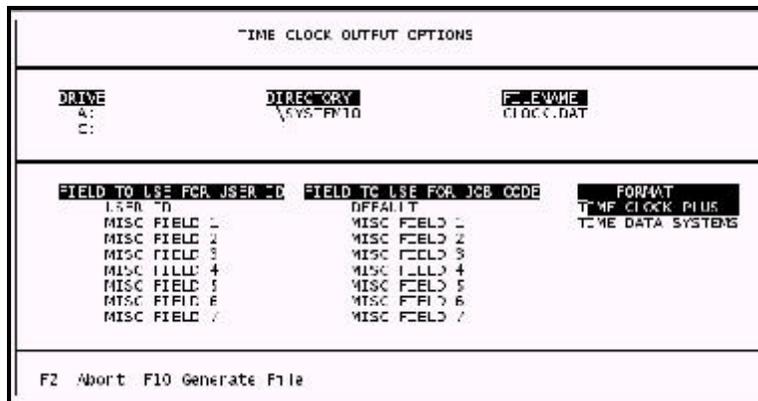


Figure 7.2 - Time Clock Output Options screen

The *Attendance Report* shows which users are logged in, DPM by DPM. A user is considered logged if there is an odd number of valid user events for that user. When you have pressed F10 the Printer output option will be selected with an arrow. The Attendance report can only be sent to the printer. Press the a <P> or the Enter key to select the printer. The Standard printout output option will then be selected with an arrow. Press a <A> to select the Attendance report. The report will print and then System 10 will go back to the main menu.

A report can be canceled by pressing the F2 key. Note that the printer will not automatically stop when the cancel command is given. This is because the printer contains a large buffer.

The *Standard Report* printout shows the selected event types in chronological order. When you have pressed F10 the Printer output option will be selected with an arrow. The Standard printout can be sent to the printer, the console, or dumped to a file. Press a <P> or the Enter key to select the printer option, press a <C> to select the console option, or press a <D> to select the dump to file option. The Standard printout output option will then be selected with an arrow. Press the Enter key. If the printer or console options were selected report will be printed or display on the screen and the System 10 will return to the main menu. If the dump to file option was selected you will be prompted to select which drive the files are to be created on. Drives: a: or c: are the valid choices. Press the Enter key after you have made your selection. The files will be created then press any key to return to the main menu.

SYSTEM 10 DATABASE REPORT  
 printed: 04/09/97 09:03:34

Event Types: Valid User, Code Error, Auto Relay, Request-To-Exit, System User Info

	Starting	Ending
CODE:	0000 0100	
DOOR:	001	004
DATE:	03/08/89	03/08/89
TIME:	08:30:00	17:30:00

Name Or Event	Type door / Port	DPM	Time	Date	Data
SMITH ,MIKE S	FRONT OFFICE	2	08:32:12	04/08/97	MANAGER
Code Error 14937	KITCHEN DOOR	1	08:35:24	04/08/97	
JONES ,LENNY E	KITCHEN DOOR	1	08:35:30	04/08/97	CHEF
Auto Relay ON	DELIVERY DOOR	3	08:45:00	04/08/97	
System Administrator	LOGON SYSTEM 10		09:01:02	04/08/97	
System Administrator	EVENT REPORTS		09:01:20	04/08/97	
System Administrator	USER DATA & CODES		09:03:45	04/08/97	
System Administrator	LOGOFF SYSTEM 10		09:10:34	04/08/97	
Request-To-Exit	FRONT OFFICE	2	12:03:56	04/08/97	
PRICE ,DEBI H	STAFF ENTRANCE	4	13:55:03	04/08/97	HOSTESS
COLE ,STEVE J	STAFF ENTRANCE	4	14:45:38	04/08/97	WAITER
Auto Relay OFF	DELIVERY DOOR	3	17:00:00	04/08/97	
Request-To-Exit	KITCHEN DOOR	1	18:23:29	04/08/97	
JONES ,LENNY E	KITCHEN DOOR	1	18:25:47	04/08/97	CHEF

**Event File Dump**

This option is very useful if the access control events can be used by other computer programs such as spreadsheets and databases. These programs can be used to generate user specific reports that the System 10 cannot. The data dumped with this option can also be transferred to other computers for use as electronic time cards for payroll, job costing, resource usage billing etc.

This option writes all event data matching the criteria on the DATABASE REPORT screen to an ASCII file called EVENTS.DAT. As a supplement to the event data, USERS.DAT and CODES.DAT are also generated. These files contain an ASCII version of the user name database and the access code database respectively.

The file formats for each of these files are listed below. Note that each field within the file is ended with the carat (^) character and each record ends with a CR/LF combination.

Field name	Length in bytes
EVENTS.DAT	Event type 2 digits
Code/User #	5 digits
DPM #	2 digits
Door #	1 digit
Date	10 (MM/DD/YY)
Time	8 (HH:MM:SS)
USERS.DAT	User # 4 digits
Name	15 alpha
Data	10 alphanumeric
CODES.DAT	User # 4 digits
Access Code	5 digits

Field Descriptions:

EVENTS.DAT(1)

Event type - this is a 2 digit number designating the type of event. Possible values for this field are numbers 01 through 18.

- 01 Duress user entry
- 02 Valid user entry
- 03 Code error
- 04 Not Used
- 05 Aux Input ON/OFF
- 06 Door ajar/closed
- 07 AC on/off
- 08 Relays on/off
- 09 Automatic Relay (AR) on/off
- 10 DPM reset
- 11 Zone open/closed
- 12 Manual relay (MR) on/off
- 13 Not Used
- 14 Request-To-Exit (RTE)
- 15 Communications Failure/Restored
- 16 Auto time changes (DST)
- 17 Not Used
- 18 System 10 software user selections

(2) Code/User # - this is a 5 digit number that represents the user identification number for valid entry and duress entry events, 4 digits zero padded to 5. For code error events, this number represents the 5 digit code/card number denied access.

(3) DPM # - this is a 2 digit number, 1 through 32, representing the DPM where the event originated.

(4) Door # - this is a 1 digit number, 1 through 4, representing the port on the DPM where the event originated.

(5) Date - this is month, day, century and year of event (MM/DD/CCYY).

(6) Time - this is the hour, minute and second of event origination (HH:MM:SS).

## USERS.DAT(1)

- (1) User identification number - this a 4 digit number, unique to each person assigned access.
- (2) Name - this is a 15 character field used to hold the user's name
- (3) Data - this is a 10 character field holding miscellaneous data for the user

## CODES.DAT

- (1) User identification number - this a 4 digit number, unique to each person assigned access.
- (2) Access Code - this is a 5 digit number designating the card or code assigned to this user.

# MONITOR CURRENT EVENTS

## Overview

This chapter describes Option 6, which allows you to monitor current events on the controlling computer's screen. Selecting Option 6 will allow you to view the most recent 20 events. All events are stored on hard disk, as well as being displayed. Events from hard disk can be recalled at any time in the form of custom reports (described in Chapter 7).

## Monitor Current Events (Option 6)

To select Option 6, press number 6 followed by the Enter key while the main option menu is displayed on the screen. The Option 6 screen replaces the main option menu screen, as illustrated in Figure 8.1. The last 20 events will be displayed. It is important to note that the events on this screen may not be in chronological order. Events on this screen are displayed as they are received by the PC. The time and date may differ due to subtle differences in the time keeping of each DPM.

NAME OF EVENT	TIME	DATE	DATA
SMITH JOHN	10:12:20	04/29/87	
DOOR	10:12:28	04/29/87	
DOOR	10:12:38	04/29/87	02
DOOR	10:12:41	04/29/87	03
DOOR	10:12:50	04/29/87	04
DOOR	10:12:58	04/29/87	05
DOOR	10:13:07	04/29/87	06
DOOR	10:13:16	04/29/87	07
DOOR	10:13:25	04/29/87	08
DOOR	10:13:34	04/29/87	09
DOOR	10:13:43	04/29/87	10
DOOR	10:13:52	04/29/87	11
DOOR	10:14:01	04/29/87	12
DOOR	10:14:10	04/29/87	13
DOOR	10:14:19	04/29/87	14
DOOR	10:14:28	04/29/87	15
DOOR	10:14:37	04/29/87	16
DOOR	10:14:46	04/29/87	17
DOOR	10:14:55	04/29/87	18
DOOR	10:15:04	04/29/87	19
DOOR	10:15:13	04/29/87	20
DOOR	10:15:22	04/29/87	21
DOOR	10:15:31	04/29/87	22
DOOR	10:15:40	04/29/87	23
DOOR	10:15:49	04/29/87	24
DOOR	10:15:58	04/29/87	25
DOOR	10:16:07	04/29/87	26
DOOR	10:16:16	04/29/87	27
DOOR	10:16:25	04/29/87	28
DOOR	10:16:34	04/29/87	29
DOOR	10:16:43	04/29/87	30

Figure 8.1 - Monitor Current Events screen

All events have a time and date stamp. Events that correspond to a port will have a port number. Events that correspond to users will have user names or numbers. Some common door events are Door Ajar, Request-To-Exit (RTE), Auto Relay functions, and Zone Reporting. When someone logs on the system and enters into any option an event is generated. This event will tell which person and which option or utility was accessed. For more information on event types refer to *Event Types*.

The status line, or bottom line on the screen, contains several function keys available to you within this screen. It also has a message telling you how full the hard disk is. The number displayed is a percentage of the total disk capacity. The percentage will increase as the system collects events. At 85% a window advising you to use Option 75 Purge Events will appear.

Here is a list of all function keys available to you within this screen:

- F1 Press this key for the pop up help window to appear.
- F2 Press this key to exit Option 6, and return you to the main option menu.
- F3 Press this key to clear the currently displayed events on the screen. This allows you to view new events more clearly as they appear on the screen while you watch.
- F9 Press this key to toggle the screen timeout. The message "TIMEOUT DISABLED" will appear in the lower right corner. This disables the 20 minute auto-logout feature for the monitor screen only.
- F10 Press this key to allow a communications window to appear in the top left corner of the screen. Refer to the next section 8.2.1 The Communications Window for a more information regarding the function of this window.

### The Communications Window

The communications window is a communications diagnostic tool provided to assist in monitoring the links between the PC and the DPMs of the System 10. It is displayed within two areas. These are the monitor events screen and the communications failure screen. Within the monitor events screen this window will be displayed if the operator presses the F10 key. This window will automatically be displayed within the communications failure screen, in the event a communication breakdown occurs between one or more DPMs.

The communications window displays the present status of each DPM. If the count is incrementing for any of the DPMs it means that there is no communication between that DPM and the controlling computer. After the count reaches 10 the controlling computer will make another attempt to establish communication with the DPM. When the controlling computer has made four attempts it will consider the DPM down or unable to communicate.

Other features to note about this window come into play when using modems to call DPMs. If a schedule has been assigned to the DPM and it is not within the scheduled time, the message "is not On-Line" will appear behind the DPM's # inside this window. When the scheduled time is reached the letter "S" will appear between the DPM # and Attempts columns along with a number designating which schedule is active i.e. S1, S2 ... or S5. If the DPM is on a calling schedule and has been called by the System 10 operator using the manual dial feature in Option 76, the letter "M" will appear between the DPM # and the number of attempts made. This designates that the DPM has been manually dialed and is "on-line".

DPM	ATTEMPTS	COUNT	
1	1	0	(communications OK)
2	is not On-Line		(DPM on a schedule and waiting for dialup time)
3 S1	1	0	(DPM on schedule 1 and DPM is now on-line)
4 M	1	0	(DPM on a schedule, but manual override used)
5	2	9	(PC detects trouble with DPM communications)

# SYSTEM 10 UTILITIES

## Overview

Sub menu 7 of System 10, "SYSTEM 10 UTILITIES", allows access to utilities which maintain the integrity of the System 10 databases. The options include backing up the databases, restoring the databases, downloading information to the door/port modules (DPM), setting the number of DPMs in the network, purging the events database, setting phone numbers for DPMs that communicate with the PC via a modem, choosing type of modems and assigning alternate cables to DPMs.

## Back Up Databases (Option 71)

Backing up data is an important part of maintaining the System 10. Option 71 of sub menu 7 will not only back up your data, but all the files required to run System 10 as well. The copies will be necessary should your files become corrupted for any reason (hard disk failure, etc.). An illustration of the Option 71 screen is in Figure 9.1.



Figure 9.1 - Utilities Screen

When you enter Option 71, the first option is "BACK UP ALL FILES". This option will back up the entire contents of the System 10 directory. It will place all programs, screens, data and miscellaneous files onto 1 or more floppies. This type of back up is useful for making off site copies for safe keeping.

The second option is "BACK UP DATA FILES". This option is very similar to the 3rd option except, as it implies, it leaves off the event file. Because of the event collection capabilities of the System 10, the event file can get very large. As more events are collected you will find using Options 1 or 3 will require more and more disks to do the back up. With this option you can back up all the system's configuration data without having to use excessive disks on the event file. This option is useful if you have made changes within any of the options in menus 1, 2, 3, or 7 and wish to do a quick back up to ensure an off line copy of the configurations of your system.

The third option is "BACK UP DATA FILES AND EVENTS". This option will only back up the data files maintained by the System 10. The difference between this option and the previous option is that all programs, screens and miscellaneous files are skipped, the only files backed up are those that have the file extension of DAT. This includes all specific information concerning your system. For example all names, access codes, relay information, time schedules and events fall into the "DAT" category. This back up option is useful when you want to back up the information on your system that changes from time to time.

Once you have made you back up selection, type the number of your choice and press the Enter key to continue the back up process. The screen will then ask you to insert one of the floppy disks into the disk drive. After you insert the disk, press any key, and the back up process will be underway.

If the following message appears on the screen--"Disk Error". Please make sure disk is inserted properly!!!!"--there is something wrong with the disk or the disk drive. Check to ensure the disk is inserted face up and the floppy drive door is closed. After you check the disk, press any key to retry. If you get a "Divide Error" message and System 10 is rebooted (i.e. you are put back to the logon screen), the disk is probably not formatted. You should retry Option 71 using disks that are formatted.

If there are no errors, all the files on the floppy disk will be deleted and the System 10 files will be copied onto the disk. Messages will print on the screen relating what file is being backed up and the current number of bytes of that file which are backed up. When a disk fills up, you will be prompted to insert another disk. This cycle continues until all the System 10 files have been backed up.

Function keys available on this screen are:

F1 Press this key for instructions and information regarding this option.

F2 Press this key and System 10 will return control to sub menu 7.

NOTE: It is wise to label each of the disks with the date and a volume number, so that during restoration the disks are inserted in the same order in which they were backed up.

## Restore Databases from Back ups (Option 72)

---

Option 72 allows you to restore all the System 10 data which was backed up in Option 71. Secure the back up set of floppy disks which contain the System 10 files to be restored, enter Option 72. At the prompt insert the first volume of the floppy disks as shown in Figure 9.2. Place the first volume of the back up set of floppy disks into the floppy drive, press any key. If a disk error message appears on the screen (same message as in Option 71), be sure the disk is inserted properly, then press any key to retry. If the message "ERROR--Please insert correct diskette" appears on the screen, you have inserted the incorrect disk volume. Take this floppy disk out, and insert the correct one.

If everything is OK, messages will appear on the screen relating which file is being restored and the number of bytes restored out of the total size of the file. After all of the files from one disk have been restored, you will be prompted to insert the next volume. This cycle continues until all the data is restored.

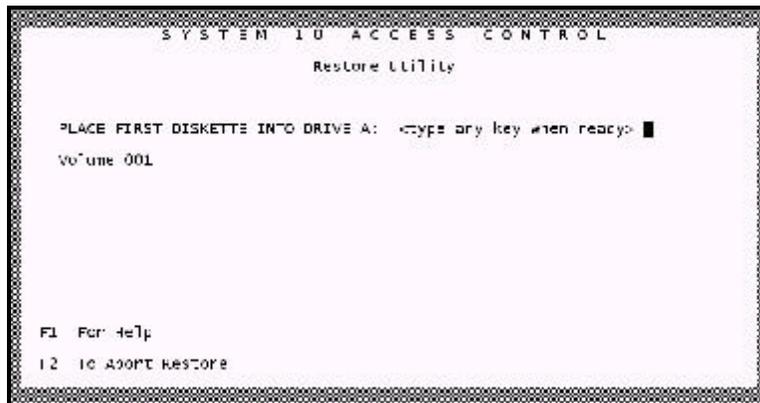


Figure 9.2 - Restore Database Screen

Function keys available on this screen are:

- F1 Press this key for instructions and information regarding this option.
- F2 Press this key and System 10 will return control to sub menu 7. It is important to note that should you abort while restoring, some data may be corrupted. Therefore, you should only abort this process in extreme circumstances and restart the restore process later.

## Program Door/Port Modules from Current Data (Option 73)

Option 73 allows you to reprogram the door/port modules (DPM) with the information stored in the System 10's database. This option is useful when the memory of one or more of the DPMs is lost or the DPM needs to be replaced. Type 73 at the sub menu 7 prompt and a window should pop-up as illustrated in Figure 9.3.

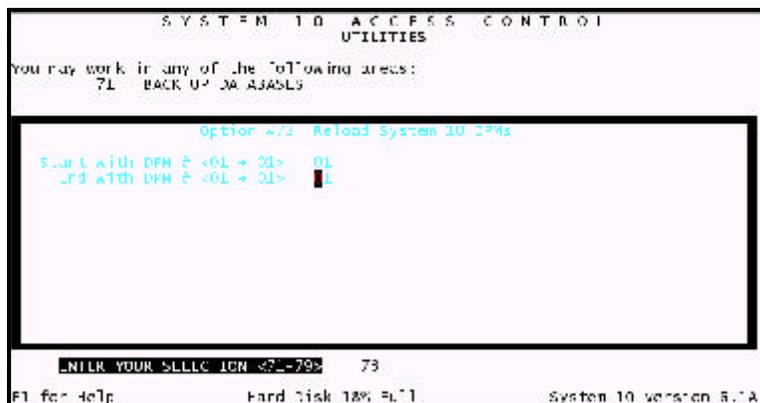


Figure 9.3 - Program Door/Port Modules Screen

You will be asked for the beginning and ending DPM to be reprogrammed. For example, if there are four DPMs on the network and DPMs one and two lose their memory, you would enter DPM one as the starting DPM and DPM two as the ending DPM.

The next prompt will ask you if you want to clear the DPMs memory first. If you press Y, then the command will be issued to the DPM to clear its memory before accepting any programming sequences. The DPM takes 2 minutes to clear and test its memory...so please be patient. As soon as the 120 seconds have gone by the reloading will begin.

NOTE: The memory clear option will only work with DPM software versions 3.6F or greater. If you select "Y" to clear memory and the DPM software is 3.6D or 3.6E, memory will not be cleared first - unfortunately the System 10 program still waits the 2 minutes before starting the reload.

After you answer these questions, messages will print on the screen concerning the DPM which is currently being programmed. The computer will, in turn, send the following information to the DPM being programmed and print it on the screen: codes, time & date, relay data, schedules, miscellaneous data, and holiday data. The computer will also print whether the programming was successful for each DPM.

When the reprogramming is done, the message--"Reload Routine Complete - Press any key for menu"--will appear on the bottom of the screen. Press any key to return to sub menu 7.

Function keys available on this screen are:

F1 Press this key for instructions and information regarding this option.

F2 Press this key and System 10 will return control to sub menu 7.

## Set Number of Door/Port Modules

Option 74 allows you to set and change the number of door/port modules (DPM) that are part of the System 10. This option should be used when the system is installed and when other DPMs are added or deleted from the system.

When you select this option, the statement--"The Number of System 10 DPMs Now Connected :"--will appear on the sub menu 7 screen as in Figure 9.4. Enter a number between one and thirty-two. After this number is entered, one of two things will happen. Either the screen will return to the sub menu 7 prompt, or if the number of DPMs wasn't changed, the message "NO CHANGE MADE" will appear on the screen. If "NO CHANGE MADE" appears, press any key to return to the sub menu 7 prompt.

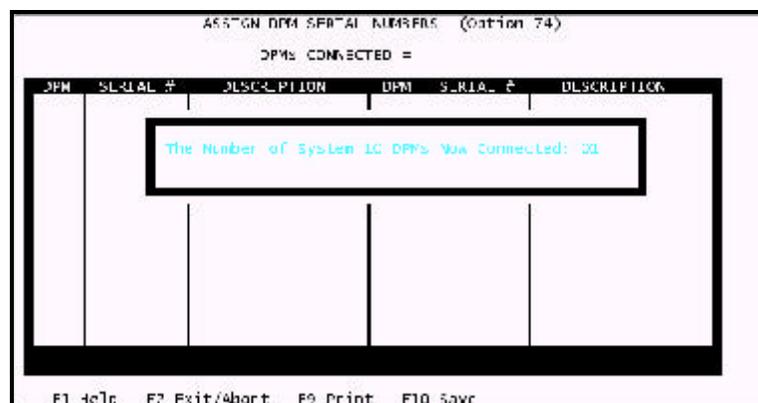


Figure 9.4 - Set Number of DPM's in Network Screen

Function keys available on this screen are:

- F1 Press this key for instructions and information regarding this option.  
 F2 Press this key and System 10 will return control to sub menu 7.

## Purge Events Database of Old Records (Option 75)

Option 75 allows you to delete events from the events database. This is done to prevent the file on the hard disk from becoming too large. Use the back up option before you purge events so data can be restored if necessary. Remember, once you purge events, the events are deleted from the hard disk and can only be restored from a back up.

When you enter Option 75, a window will pop-up with the date of the oldest event in the database as in Figure 9.5. You are also asked to enter the cut-off date that you want. All events that are older than the cut-off date will be deleted from the database. After entering the cut-off date, press any key to start the purging process. If you press any key besides F1 or F2, a running total of all the events purged will be printed on the screen.



Figure 9.5 - Purge Events Screen

It is important to know that only events OLDER than the cut-off date will be removed. For example, if you enter 09/11/96, all the events up to and including 09/10/96 will be deleted. No events from 09/11/96 to the present will be erased.

Function keys available on this screen are:

- F1 Press this key for instructions and information regarding this option.  
 F2 Press this key and System 10 will return control to sub menu 7. If this is in the middle of the purge process, a message will be displayed in the middle of the screen explaining your options. This message will appear as follows:

You have entered F2. Your options are:

1. Abort Purge and restore all events.
2. Continue purge.

Enter Option:

If you select Option 1, the event file will remain as it was before the purge was started.

If you press 2, the purge will continue until it is complete.

Automatic Purging - The System 10 continually monitors the hard disk capacity. In order to prevent loss of events storage due to a full disk. The software has been set up to alert the operator when the disk reaches 85% of its total capacity. At 90% the software will initiate a purge automatically. The 10% of unused disk space is required for working storage during the purge process.

NOTE: This routine assigns a cutoff date of the first day of the month which is at least 120 days ago. If you want to keep more than 4 months of events on-line, run Option 75 before the auto purge routine kicks in.

Here is the message that will appear on every menu screen when disk capacity reaches 85%:

```
Hard Disk has exceeded 85% capacity.
It is strongly advisable for you to purge
the event file via Option 75, else the
Hard Disk will become full.
Press any key to continue.
```

Here is the message that will appear when the event file is automatically purged:

```
Your Hard Disk has exceeded 90% capacity
The System 10 will begin purging events
that are older than xx/xx/19xx
```

## Assign DPM Phone Numbers (Option 76)

Option 76 should be used only if the DPMs and computer communicate over a modem link. If the DPMs are directly attached to the computer, this option should not be used and all the phone numbers should be blank. The screen for Option 76 is shown in Figure 9.6. If a phone link with the DPM is chosen, you have the options of having the phone connection maintained continually (i.e. a 24 hour, 7 day/week phone call) or you may select to have the PC call the DPM up to 5 different times a day using the time schedules.

SYSTEM 10 ACCESS CONTROL									
DPM PHONE NUMBERS									
DPM #	PHONE #	SCHEDULES							
1	1525-31875	23:00	0_0						
2	1525-318456	23:00	0_0						
3									
4									

Enter # of DPM to change: 0

F1 For help F3 Delete F5 Cancel Call to DPM F9Up DPMs 1-26 F9Dn DPMs 27-32  
 F7 Modem Activity Report F8 Clear Modem report  
 F2 Exit/Abort F4 Call DPM F6 Print F10 Save F11 Setup DPM Modem

Figure 9.6 - Assign DPM Phone Numbers Screen

To add a new phone number or change an old one, at the Enter # of DPM to change: prompt, enter the number of the DPM to which you want a phone number assigned. This number must be between one and the number of DPMs that are currently on the system. If zero is entered, you will return to the sub menu 7 screen.

Function keys available at this prompt are:

- |           |   |
|-----------|---|
| F1        | Press this key for instructions and information regarding this option.                        |
| F2        | Press this key and System 10 will return control to sub menu 7.                               |
| Page Up   | Press this key to see the next page of data, if more than 16 DPMs are attached to the system. |
| Page Down | Press this key to see the last page of data, if more than 16 DPMs are attached to the system. |
| F10       | Press this key to save the information currently on the screen.                               |
| Shift F10 | Program the DPM side Modem with the correct Auto answer string.                               |

### DPM Phone Numbers

Once you enter a valid DPM number, the cursor will appear in the phone slot of the DPM you have chosen. Now you enter the phone number that the computer should call to communicate with the DPM. Prefix and suffix letters can be added to a phone number to increase its length. This is useful when dialing from PBX type phone systems or using line sharing devices. Use Option 78 to add prefix and suffix letters.

Examples of valid phone numbers are, dashes are ignored:

1234567  
 1-123-123-4567  
 A-123-123-4567  
 1-A-123-4567  
 1-123-A  
 A

Function keys available are:

- |           |  |
|-----------|--|
| F1        | Press this key for instructions and information regarding valid phone numbers.   |
| F2        | Press this key and System 10 will return control to sub menu 7.  |
| F3        | Press this key to delete the entire phone number.  |
| F4        | Press this key to dial the phone number currently in the slot. This will display the Modem Communications Window.                              |
| F5        | Press this key to cancel a call to the selected DPM. This will also display the Modem Communications Window indicating a modem is being reset. |
| F9        | Print the information on this screen   |
| F10       | Press this key to save the information currently on the screen.  |
| Shift F10 | Program the DPM side Modem with the correct Auto answer string.  |

The phone numbers that are entered in Option 76 are required for modem communications. There must be a modem on each DPM and, depending on your requirements, at least one the PC side. The telephone number entered in Option 76 must be the number of the phone line which is attached to the modem on the DPM.

System 10 detects phone numbers in the database when it is rebooted, and will dial these numbers to establish modem communications before the logon screen appears, as illustrated in Figure 9.7. The System 10 will also dial the phone number of a DPM if it detects that the modem on the PC side or the DPM side has been reset. Modems can be dialed manually through Option 76 by selecting the DPM to dial, then pressing the F4 key as illustrated in Figure 9.8.

The computer will then reset the modem and re-establish communications with the DPM.

If the modem is not responding correctly, a message will appear in the pop up window when the modem was called manually (F4 pressed). Also, a message will be printed on the printer if the System 10 tried to establish communications automatically, but couldn't. These messages are listed below with a possible reason for the erroneous response.

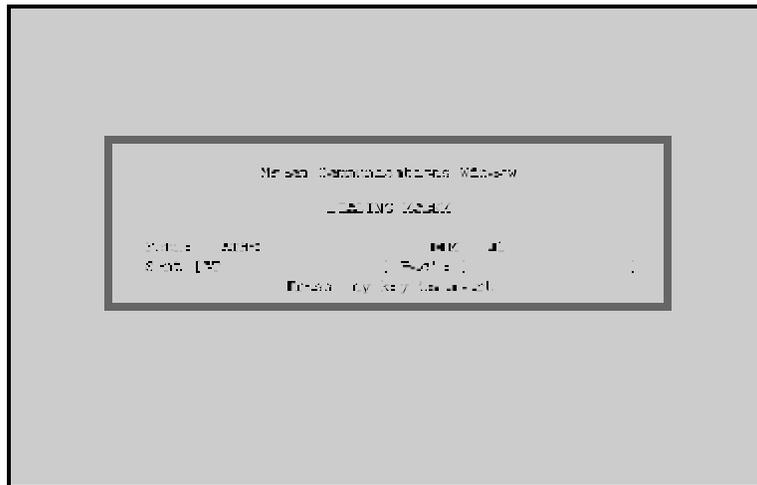


Figure 9.7 - Log on Dialing

**Ringing Signal** - This indicates that there is a phone call coming into the System 10 PC's modem and the PC's message cannot be carried out until the phone line has been cleared.

**No Carrier** - This message may indicate that the number called was not answered by a modem or the modem answering was inoperable. Check the phone number and the DPM's phone hook up.

**General Error** - This indicates that the modem has not received a valid command from the System 10 PC. Since all modem commands are built into the software, it is unlikely that this message will appear.

**No Dial Tone** - This message is printed when the modem on the System 10 PC senses no dial tone.

**Busy Signal** - This message is displayed when the DPM's modem has not reset its phone line after its last call, or possibly someone/something has dialed the number of this modem and has not hung up yet.

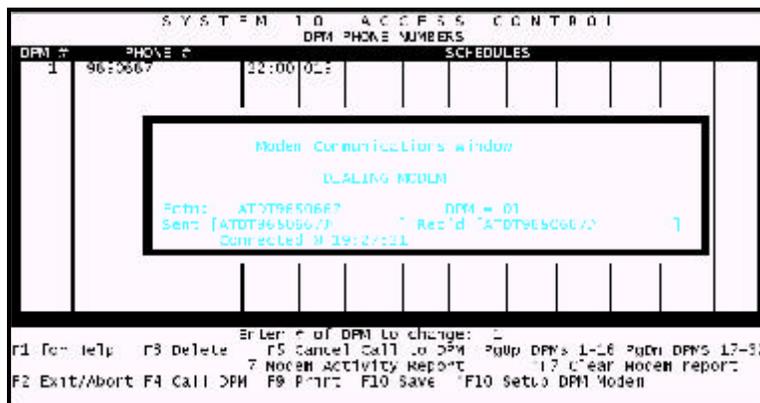


Figure 9.8 - Manual Dialing screen

### Scheduled Calling to DPMs

DPMs that are connected by modems and phone lines to the System 10 PC have two modes of operation. You can select to have the DPM called at different time intervals during the day or you can choose to have the phone link established and maintained for 24 hours per day.

The latter of these choices is programmed into Option 76 simply by NOT entering any schedules for that DPM.

Scheduled calling can be made up to five times a day. The number of times and the duration of each call should be determined by considering the traffic through the reader/keypads of the DPM. Remember, the DPMs only have a limited number of event storage. Specifically for DPM versions prior to 3.7F the DPMs only stored 64 events. Versions 3.7F or greater can store 250 events.

Example: A small branch of a company, less than 100 employees, could have one scheduled time to call per day if the personnel did not exit and re-enter the facility more than once per day. If the same branch had a lot of people leaving and coming back from lunch and coffee breaks, then it is safer to have a second or third calling time to ensure that the buffer does not overflow the 250 event limit. Should the DPM process more than 250 events before the next call from the PC is made, the oldest events are overwritten by the newest events.

Each schedule has 2 parts. These are a starting time and duration. The starting time indicates the hour and minute when the call will be initiated. The duration indicates the number of minutes the call to the DPM will last. The starting time can be any time from 00:01 to 23:59. The 00:00 time is used to indicate an unused schedule. The duration in minutes can be any number between 1 and 999 inclusive.

The advantage to using scheduled DPM calling with multiple DPMs is that only one modem on the PC is required. To use only one modem to call multiple DPMs you must first enter at least one start time and duration for each DPM. Make sure that the schedules do not overlap - then after pressing F10 to save your schedules exit this screen and go to Option 77, ASSIGN DPMS TO DPCM CABLES, and change the cable assignments. All the DPMs with a non-overlapping schedule are then assigned the same cable number. The cable number you use is the cable that has or will have the modem on it.

### Modem Activity Report

Touch the F7 key to print the modem activity for the selected DPM. This report will list all attempts at communications, the time and if the attempts were successful. Touch <Shift F7> to clear the report.

## Changing DPM Cable Assignments

Option 77 is used for two reasons. The first is in conjunction with Option 76 and using modems. The second is in the event of a communications failure on a single DPCM port. To enter this option, type 77 at the utilities menu prompt and then press the Enter key. Figure 9.9 illustrates how this screen looks.

ASSIGN DPMs TO DPCM CHANNELS (OPTION 77)					
DPM #	CABLE	DPM #	CABLE	DPM #	CABLE
01	01				
02	02				
03	03				
04	04				

This screen allows you to change the PC cable used for a DPM. When used along with option 76, more than one DPM can share a PC connection. Using option 76 to set up scheduled call times for each DPM - make sure each DPM's schedule doesn't conflict with any of the other DPM schedules. Another use for this screen is in the event of cable failure, the DPM can be moved to another available cable with little downtime involved.

Use the up and down arrows to select DPM's cable.

F2 to exit/abort F9 Print cable assignments F10 save

Figure 9.9 - DPM Cable Assignments Screen

### Sharing a phone line between DPMs

To use Option 77, for modem communications, you must first complete the information in Option 76, specifically, you must enter valid phone numbers for more than one DPM and also type in at least one schedule for each DPM. It is very important that the schedules entered for each DPM do not overlap. Once the phone numbers and schedules are entered, you enter Option 77 and assign the cable number that is connected to the PC side modem to each of the scheduled DPMs.

Example: A modem is hooked up to cable 3 of the DPCM, and you have DPMs 1, 2 and 3 set up for scheduled calling. In the Option 77 screen you set DPMs 1, 2, and 3 to communicate through cable 3. This means during the scheduled time for DPM 1, all communications received through cable 3 will be logged for DPM 1. At the end of the schedule, the modem terminates the phone call and the modem line remains inactive until the next schedule is started.

The schedule currently being used for a DPM is indicated in the communications window shown in the monitor current events screen. Refer to Chapter 11 - *Monitor Current Events*. The Communications Window for more information regarding this window.

## Emergency Cable Swapping

---

In the event that a cable on a DPCM fails to communicate for whatever reason, this option can be used to re-route all communications from the current cable that is failing to an unused cable in any of the DPCMs installed in the System 10 PC. Before re-assigning the cables for communications loss, first test the DPCM using the test utility provided.

In Option 77, use the up and down arrows to choose the cable assignments. Enter the cable number and press the Enter key. Press the F10 key to save the data on the screen. By pressing the F2 key, all changes made since the last save are restored to the original values. Press the F9 key to get a printout of the cable assignments. If you press F9, the printer will print a report similar to the following:

DPM CABLE ASSIGNMENTS 08/14/1996 @ 13:42:36

DPM #	CABLE CONNECTIONS
01	cable # 1 on DPCM 0
02	cable # 2 on DPCM 0
03	cable # 1 on DPCM 0

If a cable is assigned to more than one DPM and their schedules overlap, you have a contention. When you press F10 to save the cable assignments, the System 10 verifies all assignments and schedules to ensure that cable contentions are not permitted. If the program detects contention, the screen will display a message window, as shown below.

```
You have schedule conflicts with your
current cable selections.
Press RETURN to PRINT all conflicts
or F2 to abort
```

### Adding prefix and suffix telephone codes

Option 78 is used to generate telephone prefixes and suffixes to be used in conjunction with Option 76. Some dialing instances require more digits than are available in Option 76 so we provided you the ability to assign an alphabetical character to a string of numbers. This option enables System 10 to communicate over unusual telephone setups like dialing through PBXs and using line sharing devices. Suppose you needed a phone number like 1,,234,123-4567-234: instead of typing the entire number in Option 76 you could use the letter A to represent all or part of the dialing string.

Example: A-4567-234 is what you would place in Option 76. In Option 78 you would make A equivalent to 1,,234,123

Example: 1,,234, is what you would place in Option 76. In Option 78 you would make A equivalent to 123-4567-234

Example: A is what you would put in Option 76. In Option 78 you would make A equivalent to 1,,234,123-4567-234

As you can see the combinations are infinite.

Function keys available at this prompt are:

- F1 Press this key for instructions and information regarding this option.
- F2 Press this key and System 10 will return control to sub menu 7.
- F3 Press this key to see delete the value of a particular code.
- F10 Press this key to save the information currently on the screen.

### Change screen colors

A second function of Option 78 is to give the administrator of the system the ability to change the color scheme of the screen. There are 14 color choices available for the background, key text color, normal text color and key background color. This is illustrated in Figure 9.10.

SYSTEM 10 ACCESS CONTROL  
PHONE NUMBER CODES (PREFIX + SUFFIX)  
or CHANGE VIDEO COLORS

CODE	VALUE	CODE	VALUE
A		J	
B		K	
C		L	
D		M	
E		N	
F		O	
G		P	
H			

Enter code to change (A-P):

F1 for help	F2 Exit/Back	F3 Delete
F4 Background color	F7 Normal text color	F9 Default colors
F7 Key text color	F8 Key background color	F10 Save Codes/Colors

Figure 9.10 - Changing Screen Colors

Function keys available for this option are:

- F2 Press this key and System 10 will return control to sub menu 7.
- F4 Background color
- F5 Normal text color
- F7 Key text color
- F8 Key background color
- F9 Default colors
- F10 Press this key to save the information currently on the screen.

### Modem configuration

When using modems to communicate with DPM's, use Option 79 to assign the modem type to a particular cable. Corby currently sells and supports US Robotics Sportster modems. In the past we have sold Hayes 2400, Accex 2400 and Avatex 2400 baud modems and still support those configurations. In Option 79, you will see a modem configuration for every DPM assigned to the system. Even if you are not using modems, the default setting for a US Robotics modem will still occupy that cable. This will not effect a hardwire connection since the System 10 will only look for a modem if a telephone number is assigned to a DPM.

NOTE: When using modems, the same model modem must be used in pairs. Example: If US Robotics is used at the PC on cable 1 and 3, then DPMs 1 and 3 must have US Robotics modems as well.

In Option 79, you must choose a modem for the PC and DPM. Type in the line number to change then hit enter. The curser will transfer to the type of PC modem. Use the up and down arrow keys to scroll modem choices, then save the configuration. Use the "page up" key to go to the DPM configuration screen and do the same thing for that modem. When you are done configuring and saving information here in Option 79, go to Option 76 and use the shift F10 key to program the DPM side Modems. This is illustrated in Figure 9.11.

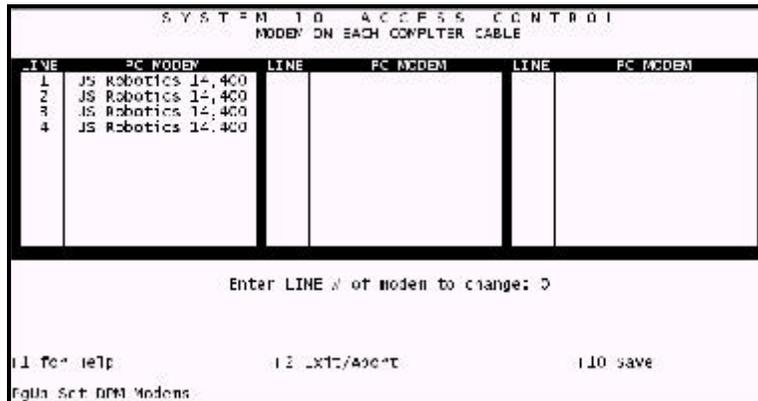


Figure 9.11 - Modem Configuration Screen

Function keys available for this option are:

- F1                      Press this key for instructions and information regarding this option.
- F2                      Press this key and System 10 will return control to sub menu 7.
- F10                     Press this key to save the information currently on the screen.
- Page up                Toggles to set DPM modem screen
- Page down             Toggles to set PC modem screen
- ↑ ↓                      Scrolls the modem selection

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# DOS CONSIDERATIONS

## What is DOS?

---

A computer is nothing more than a collection of chips, switches and other pieces of hardware. Without programs to run it can do nothing. But how do these programs run? How do they use resources such as memory, disks, the display screen? A computer's operating system serves as the "supervisor" for all activities - most importantly the running of programs.

DOS is the name of the disk operating system used with virtually all personal computers today. The System 10's software is designed to run under DOS. There are many versions of DOS which increase numerically. What is most important for System 10 is that your version of DOS must be 6.22 or greater. If your version is less than 6.22, consult the vendor from which your computer was purchased for an upgrade.

## DOS and You

---

Normally, you may never see DOS. The extent of your interaction with the System 10 computer will be through the user interfaces provided by the System 10's software. In the event of a problem, however, it may be necessary to use some of the DOS commands.

To access DOS, you must first exit the System 10 software. This is accomplished by entering a password with a privilege level of 9 at the System 10's logon screen. Instead of hitting the Enter Key after the password, press the Shift Key and the F10 key simultaneously. At this point, a message will be displayed instructing you that you have 10 seconds to press the escape key to return to DOS or press enter to return to the System 10. Depending on the version of DOS your using the PC will either return you to a DOS prompt or run Windows 95.

It is important to note that exiting the System 10 software may compromise the operation of your access control system. This is because it is the System 10 software that captures incoming messages from the DPM's and stores them on the hard disk. Though there is a buffer on both the DPMs and the controlling computer which minimizes this possibility, it is possible that if the System 10 software is not run for too long a period of time, some events may be lost. The period of time that the controlling computer can be left off-line from the DPMs depends on the traffic at each DPM. Thus, you should exit the System 10 software only when absolutely necessary.

## System Files

---

There are two files which are provided with your System 10 software that must never be changed. These two files are "config.sys" and "autoexec.bat". These files communicate very important information about System 10 to your computer. More information about the function of these files is available in the DOS manual supplied with your computer.

## Disk Formatting

---

System back up was discussed in *Back up Databases* (Option 71). As noted, formatted floppies are required for back up. Although pre-formatted floppies are available from Corby and from your local computer store, you may elect to format your own. In this case you must exit the System 10 software to access the DOS format command. Because of the limitations noted earlier in this chapter - section *DOS and You*, you should try to do this when system traffic is at a minimum.

To format a floppy or group of floppies, follow these steps:

- # Acquire the necessary number of double-sided double-density 3.5 inch floppy disks.
- # Exit the System 10 software as described in section *DOS and You*.
- # Insert a floppy in the A drive.
- # At the C> prompt, type format a:.
- # The computer will respond with a prompt similar to Strike ENTER when ready. At this point, hit the Enter Key.
- # The system will then respond with a prompt similar to Formatting... At this point the system is formatting the floppy. This will usually take about 30 seconds.
- # The next prompt you will see will be similar to Verifying... This step will also take about 30 seconds.
- # Finally, you will see a prompt similar to Format another (Y/N)? If you have more floppies to format, simply respond with a Y and repeat the above steps.

# ERROR MESSAGES

## Overview

---

The following list contains all the error messages the System 10 may encounter and an explanation of each one. If any of these messages are printed on the screen or the printer, one of two things has gone wrong.

Either the user has entered invalid data or the System 10 has detected an error in operation. If the error is user oriented, correction is easy--just enter valid data. If it is not user oriented, the first thing you should do is exit to DOS, check to make sure your config.sys file contains the line files = 30, and rerun System 10's program.

If the config.sys file does not contain this line, you should copy the config.sys file from the Corby diskette into your root directory, and reboot the computer. Rebooting the computer is accomplished by holding down the CTRL, ALT, and DEL keys simultaneously. If this also fails to solve the problem, please call Corby for more specific help.

### **\*\*\*Auto Programming Error Detected\*\*\***

"user number", "user name" could not be used  
Name May Exist with other User ID #

This error occurs during auto programming in Option 22. The usual cause is that a name has been entered that is already used by another individual. All user names must be unique.

### **CANNOT OPEN FILE "name"**

In Option 39, the named file which contains DPM information couldn't be accessed properly. Therefore, the report you get in Option 39 may not reflect the information that is stored in the DPMs.

### **Can't create back up list**

In Option 71, the list of files that are to be backed up couldn't be created. The back up procedure cannot be completed without this list. Exiting to DOS and checking the config.sys file as described above will probably remedy the situation.

### **Can't open schedule file**

The file containing the schedule information couldn't be opened properly in Option 15. Exiting to DOS and checking the config.sys file as described above will probably remedy the situation.

### **Can't open "name" screen**

The named screen file could not be opened. This error usually occurs when a file is left open. Exiting to DOS and checking the config.sys file as described above should take care of the problem.

### **CODE IS USED BY ANOTHER USER**

In Option 22, a user code was entered that already exists. System 10 does not allow duplicate codes to be assigned, so you must enter a unique user code.

### **Comm. error DPM # "number" "transaction" "date" "time"**

This error is printed on the printer. It means that communications between the computer and the named DPM have been lost. The message consists of the transaction on which the error occurred, and the time and date of the error. Check all connections between the computer and DPMs.

**Couldn't close pcitemp.dat**

The System 10 database handler could not close the temporary code database. This message is usually printed when the file couldn't be opened. Exiting to DOS and checking the config.sys file as described above should take care of this error.

**Couldn't create pcitemp.dat Status = "number"**

The System 10 database handler could not create the temporary code database and returned "number" as the error code. Exiting to DOS and checking the config.sys file as described above should remedy the situation.

**Couldn't open "number"**

The file corresponding to "number" could not be opened. Exiting to DOS and checking the config.sys file for the line files = 30 should get rid of this error.

**Couldn't open pcitemp.dat**

The System 10 database handler could not open the temporary code database. Exiting to DOS and checking the config.sys file for the line files = 30 should remedy the situation.

**CREATE I/O ERROR "filename"**

The System 10 database handler cannot create the named file. Exiting to DOS and checking the config.sys file should remedy the situation.

**DB Status Error "number"**

The System 10 database handler has detected an error. The "number" specifies this error. Exiting to DOS should remedy the situation.

**Disk Error**

Make sure disk is inserted properly!!!! In Option 71 or Option 72, a disk error was detected. Check to make sure the disk is inserted properly and the disk drive door is closed.

**DISK ERROR! PLEASE TRY AGAIN**

During disk optimization in Option 75, a disk error was detected. Check to make sure the disk is inserted properly and the disk drive door is closed.

**Error allocating space for help screen**

There is insufficient memory to hold the information contained in the help screen. Rebooting the computer should take care of this problem.

**Error in event process "number"**

The System 10 database handler has detected an error in writing to the events database. Code for the error is "number". Exiting to DOS and checking the config.sys file should correct this error. If it doesn't, please call Corby.

**Error in writing to Hard Disk**

In Option 72, the information on the floppy disk was not properly copied to the hard disk. Either the hard disk is filled to capacity or it needs to be repaired. If it is filled to capacity, please purge events (Option 75).

**Error opening file pcihelp**

The help file could not be accessed. Either the help file is not in the working directory or a file error has occurred. If the file is in the working directory, exiting to DOS and checking the config.sys file should remedy the situation.

**Error Please enter the correct diskette**

In Option 72, the incorrect diskette was inserted. Take out this diskette and insert the diskette with the proper volume number.

**Error--Please enter the FIRST volume**

In Option 72, the floppy disk that was inserted was not the first disk of information. Take the disk out and insert the first disk of the back up group.

**"number" Errors Detected**

See Printer Errors have been detected while auto programming in Option 22. The errors pertain to a name that is assigned to two different people. The errors are printed on the printer.

**ERROR WRITING**

In Option 71, there was an error writing to the floppy disk. The floppy disk is probably defective in some way. Back up should be rerun with a replacement for the bad floppy disk.

**Fail opening destination**

In Option 71, the destination file could not be opened properly on the floppy disk. The floppy disk is probably defective in some way. Back up should be rerun with a replacement for the bad floppy disk. Exiting to DOS and checking the config.sys file may also help this situation.

**fail opening volume #**

In Option 71, the file that contains the volume information could not be opened properly. The floppy disk is probably defective in some way. Back up should be rerun with a replacement for the bad floppy disk. Exiting to DOS and checking the config.sys file may also help this situation.

**IMPROPER VOLUME**

During disk optimization in Option 75, the incorrect diskette was inserted into the disk drive. Remove the floppy disk and insert the correct one.

**Invalid date**

An invalid date was entered at the keyboard. The date must contain a valid month (01-12), a valid day for that month (01-31) and a valid year (00-99).

**invalid file name - "filename"**

The System 10 database handler is trying to manipulate a file that does not exist.

**invalid time**

An invalid time was entered at the keyboard. The time must conform to the military time standard (00:00-23:59).

**\*\*\*Lseek error\*\*\***

An error has occurred while System 10 was examining a file. Exiting to DOS should help this problem.

**Manual Relay error # "number"**

A communication problem between the DPM and the computer has occurred. Relay status was requested by the computer and the DPM didn't respond. Check all connections between the computer and the DPMs.

**NAME USED BY ANOTHER USER**

In Option 22, a name has been entered that was already assigned to another user. All user names must be unique.

**NO ROOM in Module # "number"**

There is no more room left in the DPM to store information.

**open error on file "filename"**

The System 10 database handler cannot open the named file. Exiting to DOS should remedy the error.

**READ ERROR "name"**

In Option 39, the information was not properly read from the named file. Most likely, the report does not contain the correct data.

**Screen restore without screen save**

There was a call to restore a screen that wasn't initially saved. This error is harmless.

**THE PRINTER IS NOT RESPONDING PLEASE CHECK TO SEE IF IT IS OFF-LINE OR OUT OF PAPER**

A printer error has been detected by the System 10. The two most common errors are that the printer is off-line or needs paper.

**Unable to allocate space for screen**

There was not enough memory to save the screen image. Rebooting the computer should remedy this situation.

**Unable to Create name list**

During auto programming in Option 22, the list of user names couldn't be created properly. Exiting to DOS and checking the config.sys file for the line file = 30 should fix this problem.

**USER NUMBER USED BY ANOTHER USER**

In Option 22, a user number has been entered that was already assigned to another individual. Every user must have a unique user number.

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