GORDON KAPES INC. **Model 125 Site Monitor**

**Enhanced Security
Operator Guide**

WARNING The Model 125 Site Monitor is not intended to monitor or report conditions that relate to the safety of people or property. It should not be used in place of, or in conjunction with an approved fire or burglar alarm system.

NO WARRANTIES OF ANY NATURE ARE EXTENDED BY THE DOCUMENT. Gordon Kapes, Inc. cannot accept any financial or other responsibility that may be the result of your use of the information in this document or software material, including direct, indirect, special, or consequential damages.

The information contained herein is subject to change without notice. Revisions may be issued to advise of such changes and/or additions.

The statement below is included in this document to comply with a Federal Communications Commission (FCC) regulation. The FCC is an agency of the United States government; thus, the statement below applies to computing equipment installed in the United States of America. Gordon Kapes, Inc. is taking appropriate steps to be in compliance with FCC regulations and similar regulations of other countries.

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

All product names mentioned in this manual are trademarked or copyrighted by their respective manufacturers.

Contents

Foreword

Preface

Chapter One   Understanding the Model 125

Chapter Two   Getting Started with the Menu System

Chapter Three   Connecting to a Serial Port

Contents

Chapter Four   Reviewing System Status & Activity

Appendix A   Terminal Emulator Requirements

Appendix B   Serial Port Connections

Foreword
Words about this Guide

This document covers only operation of the Model 125 Enhanced Security Site Monitor. Other Model 125 documentation includes the Enhanced Security Installation Guide and the Enhanced Security Master Reference Guide. The Enhanced Security Installation Guide strictly covers installation procedures. The Enhanced Security Master Reference Guide is a 400+ page document covering all facets of Model 125 installation, configuration, troubleshooting, and operation.

Please contact your system administrator to obtain any additional documentation that you require. Also, remember that Gordon Kapes, Inc. welcomes your questions, comments, or suggestions. We can be reached by phone at 847 676-1750, fax at 847 982-0747, or via the Internet @ www.gkinc.com.

This page intentionally not left blank.

Preface

Gordon Kapes, Inc. is pleased to announce issue 1 (April 1994) of the Model 125 Enhanced Security Master Reference Guide, Installation Guide, and Operator Guide. These guides include security enhancements made to this version of the Model 125 software.

Enhanced Security Version

The Model 125 Enhanced Security version implements more sophisticated security features than the Model 125 Standard version. The added capabilities are described in the list that follows:

- The Name-password security mode is now called ID password. With the ID-password security mode you create a unique user ID for each user profile. A user ID can be from one to ten characters in length.

- The ID-password mode supports SecureNet Key (SNK) personal identifier products from Digital Pathways, Inc.

- The ID-password security mode enables you to create an optional password for each user profile. A password can be from five to ten characters in length.

- The ID-password mode enables you to create as many as 64 individual user profiles.

- The ID-password mode enables you to specify an initial connection that applies to accessing the Model 125 through the maintenance port as well as a remote-access device.

- The ID-password mode enables you to grant individual user-profile access to specific Operator Menu options.

- You can specify a specific expiration date for each user profile under ID-password mode.

- The ID-password mode enables you to specify display of the VT100 compatibility prompt for individual user profiles.

- You can compose additional prompts for use under the ID-password mode. These are four lines of opening text, SNK challenge and response prompts, a 10-day-warning prompt, and an ID-expired prompt.

- The open-operator-menu mode enables you to configure system-level and administrator-level passwords as required or not required.

- Under the open-operator-menu mode. You can no longer restrict access to Operator Menu options.

Refer to Chapter Fourteen of the Master Reference Guide for a complete discussion of access security. Additional changes reflected in this version of the Model 125 software and manuals are as follows:

- The scheduled-monitoring function has been added to the ASCII-data-matching function. This enables you to temporarily disable the ASCII-data-matching function according to a specific schedule.

- System alarm codes 157, 158, 159, and 160 have been added to the system. (Refer to Appendix B of the Master Reference Guide.)

- You can restore and back up system and user databases from the Configure Access Security Menu. (Refer to Appendix K of the Master Reference Guide.)

- You can no longer press **Ctrl-X** to return to the Operator Menu.

If Upgrading, Please Read!

If you are upgrading from a standard version of the Model 125 software to the enhanced security version, make sure you read the following items. These describe accommodations and constraints involved with migrating to the enhanced security version of the Model 125 software.

- User profiles you configured with the standard version of the software are preserved. However, user names, now known as user IDs, are truncated to ten characters.

- A default user profile **guest** is inserted as the first user profile in your list of profiles (ID-password security mode). Previously configured user profiles are "bumped down" one position in the list.

- Factory access is re-enabled. To change factory access, refer to "Changing Factory Access" in Chapter Fourteen.

- System-level and administrator-level passwords you previously configured under open-operator-menu mode are preserved. However, these passwords are not required under this mode when the new software is installed. If desired, access the Open Operator Parameters screen and enable the password functions to make these passwords required.

- If you previously disabled either the Display System Status option or the System Activity Log option on the Operator Menu, the enhanced security version modifies each converted user profile (ID-password mode) accordingly by disabling access to the appropriate Operator Menu option or options. In the enhanced security version, open-operator-menu mode always allows access to all Operator Menu options.

- The initial modem connection you previously configured is transferred as the initial modem connection under the open-operator-menu mode and as the initial connection for each converted user profile under the ID-password mode. The initial connection selected for a user profile applies to accessing the system through both a remote-access device and through the maintenance port.

- If you previously enabled the VT100-compatibility prompt, the enhanced security version enables this prompt under the open-operator-menu mode and in each converted user profile under the ID-password mode.

- When you log on the Model 125, the system displays the user ID as you enter it. Previously, the actual letters typed would not have appeared on the screen.

This page intentionally not left blank.

Chapter One
Understanding the Model 125

Introduction

Today rapid and effective communications activities depend more and more upon the use of telecommunications and data systems equipment. As dependency upon this equipment increases, so does the need to provide immediate, cost-effective, and secure troubleshooting and maintenance.

The *Model 125 Site Monitor* is a compact, multifunctional device designed to help support personnel by enabling rapid access to maintenance software resident within such equipment, to ensure access security to that equipment, and to implement the automatic monitoring and reporting of various physical and electrical conditions in the equipment room itself.

Intended to be mounted on the wall of an equipment room, the Model 125 is powered by a 120Vac outlet, with power failure backup provided by a built-in battery.

Flexibility

The Model 125 features a host of resources including a 2400 bits-per-second modem, three serial communications ports, eight contact inputs, an internal temperature sensor (along with provision for connecting an external temperature sensor), two DC-voltage-monitoring inputs, and two relay-contact outputs.

The Model 125's processing power is provided by a microprocessor, a real-time multi-tasking operating system, and RAM-based program software. The program software can be remotely updated, ensuring that upgrades are easily performed. The Model 125's internal *menu system* enables you to configure and operate the Model 125 with ease. This provides the flexibility to meet both site-specific requirements and global maintenance goals.

Figure 1-1 illustrates the major hardware components of the Model 125 as installed in a typical PBX-system site.
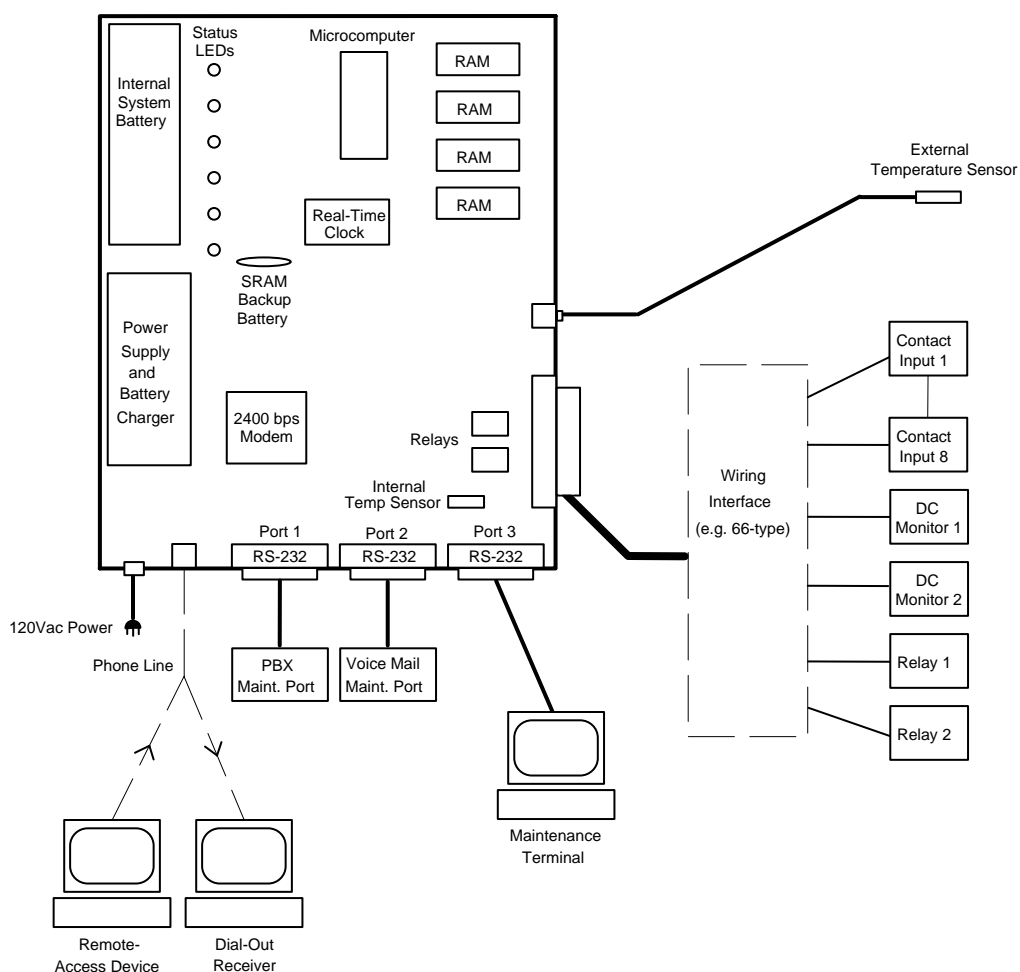
Figure 1-1. Model 125 Installed in a Typical PBX-System Site

Major Purposes

The Model 125 serves two major purposes. First, as an intelligent "front end," it provides rapid, secure access to devices connected to the three serial communications ports. Extensive password protection and access logging maintains the integrity of the connected equipment.

Second, the Model 125 monitors various site conditions. Both real-time and historical records of the conditions are available for review. In addition, alarm conditions can be defined so that the system will generate automatic dial-out alarm reports. These reports, which are in the form of text-based data, can be transmitted to multiple receiver locations using the Model 125's internal modem. In addition, alarm conditions can cause the unit to call a pager.

Feature Highlights

- Rapid, Secure Access to Three Serial Ports

- Configurable Access and Security Parameters
    Multiple, Unique User-ID Profiles
    Logging of User Access
    Intruder Detection, Lock Out, and Reporting
    Support for SNK Personal-Identifier Products

- Monitors On-Site Equipment-Room Conditions

- Serial Port Monitoring and Message Capture

- Automatic Reporting of Alarms

- Real-Time Display of System Conditions

- Maintains Log of Site and System Activity

- Relay Functions

- Menu System for Rapid Model 125 Operation

Provides Rapid, Secure Access to Equipment

The Model 125 contains three RS-232 serial ports. These are designed to allow communications with up to three serial ports located on telecommunications or other types of data equipment.

A typical configuration might consist of a PBX telephone system's maintenance port connected to Port 1 on the Model 125. The maintenance port on an associated voice-mail system would be connected to Port 2. Although a third device can be connected to Port 3, this port is generally reserved for an on-site maintenance terminal.

On-Site Access

Using an on-site terminal or personal computer connected to Port 3, you can access the serial port on either connected device by simply selecting a software menu option. You do not need to connect a cable to one device, then remove it to connect to the other device. The cables are already in place! Nor do you need to change communications settings such as data format or baud rate when switching from one port to another. The Model 125's smart routing capability automatically performs any needed protocol conversion.

Remote Access

In addition to on-site access, you may choose to access the Model 125 from a remote location as well. Integral to the Model 125 is a 2400 bits-per-second modem. Connect the unit to a phone line and you are ready to use all Model 125 resources. A remote-access device can be as simple as a modem and a terminal or a modem and a personal computer running communications software that supports VT100 emulation. (The Model 125 also provides limited functionality with a TTY-compatible terminal.)

The Model 125's internal modem enables you to access the Model 125 from a variety of remote locations, or to access many Model 125s from a single location. The Model 125 eliminates the need for more than one phone line and more than one on-site modem.

When you access the Model 125 from a remote site, you enjoy the same capabilities provided through on-site access. You can connect to Ports 1 and 2 on the Model 125, and, if it is not configured for use with an on-site maintenance terminal, to Port 3 as well. You can also access the Model 125's menu system to view an audit trail of events and "alarms" reported by the Model 125 (described later in this chapter), or to configure and test the system. You can even configure the system to allow you to perform special functions remotely, such as using one of the two relays to perform a reset of malfunctioning equipment.

The advantages of remote-access monitoring are self-evident to all involved with equipment maintenance—whether they provide services to many clients, maintain equipment in several locations on a corporate campus, or simply wish to continue site monitoring when most personnel are "off duty." With the Model 125 there is no need to spend time traveling to a site unless you know a potential problem exists.

Configurable Access and Security Parameters

Although the Model 125 provides you rapid, easy access to the devices connected to the three serial ports, it in no way trades these advantages for system security. On the contrary, the Model 125 contains a multi-functional access security system designed to give you the right amount of security for meeting your specific needs.

The Model 125 enables you to configure access security using two different modes. These are the open-operator-menu mode and the ID-password mode. *Open-operator-menu* provides basic security suitable for use with

connected devices that contain good internal security, while the *ID-password* mode offers advanced features designed for maximum protection. This mode is especially attractive to those using equipment with minimal security features on their serial ports.

Multiple, Unique User-ID Profiles

The ID-password mode is a user profile system where preregistered users must enter a valid user ID and password, if configured, to gain access to the Model 125. Alternately, you can configure the Model 125 to call back an authorized user at a predetermined telephone number before entry to the system is granted. The Model 125 can store up to 64 user profiles. Each user ID and password can consist of up to 10 characters, with letters, numbers, and punctuation marks acceptable. For additional protection, the Model 125 discriminates between upper and lower case letters.

Integral to the Enhanced Security software is support for the personal-identifier products from Digital Pathways, Inc. When used with their SNK hardware or software personal identifiers, the Model 125 offers maximum access security. DES challenge/response methodology is associated with the SNK functions and provides a unique, one-time electronic password whenever a user attempts to access the Model 125.

Logging of User Access

All attempts to access the Model 125, whether successful or unsuccessful, result in an entry being made to the System Activity Log. This information provides system administrators with a time-stamped history of Model 125 use.

Intruder Detection, Lock Out, and Reporting

The Model 125 provides numerous options and possibilities for configuring access security. The number of times a user can enter a password can be set. Should the number of password attempts be exceeded, the system goes into an access-restriction mode. Three methods of access restriction can be selected from, each of which prevents access for up to 99 minutes. In addition, should someone attempt and fail to gain access to the Model 125 repeatedly (as defined by you), an alarm is generated. This alarm sends a message to the internal log and, if configured, causes a dial-out report to be sent to the destinations you define. Thus within a few minutes of someone attempting to "hack" a system, the Model 125 can send an alert message to a service or maintenance center, or even call a pager!

Monitors On-Site Equipment-Room Conditions

In addition to its functions as a secure front end and "smart router" for access to serial communications ports on connected equipment, the Model 125 monitors a variety of equipment-room and system-specific conditions. These monitoring functions can enable you to quickly spot operating trends. These may require immediate remediation or further analysis with more expensive equipment, which the Model 125 enables you to use in a more strategic and cost-effective manner.

The Model 125 provides these monitoring capabilities:

- Open-or-closed state monitoring for as many as eight contact inputs
- Temperature monitoring for room-ambient temperature and, using an optional temperature sensor, a second location
- Voltage-level monitoring for as many as two DC-power sources
- AC-line monitoring including voltage, sag, and impulse conditions
- DTR-pin status monitoring for the three serial ports
- Model 125 backup battery condition monitoring

The following paragraphs provide details about the monitoring capabilities.

Contact-Input Monitoring

The Model 125 provides eight general-purpose contact inputs which allow monitoring of the open-or-closed state of various hardware points. You can connect these contact inputs to equipment alarms or a variety of sensors.

Temperature Monitoring

Built into the Model 125 is a sensor that monitors ambient temperature in the equipment room where the Model 125 is installed. An optional external sensor kit is available from Gordon Kapes, Inc. You can use this kit to measure the temperature for a specific piece of equipment or location either within or near the equipment room.

DC-Power Monitoring

With the Model 125 you can monitor DC-voltage levels from as many as two DC-power sources. These could be a PBX battery backup system, the power source for a paging system, or the status of a logic signal.

AC-Line Monitoring

The Model 125 performs extensive monitoring of the AC-line that powers the unit. Line-to-neutral voltage is measured and displayed in real-time. High-speed circuits detect voltage sags (temporary low-voltage conditions) and high voltage impulses (spikes). These features allow power problems to be recognized, reported, and corrected.

DTR Monitoring

The Model 125 monitors the state of the DTR lead (pin 20) on each of its serial ports. This function is used to detect accidental disconnection of the three serial ports.

Internal Battery Monitoring

The Model 125 tests and reports the condition of its internal lead-acid battery once every 168 hours (one week). This helps you ensure that Model 125 battery backup operation is always ready should an AC-power failure occur.

Serial Port Monitoring and Message Capture

Using its ASCII-data-matching function, the Model 125 can monitor both Port 1 or Port 2 for specific ASCII data that may be present. This feature is valuable when the Model 125 is used with communications systems generating critical alarm and status messages from serial ports. You can configure the Model 125 to activate its own alarms when it detects specified messages emitted from the connected equipment. As configured by you, each alarm can include a name and message as well as the actual data string emitted by the connected equipment. Each alarm is sent either to the System Activity Log or to both the log and a dial-out alarm report.

Message ignore characters can be included in the specified message so that historical records of messages stored in an internal database can be accessed without causing duplicate alarms.

Automatic Reporting of Alarms

The Model 125 reports conditions and alarms to the System Status screen, the System Activity Log, and dial-out alarm reports.

Dial-Out Reports

The Model 125 can automatically send a dial-out alarm report to up to three receiver locations. A dial-out alarm report is a list of the one or more alarms the Model 125 transmits, through the internal modem, to a database, personal computer, or printer set up as a dial-out alarm receiver. (Software is available from Gordon Kapes, Inc. to implement a personal-computer-based receiver system.) In addition to the alarm data, each dial-out report contains an opening and closing message that has been specifically configured for each receiver destination—primary, backup, and secondary. Opening and closing messages can be used for several purposes since they can contain machine-readable codes as well as human-readable text.

As an alternative to calling a modem and leaving text alarm reports, the Model 125 can be configured to call a pager. Using a pager allows the Model 125 to automatically alert field service personnel that a system problem may exist.

Real-Time Display of System Conditions

The Model 125 reports the current condition for each entity monitored on the System Status screen, which is a part of the menu system. The System Status screen displays values that are updated in real time. It also displays whether each entity is currently in a normal or alarm state. Figure 1-2 shows a screen capture of page 1 taken from a configured Model 125.

You determine the values that constitute an alarm. For example, if you determine that 95 degrees Fahrenheit is an alarm condition for room ambient temperature, the System Status screen displays the state of Temperature 1 as "alarm." The System Status screen enables you to review current conditions at a glance, and to perform needed troubleshooting and diagnosis of the system.

```
Gordon Kapes, Inc.                  Model 125          18:05:34 UTC 23-MAR-1994
Skokie, Illinois USA
                              System Status - Page 1
Status          State       Function
ENABLED         NORMAL      Contact 1 - Major Alarm - PBX System
NOT CONFIG                  Contact 2
NOT CONFIG                  Contact 3
NOT CONFIG                  Contact 4
NOT CONFIG                  Contact 5
NOT CONFIG                  Contact 6
NOT CONFIG                  Contact 7
NOT CONFIG                  Contact 8
ENABLED         NORMAL  75F Temperature 1 - Equipment Room Ambient
NOT CONFIG                  Temperature 2
SLEEP 006:00    ALARM  <+1V DC Volts 1 - Emergency Lighting 12V Power Supply
NOT CONFIG                  DC Volts 2
ENABLED         NORMAL 117V AC-Line Volts - Phase 1 of PBX Power Source
ENABLED         NORMAL      AC-Line Sag - Phase 1 of PBX Power Source
ENABLED         NORMAL      AC-Line Impulse - Phase 1 of PBX Power Source
DISABLED        ALARM       Port 1 DTR - PBX 9000
DISABLED        ALARM       Port 2 DTR - Phone Mail
NOT CONFIG                  Port 3 DTR - Maintenance
                    Press Space Bar to select then <Enter>
 Up/Down Arrow, <F1> for help, <F2> to exit, <F3> previous page, <F4> next page
```

Figure 1-2. Page 1 of the System Status Screen

Maintains Log of Site and System Activity

Alarms generated by Model 125 functions are reported to the System Activity Log. The contents of the *System Activity Log* can be displayed or downloaded to another device by accessing the Model 125's menu system. The Model 125 also reports many other events as they occur within the Model 125 itself, making the log a useful audit trail of both alarms and operating events.

Relay Functions

You can configure the Model 125 to energize two built-in relays making it possible for the system to automatically operate devices such as a cooling fan or warning light. The system can energize a relay when configured alarm conditions are encountered, when an alarm is reported for battery failure, when the Model 125 switches to battery power, or when it fails to connect with primary, backup, or secondary dial-out report destinations. You can also trigger either relay manually to perform an operation such as resetting equipment from a remote location.

Menu System

The Model 125's internal menu system enables you to configure and operate the Model 125 with ease. The menu system is organized into three major levels—operator, system, and administrator. Each level has its own main and sub menus. The three levels make it possible for you and other personnel to operate, configure, and test Model 125 functions within the rights granted by the access security system.

From the Operator-level menu you can:

• Directly access the three serial communications ports

• View or download the System Status screen

• View the System Activity Log

• Exit the Model 125

From the System-level menu you can:

• View the System Status screen

• View or download the System Activity Log

• Perform System Tests

• Configure a multitude of system operating parameters

From the Administrator-level menu you can:

• View the System Status screen

• View, download, or clear the System Activity Log

• Configure Access Security, a comprehensive system to control and monitor access to the Model 125 and the serial communication ports

VT100 and TTY Terminal-Emulation Capabilities

Although the Model 125 is intended for use with terminals or personal computers running communications software configured for VT100 emulation, it does provide limited functions when used with terminals configured for TTY.

The capabilities provided by the Model 125 in TTY mode enable you to connect to each of the three serial ports and to exit from the Model 125. Consequently, TTY mode may be adequate for field engineers or others

whose responsibilities are limited to these tasks, and for whom a VT100 terminal is not currently available.

VT100 mode, however, enables you to make full use of the menu system. You must use VT100 mode to access the System Status screen and the System Activity Log from the Operator Menu, and to access *all* of the functions available from the system and administrator levels of the menu system. As a result, you cannot configure the system, test it, or access the System Status screen or System Activity Log unless you are using a terminal set to VT100.

The limited functions provided by TTY mode are included to aid organizations where a VT100 terminal is not available for each person using the Model 125. If you can make VT100 emulation available to everyone, you should probably do so. You can then disregard all references to TTY in this guide, since the Model 125 is shipped from the factory configured for use with VT100.

Model 125 Applications

The Model 125 is appropriate for use in virtually every PBX-system site. In addition, it should find wide application in data and other specialized communication and computer settings.

This page intentionally not left blank.

Chapter Two
Getting Started with the Menu System

Overview

The Model 125 contains menu-driven software called the menu system. The menu system enables you to configure and customize the monitoring functions provided, to test dial-out and other functions, and, of course, to operate the Model 125.

The menu system and other software components for the Model 125 are loaded into memory at the factory. Since the Model 125 is continually powered by either an AC-line power source or an internal battery, the software is maintained in memory "permanently."

This chapter provides basic information you need before using the Model 125 menu system. It explains

- How to access the menu system

- How to exit the menu system and disconnect from the Model 125

- How to select menu options and enter or select information

- How to use online help

The Model 125 menu system is extremely easy to use and quite similar to other menu-driven software widely used with IBM-compatible personal computers.

Conventions

This guide provides a detailed procedure for each task you can accomplish with the menu system. To help you read and understand these procedures easily and quickly, this guide uses several special terms, symbols, and type faces. The following explains these conventions:

Term	Meaning
menu	A numbered list of options displayed on a screen. To accomplish a task, you display the needed menu and then select the option corresponding with the task.
cursor	A highlighted box or small line which may or may not blink depending upon the terminal or personal computer you are using and how it is set up. The cursor marks the location on the screen where the information you type or select is displayed. As you move from field to field by pressing keys, the cursor moves along with you to show you where you are.
field	An area on the screen where you enter or select information or where information is displayed. In general, each field has a title displayed next to it for easy identification.

Type style	Purpose
bold	Used to indicate words you must type exactly as they appear, and to indicate the names of keys you must press.
italic	Used to highlight a name or subject not previously mentioned in the guide. Also used in Appendix B, "Alarm Codes" to indicate information either you or the system provides.
Condensed	Used to indicate information exactly as it is displayed on a screen.
Condensed Bold	Used to indicate field titles.

Symbol	Purpose
↵	Used to indicate the Enter key on the keyboard. Press ↵ after entering or selecting information.
↓	Used to indicate the down-arrow key. Press ↓ to move from field to field on a screen.
↑	Used to indicate the up-arrow key. Press ↑ to move from field to field on a screen.

The menu system consistently uses specific function keys to perform the following operations:

Function Key	Purpose
F1	Press to display Online Help available on a separate screen.
F2	Press to exit a screen and return to the previous menu.
F3	Press to display the previous page of a multi-page screen.
F4	Press to display the next page of a multi-page screen.

Accessing the Menu System

Although accessing the menu system is a simple procedure, the steps involved vary by two factors. These are

- Whether you are using a remote-access device or an on-site-access device

- The access-security mode configured for your Model 125

Consequently this guide offers several alternate procedures for accessing the menu system.

There are two types of devices that can access the Model 125.

- A *remote-access device* is a terminal or personal computer connected to the Model 125 through a modem and a telephone line

- An *on-site-access device* is a terminal or personal computer connected directly to Port 3 configured as a maintenance port

Note: You must use a terminal set for either VT100 or TTY emulation. Use a terminal set to VT100 if you wish to use full capability of the menu system. Using a TTY-compatible terminal enables you to connect with serial ports and exit the system only.

The Model 125 can be configured using two different access-security modes:

- With *open-operator-menu* mode you are given password-free access to the Operator Menu, but you may need to use a password to access the System or Administrator Menus.

- With *ID-Password* mode you must enter a user ID and possibly password before you are given access to any part of the menu system. Depending upon how your user profile has been configured, you may also be required to use a SecureNet Key. The Model 125 may also call you back to grant you access when you are using a remote-access device.

Based upon your device (remote or on-site access) and your access security mode, choose the appropriate procedure among those in the following sections of this chapter. If you are not sure, ask your system administrator if the device you are using is configured as remote access or on-site access. Also find out which access-security mode is configured for your Model 125.

Accessing the Menu System Using a Remote-Access Device

The three scenarios you may encounter when accessing the menu system using a remote-access device (a terminal or personal computer and modem) are described in this section. The three situations you may encounter depend on how the access-security mode has been configured in the Model 125 to be accessed.

Possibilities are:

- Open-operator-menu mode

- ID-password mode with user name configured for callback

- ID-password mode with user name not configured for callback

Once you access the Model 125, it connects you directly to either the Operator Menu, shown in Figure 2-1, or one of the serial ports. This is called the initial connection and is configured for your system.

```
Gordon Kapes, Inc.              Model 125          18:11:26 UTC 23-MAR-1994
Skokie, Illinois USA
                                Operator Menu

            1. Connect to Port 1 - PBX 9000
            2. Connect to Port 2 - Phone Mail
            3. Connect to Port 3 - Not Available
            4. Display System Status
            5. Display or Download System Activity Log

            9. Exit Menu System and Disconnect













            Enter 1-5, 9 or press Up/Down Arrow then <Enter>
                            <F1> for help
```

Figure 2-1. Configured Operator Menu Showing Sample Serial Port Information

To access the menu system, you must use a terminal or personal computer that can emulate the keyboard commands for a VT100 terminal. (Refer to Appendix A for terminal emulator requirements.)

If you are using a terminal with a built-in emulator, set the emulator to VT100. If you are using a personal computer, you may need to acquire terminal emulator software capable of emulating VT100. The communications program PROCOMM PLUS by DATASTORM TECHNOLOGIES, INC. provides excellent VT100 emulation (they refer to it as VT100/102).

Note: You can also use a terminal set for TTY emulation. However, using a TTY-compatible terminal enables you to connect with serial ports and exit the system only.

If You Have Problems with Garbage on the Screen

Should you access the Operator Menu using inappropriate terminal emulation, the screen may appear filled with "garbage." If need be, access your terminal emulator and implement the correct terminal emulation. Then type **###** to refresh the screen if you are using VT100 emulation. (Type **%%%** to refresh the screen when using a TTY terminal.)

Notes: Since incorrect terminal emulation is only one reason why a screen might appear filled with "garbage," or work incorrectly in some other way, you may wish to verify that your terminal is set for VT100 emulation.

To verify VT100 emulation, take the following steps:

1. Type **%%%** to display the Operator Menu designed for use with a TTY-compatible terminal.

2. Press **F1**.

    If your terminal is set for VT100 emulation, the screen displays the message:

    You have pressed the VT100-compatible F1 Function Key

    (The screen displays similar responses when you press **F2**-**F4**, ↑, ↓, ←, →, or **Backspace**.)

    If the terminal is not set for VT100, the screen does not respond when you press F1.

For example, you set terminal emulation to TTY, then inadvertently access the VT100 Operator Menu by typing **###** and the System Status screen by pressing **4**. Since the System Status screen requires VT100 emulation, it appears as garbage. Furthermore, you cannot press **F2** to return to the Operator Menu because F2 requires VT100 emulation.

When the Connected Device Requires a Different Emulation

Should the software resident in the device connected to a serial port require a different emulation, you must implement the required emulation immediately after connecting with the port. Then, after exiting the device software, reimplement the VT100 (or TTY) emulation.

Ensure Matching Data Format Settings

The data format settings (data bits, parity, and stop bits) for your modem must match the dial-in settings for the Model 125's internal modem. If your modem has not been set up, ask your system administrator for the correct settings. A modem supporting 2400 baud is recommended.

Remote Access under Open-Operator-Menu Mode

Use the following procedure to access the menu system if you are using:

- A remote-access device (a terminal or personal computer and modem)
- Open-operator-menu mode access security

Before You Begin

Before you begin the procedure, ensure you have done the following:

- Confirmed that your remote-access device is equipped with a correctly configured modem connected to a telephone line as described earlier in this chapter
- Obtained the telephone number for the desired Model 125
- Learned how to dial the telephone number using your specific hardware and software
- Learned how to set your communications software to VT100 (or TTY) mode if this is not the default mode
- Obtained system- or administrator-level passwords if you intend to access these menu levels and passwords are required
- Obtained logon or other access information required by each device connected to a Model 125 serial port whose software you intend to access and use

If necessary, consult with your system administrator for needed information or advice.

Procedure

To access the Model 125, take the following steps:

1. With your remote-access device correctly configured and in VT100 (or TTY) mode, dial the Model 125.

   Your modem calls the Model 125 and establishes a connection.

2. Do one of the following:

If:	Take this Action:
The system displays a prompt asking if your terminal is VT100 compatible	Press ↵ if your terminal is set to VT100.
	Press **N**, then ↵ if your terminal is set to TTY.
No prompt is displayed	Proceed to step 3.

3. Do one of the following:

If:	Take this Action:
The system displays the Operator Menu	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.
The system connects you with one of the serial ports	Proceed to step 4.
The screen displays the message: Model 125 is currently in use by the maintenance port the Model 125 is being accessed by another user	Try again later when the Model 125 is free.

4. Do one of the following:

If:	Take this Action:
Your intention is to use the software resident in the device connected to the port on the Model 125	Enter logon or other access information required by the device. Use the software resident in the connected device. To get to the Operator Menu, log off and type **###** if using a VT100 terminal. (Type **%%%** if TTY.)
	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.
You want to immediately display the Operator Menu	Type **###** if using a VT100 terminal. (Type **%%%** if TTY.)
	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.

Remote Access under ID-Password Mode with User Name Configured for Callback

Use the following procedure to access the menu system if you are using:

- A remote-access device (a terminal or personal computer and modem)
- ID-password access security
- A user profile configured for callback

Before You Begin

Before you begin the procedure, ensure you have done the following:

- Confirmed that your remote-access device is equipped with a correctly configured modem connected to a telephone line as described earlier in this chapter
- Obtained the telephone number for the Model 125
- Learned how to set your communications software to VT100 (or TTY) mode if this is not the default mode
- Learned how to dial the telephone number using your specific hardware and software
- Learned how to set your modem to auto answer
- Obtained a valid user ID and password, if required
- Obtained logon or other access information required by each device connected to a Model 125 serial port whose software you intend to access and use

If necessary, consult with your system administrator for needed information or advice.

Procedure

To access the menu system, take the following steps:

1. With your remote-access device correctly configured and in VT100 (or TTY) mode, set the modem to auto answer.

2. Dial the Model 125.

   Your modem calls the Model 125 and establishes a connection.

3. Do one of the following:

If:	Take this Action:
The system displays a prompt requesting your ID	Proceed to step 4.
The screen displays the message: Model 125 is currently in use by the maintenance port the Model 125 is being accessed by another user	Try again later when the Model 125 is free.

4. Type your user ID exactly as given. Press ↵. (Remember the system is case sensitive. If you do not enter your user name within 60 seconds, the system disconnects you. Return to step 2.)

    The system displays a prompt requesting your password.

5. Do one of the following:

If:	Take this Action:
The system displays a prompt requesting your password	Type your password exactly as given. Press ↵. (Remember the system is case sensitive. If you do not enter your password within 60 seconds, the system disconnects you. Return to step 2.) Proceed to step 6.
No password prompt is being displayed	Proceed to step 6.

6. Do one of the following:

If:	Take this Action:
The system displays an SNK challenge number	Enter the correct response number. (If you do not enter the response number within 60 seconds, the system disconnects you. Return to step 2. For more information about the SecureNet Key challenge/ response, refer to the *SecureNet Key User's Guide* by Digital Pathways, Inc.)
	The system displays a message stating it will call you back in 15 seconds, then disconnects. Proceed to step 7.
The system displays a message stating it will call you back in 15 seconds, then disconnects	Proceed to step 7.

7. If you have not done so, enable your modem to auto answer.

The system dials your modem after 15 seconds has elapsed. Your modem answers and the system displays the VT100-compatibility prompt, if enabled, or takes you to the configured initial connection. The initial connection is either the Operator Menu or one of the serial ports.

8. Do one of the following:

If:	Take this Action:
The system displays a prompt asking if your terminal is VT100 compatible	Press ↵ if your terminal is set to VT100.
	Press **N**, then ↵ if your terminal is set to TTY.
No VT100-compatibility prompt is displayed	Proceed to step 8.

9. Do one of the following:

If:	Take this Action:
The system displays the Operator Menu	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.
The system connects you with one of the serial ports	Proceed to step 10.

10. Do one of the following:

If:	Take this Action:
Your intention is to use the software resident in the device connected to the port	Enter logon or other access information required by the device. Use the software resident in the connected device. To get to the Operator Menu, log off and type **###** if using a VT100 terminal. (Type **%%%** if TTY.)
	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.
You want to immediately display the Operator Menu	Type **###** if using a VT100 terminal. (Type **%%%** if TTY.)
	The system displays the Operator Menu.
	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.

Remote Access under ID-Password Mode with User Name Not Configured for Callback

Use the following procedure to access the menu system if are using:

- A remote-access device (a terminal or personal computer and modem)
- ID-password access security
- A user profile not configured for callback

Before You Begin

Before you begin the procedure, ensure you have done the following:

- Confirmed that your remote-access device is equipped with a correctly configured modem connected to a telephone line as described earlier in this chapter
- Obtained the telephone number for the Model 125
- Learned how to set your communications software to VT100 (or TTY) mode if this is not the default mode
- Learned how to dial the telephone number using your specific hardware and software
- Obtained a valid user ID and password
- Obtained logon or other access information required by each device connected to a Model 125 serial port whose software you intend to access and use

If necessary, consult with your system administrator for needed information or advice.

Procedure

To access the menu system, take the following steps:

1. With your remote-access device correctly configured and in VT100 (or TTY) mode, dial the Model 125.

   Your modem calls the Model 125 and establishes a connection.

2. Do one of the following:

If:	Take this Action:
The system displays a prompt requesting your ID	Type your user ID exactly as given. Press ↵. (Remember the system is case sensitive. If you do not enter your user name within 60 seconds, the system disconnects you. Return to step 1.) Proceed to step 3.
The screen displays the message: Model 125 is currently in use by the maintenance port the Model 125 is being accessed by another user	Try again later when the Model 125 is free.

3. Do one of the following:

If:	Take this Action:
The system displays a prompt requesting your password	Type your password exactly as given. Press ↵. (Remember the system is case sensitive. If you do not enter your password within 60 seconds, the system disconnects you. Return to step 2.) Proceed to step 4.
No password prompt is displayed	Proceed to step 4.

4. Do one of the following:

If:	Take this Action:
The system displays an SNK challenge number	Enter the correct response number. Proceed to step 5. (If you do not enter the response number within 60 seconds, the system disconnects you. Return to step 2. For more information about the SecureNet Key challenge/response, refer to the *SecureNet Key User's Guide* by Digital Pathways, Inc.)
No challenge prompt is displayed	Proceed to step 5.

5. Do one of the following:

If:	Take this Action:
The system displays a prompt asking if your terminal is VT100 compatible	Press ↵ if your terminal is set to VT100. Press **N**, then ↵ if your terminal is set to TTY.
No prompt is displayed	Proceed to step 5.

6. Do one of the following:

If:	Take this Action:
The system displays the Operator Menu	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.
The system connects you with one of the serial ports	Proceed to step 7.

7. Do one of the following:

If:	Take this Action:
Your intention is to use the software resident in the device connected to the Model 125's port	Enter logon or other access information required by the device. Use the software resident in the connected device. To get to the Operator Menu, log off and type **###** if using a VT100 terminal. (Type **%%%** if TTY.)
	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.
You want to immediately display the Operator Menu	Type **###** if using a VT100 terminal. (Type **%%%** if TTY.).
	The system displays the Operator Menu.
	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.

Accessing the Menu System Using an On-Site-Access Device

In this section we will describe the two scenarios you may encounter when accessing the menu system using an on-site-access device (a terminal or personal computer connected to Port 3 configured for maintenance mode). The situation you encounter depends on how the access-security mode has been configured in the Model 125 to be accessed.

Possibilities are:

- Open-operator-menu mode
- ID-password mode

When you access the Model 125 using VT100, it connects you directly to the Operator Menu, shown in Figure 2-2.

To access the menu system, you must use a terminal or personal computer that can emulate the keyboard commands for a VT100 terminal. (Refer to Appendix A for terminal emulator requirements.)

```
Gordon Kapes, Inc.              Model 125           18:13:04 UTC 23-MAR-1994
Skokie, Illinois USA
                              Operator Menu

           1. Connect to Port 1 - PBX 9000
           2. Connect to Port 2 - Phone Mail
           3. Connect to Port 3 - Not Available
           4. Display System Status
           5. Display or Download System Activity Log

           9. Exit Menu System and Disconnect












           Enter 1-5, 9 or press Up/Down Arrow then <Enter>
                         <F1> for help
```

Figure 2-2. Configured VT100 Operator Menu Showing Sample Serial Port Information

If you are using a terminal with a built-in emulator, set the emulator to VT100. If you are using a personal computer, you may need to acquire terminal emulator software capable of emulating VT100. The communications program PROCOMM PLUS by DATASTORM TECHNOLOGIES, INC. provides excellent VT100 emulation.

Note: You can also use a terminal set for TTY emulation. However, using a TTY-compatible terminal enables you to connect with serial ports and exit the system only.

If You Have Problems with Garbage on the Screen

Should you access the Operator Menu using inappropriate terminal emulation, the screen may appear filled with "garbage." If need be, access your terminal emulator and implement the correct terminal emulation. Then press **###** to refresh the screen if you are using VT100 emulation. (Press **%%%** to refresh the screen when using a TTY terminal.)

Notes: Since incorrect terminal emulation is only one reason why a screen might appear filled with "garbage," or work incorrectly in some other way, you may wish to verify that your terminal is set for VT100 emulation.

To verify VT100 emulation, take the following steps:

1. Type **%%%** to display the Operator Menu designed for use with a TTY-compatible terminal.

2. Press **F1**.

   If your terminal is set for VT100 emulation, the screen displays the message:

   You have pressed the VT100-compatible F1 Function Key

   (The screen displays similar responses when you press **F2-F4**, ↑, ↓, ←, →, or **Backspace**.)

   If the terminal is not set for VT100, the screen does not respond when you press F1.

   For example, you set terminal emulation to TTY, then inadvertently access the VT100 Operator Menu by typing **###** and the System Status screen by pressing **4**. Since the System Status screen requires VT100 emulation, it appears as garbage. Furthermore, you cannot press **F2** to return to the Operator Menu because F2 requires VT100 emulation.

When the Connected Device Requires a Different Emulation

Should the software resident in the device connected to a Model 125 serial port require a different emulation, you must implement the required emulation immediately after connecting with the port. Then, after exiting the device software, reimplement the VT100 (or TTY) emulation.

Connect your terminal to Port 3 on the Model 125 with a 25-pin serial cable. (Refer to Appendix B, "Serial Port Connections." Port 3 has a female connector and requires a male connector on the cable.)

Ensure Matching Data Format Settings

The data format settings (data bits, parity, and stop bits) and baud rate for your terminal must match the settings for Port 3 configured as a maintenance port on the Model 125. If your terminal has not been set up, ask your system administrator for the correct settings.

On-Site Access under Open-Operator-Menu Mode

Use the following procedure to access the menu system if you are using:

- An on-site-access device (a terminal or personal computer connected to Port 3 configured for maintenance mode)
- Open-operator-menu mode access security

Before You Begin

Before you begin the procedure, ensure you have done the following:

- Confirmed that your on-site-access device is correctly configured as described earlier in this chapter
- Learned how to set your communications software to VT100 (or TTY) mode if this is not the default mode
- Obtained system- or administrator-level passwords if you intend to access these menu levels and passwords are required
- Obtained logon or other access information required by each device connected to a serial port whose software you intend to access and use

If necessary, consult with your system administrator for needed information or advice.

Procedure

To access the menu system, take the following steps:

1. With your on-site-access device correctly configured and in VT100 mode, press ↵.
2. Do one of the following:

If:	Take this Action:
The system displays a prompt asking if your terminal is VT100 compatible	Press ↵ if your terminal is set to VT100.
	Press **N**, then ↵ if your terminal is set to TTY.
No prompt is displayed	Proceed to step 3.

3. Do one of the following:

If:	Take this Action:
The system displays the Operator Menu	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.
The screen displays the message: Model 125 is currently in use by the modem the Model 125 is being accessed by another user	Try again later when the Model 125 is free.

On-Site Access under ID-Password Mode

Use the following procedure to access the menu system if you are using:

- An on-site-access device (a terminal or personal computer connected to Port 3 configured for maintenance mode)
- ID-password mode access security

Before You Begin

Before you begin the procedure, ensure you have done the following:

- Confirmed that your on-site-access device is correctly configured as described earlier in this chapter
- Learned how to set your communications software to VT100 (or TTY) mode if this is not the default mode
- Obtained a valid ID and password
- Obtained logon or other access information required by each device connected to a serial port whose software you intend to access and use

If necessary, consult with your system administrator for needed information or advice.

Procedure

To access the menu system, take the following steps:

1. With your on-site-access device correctly configured and in VT100 mode, press ↵.

   The system accesses the Model 125.

2. Do one of the following:

If:	Take this Action:
The system displays a prompt requesting your ID	Type your user ID exactly as given. Press ↵. (Remember the system is case sensitive. If you do not enter your user name within 60 seconds, the system disconnects you. Return to step 1.) Proceed to step 3.
The screen displays the message: Model 125 is currently in use by the modem the Model 125 is being accessed by another user	Try again later when the Model 125 is free.

3. Do one of the following:

If:	Take this Action:
The system displays a prompt requesting your password	Type your password exactly as given. Press ↵. (Remember the system is case sensitive. If you do not enter your password within 60 seconds, the system disconnects you. Return to step 1.) Proceed to step 4.
No password prompt is displayed	Proceed to step 4.

4. Do one of the following:

If:	Take this Action:
The system displays an SNK challenge number	Enter the correct response number. Proceed to step 5. (If you do not enter the response number within 60 seconds, the system disconnects you. Return to step 1. For more information about the SecureNet Key challenge/response, refer to the *SecureNet Key User's Guide* by Digital Pathways, Inc.)
No challenge prompt is displayed	Proceed to step 5.

5. Do one of the following:

If:	Take this Action:
The system displays a prompt asking if your terminal is VT100 compatible	Press ↵ if your terminal is set to VT100. Press **N**, then ↵ if your terminal is set to TTY. The system displays the Operator Menu.
The system displays the Operator Menu	Locate the chapter of this guide describing the task you want to accomplish. Follow the procedure described in that chapter.

Exiting the Menu System and Disconnecting

To exit the menu system and disconnect from the Model 125, select Exit Menu System and Disconnect from the Operator Menu.

To exit and disconnect, take the following steps:

1. At any screen in the menu system, press **F2** until the system displays the Operator Menu.

2. At the Operator Menu, press **9** to select Exit Menu System and Disconnect.

    The Model 125 disconnects and returns you to your communications software.

Selecting Menu Options

To select an option from a menu, either press the key with the number of the option or press ↓ or ↑ to highlight the option, then press ↵. (You cannot highlight an option when displaying the Operator Menu with a terminal set to TTY.)

Entering and Selecting Information

When configuring the Model 125, you must enter text or select a value in specific fields displayed on a configuration screen.

To enter text, move to the field by pressing ↑, ↓, or ↵. Type the text, then press ↵. To delete entered text, press **Backspace**.

To select a value in a field, move to the field by pressing ↑, ↓, or ↵. To display possible values, press the spacebar. Display the value you want to select, then press ↵.

Using Online Help

The menu system displays brief operating instructions at the bottom of each screen. These instructions, which can change as you move from field to field, tell you how to make an entry or select a value in the highlighted field.

Many screens in the menu system provide additional online help using separate screens, which supplement the information available in this guide. <F1> for help displayed at the bottom of a screen indicates additional help is available. Press **F1** to display the online help screen.

Chapter Three
Connecting to a Serial Port

Overview

Operating the Model 125 is easy and straightforward. Before operating the 125 on a routine basis, ensure it has been correctly installed and its software properly configured.

Operating tasks consist of connecting to one of the available serial ports, using the System Status screen to review or change system status, and using the System Activity Log to review system activity. To perform these tasks you can access the Model 125 either through a remote-access device (modem) or through an on-site-access device connected to Port 3 configured as maintenance.

Note: Your remote-access or on-site-access device must include VT100 terminal emulation if you intend to use the System Status screen or the System Activity Log. You can use a terminal set for TTY emulation as well, but only to connect with serial ports and exit the system.

This chapter explains how to connect to a serial port. Chapter Four provides instructions for reviewing system status and activity.

Connecting to a Serial Port

Connect to a serial port when you want to access a connected device. Once you have connected to the port, you must access the software resident in the connected device. Consult the instructions accompanying the device for further information.

Notes: If Port 3 on the Model 125 is configured as either a maintenance port or a modem-monitor port, you cannot connect to it from a remote-access device since it is configured as an incoming port. When this is the case, the system displays Not Available next to option 3 on the Operator Menu.

To connect to a serial port on the Model 125, you must use either VT100 or TTY terminal emulation. (Refer to Appendix A for

terminal emulator requirements.) Should the software resident in the connected device require a different emulation, you must implement the required emulation immediately after connecting with the port (immediately after step 2 in the following procedure). Then, after exiting the device software, reimplement the VT100 (or TTY) emulation (immediately after step 3).

Should you access the Model 125 menu system using inappropriate terminal emulation, the screen may appear filled with "garbage." If need be, access your terminal emulator and implement the correct terminal emulation. Then press **###** to refresh the screen if you are using VT100 emulation. (Press **%%%** to refresh the screen when using a TTY terminal.)

The port you want to connect to may be configured as the initial connection. If this is the case, follow the appropriate procedure in "Accessing the Menu System," in Chapter Two.

To connect to a serial port, take the following steps:

1. Access the menu system and display the Operator Menu. (For more detailed instructions, refer to "Accessing the Menu System" in Chapter Two.)

2. At the Operator Menu (Figure 3-1), press the number of the port you want to connect with.

```
Gordon Kapes, Inc.                  Model 125           18:19:42 UTC 23-MAR-1994
Skokie, Illinois USA
                                   Operator Menu

              1. Connect to Port 1 - PBX 9000
              2. Connect to Port 2 - Phone Mail
              3. Connect to Port 3 - Not Available
              4. Display System Status
              5. Display or Download System Activity Log

              9. Exit Menu System and Disconnect










              Enter 1-5, 9 or press Up/Down Arrow then <Enter>
                             <F1> for help
```

Figure 3-1. VT100 Operator Menu

The system clears the menu and connects you with the port. Any further keystrokes you make are sent to the port. The screen displays any information coming from the port.

3. Enter logon or other access information required by the device connected to the port.

   Use the software resident in the connected device. To reconnect to the Model 125, exit the software using its standard logoff commands.

4. Type **###** (no more than 2 seconds between each #) if you are using a VT100 terminal. (Type **%%%** if TTY.)

   The system disconnects from the port and displays the Operator Menu.

5. To exit the menu system and disconnect from the Model 125, press **9**.

   If you are accessing the Model 125 through a remote-access device, the system disconnects you from the Model 125 and returns you to your communications software. If you are accessing the Model 125 through Port 3, the system returns you to your communications software.

This page intentionally not left blank.

Chapter Four
Reviewing System Status & Activity

Overview

This chapter explains how to use the System Status screen to quickly gain an overview of Model 125 and site-specific functions. In addition, the System Status screen allows personnel to review, and in some cases change, the status of Model 125 functions. The chapter also explains how to display or download the System Activity Log for reviewing system activity.

The Model 125 enables you to review system conditions by viewing the System Status screen, a 6-page screen you can access from the Operator Menu (if configured), the System Menu, and the Administrator Menu. The System Status screen provides real-time information about the condition of Model 125 functions. By following the directions in this chapter, you can also use the System Status screen to change the status of various monitoring functions for the purpose of maintenance, diagnosis, and troubleshooting.

You review system activity by viewing the System Activity Log, a comprehensive activity record containing a list of *all* events and alarms reported by the Model 125. These include alarms that cause dial-out alarm reports, as well as those events not configured for dial-out. By reviewing the log you can view a sequential "picture" of Model 125 and site activity.

Note: To display the System Status screen or the System Activity Log, you must use a terminal set for VT100 emulation.

Reviewing and Changing System Status

The System Status screen enables you to review the current condition of Model 125 functions and site conditions. This screen also enables you to change the status of monitoring functions (page 1), and ASCII-data matching functions (pages 5 and 6) based upon your security access level and need to perform rapid and real-time diagnosis (refer to Table 2-2). In addition, you can use the System Status screen to manually activate either of the built-in relays.

The System Status screen consists of six pages, each devoted to a specific type of information. These pages are organized as follows:

- Page 1—Displays status and state of monitoring functions

- Page 2—Displays power, internal-battery test, dial-tone, and automatic dial-out test status

- Page 3—Displays destination-specific dial-out status

- Page 4—Displays relay status and state

- Pages 5 and 6—Displays ACSII-data-match-word record status

Page 1—Monitoring Functions

Page 1 of the System Status screen, shown in Figure 4-1, displays information about the Model 125 monitoring functions. These functions are the following:

- Contact input monitoring for the eight contact inputs

- Temperature monitoring using the internal and external sensors

- DC-voltage monitoring for the two DC sources

- AC-line monitoring, including voltage, sag, and impulse

- DTR (data-terminal-ready) monitoring for the three serial ports

Page 1 displays the status, state, name, and in certain cases, the current value associated with each monitoring function.

```
 Gordon Kapes, Inc.              Model 125         19:15:14 UTC 23-MAR-1994
 Skokie, Illinois USA
                          System Status - Page 1
 Status        State       Function
 ENABLED       NORMAL      Contact 1 - Major Alarm - PBX System
 NOT CONFIG                Contact 2
 NOT CONFIG                Contact 3
 NOT CONFIG                Contact 4
 NOT CONFIG                Contact 5
 NOT CONFIG                Contact 6
 NOT CONFIG                Contact 7
 NOT CONFIG                Contact 8
 ENABLED       NORMAL   76F Temperature 1 - Equipment Room Ambient
 NOT CONFIG                Temperature 2
 SLEEP 006:00  ALARM   <+1V DC Volts 1 - Emergency Lighting 12V Power Supply
 NOT CONFIG                DC Volts 2
 ENABLED       NORMAL  116V AC-Line Volts - Phase 1 of PBX Power Source
 ENABLED       NORMAL      AC-Line Sag - Phase 1 of PBX Power Source
 ENABLED       NORMAL      AC-Line Impulse - Phase 1 of PBX Power Source
 DISABLED      ALARM       Port 1 DTR - PBX 9000
 DISABLED      ALARM       Port 2 DTR - Phone Mail
 NOT CONFIG                Port 3 DTR - Maintenance
                    Press Space Bar to select then <Enter>
  Up/Down Arrow, <F1> for help, <F2> to exit, <F3> previous page, <F4> next page
```

Figure 4-1. Page 1 of System Status Screen

Understanding Status on Page 1

One of five possible statuses for a monitoring function is shown in
the **Status** column on page 1 of the System Status screen. These are
not config, enabled, sleep, alarm active, and disabled. Table 4-1
summarizes the meaning of each status.

Table 4-1. Status Definitions

Status	Definition
Not config	Monitoring parameters have not been set. Monitoring function is not active. Configure the function before enabling.
Enabled	Monitoring function is active but an alarm state does not exist. (The screen displays enabled when an alarm state exists but the debounce or minimum threshold time has not expired.).
Sleep *hhh:mm*	Monitoring function is active. However, if an alarm condition exists during time period shown, does not send alarm to System Activity Log and, even if configured, does not cause dial-out alarm report. After time period has elapsed, status automatically returns to enabled.
Alarm active	Monitoring function is active and an alarm state exists when sleep time is set to zero. (With sleep time set to zero, the screen displays alarm active when a normal state exists but the debounce or minimum restore time has not expired.)
Disabled	Monitoring function is active. However, if an alarm condition exists, does not send alarm to System Activity Log and, even if configured, does not cause dial-out alarm report. Status remains disabled until you enable it.

Changing Status on Page 1

It is possible to change the status of all functions shown on page 1 of the System Status screen. Your authority to do so, however, is restricted by the menu from which you display the screen. If you display the screen from the Operator Menu, you can change status from enabled to sleep or from sleep to enabled.

If you display the screen from the System Menu, you can change status among enabled, sleep, and disabled. You cannot change a function in not config status to any other status.

If you display the screen from the Administrator Menu, you can change among all four statuses. From this menu you can enable a function currently in not config status. These authority levels are summarized in Table 4-2.

Table 4-2. Status Change Authority Levels from System Status Screen

Status→ If access screen from ↓	Not Config	Enabled	Sleep	Disabled
Operator Menu	Cannot change	Can change	Can change	Cannot change
System Menu	Cannot change	Can change	Can change	Can change
Administrator Menu	Can change	Can change	Can change	Can change

To change the status of a monitoring function, display the System Status screen by following the procedure described in "Displaying the System Status Screen" later in this chapter. Move the cursor to the status you want to change. Press the spacebar. You can only change the status of functions displayed on pages 1, 5, and 6 of the System Status screen.

Understanding State on Page 1

For each monitoring function whose status is other than *not config*, the current, real-time state is displayed. State is either *normal* or *alarm* indicating whether the function currently detects an alarm condition. The system displays the *current* state in *real time*. This means that at the point in time you are viewing the display, the monitoring function is detecting either a normal or an alarm condition. If the state changes while you are viewing the screen, you immediately see the change.

The system does not take debounce time, minimum threshold time, or minimum restore time into account when displaying states. Consequently, the system may not report a displayed alarm state to the System Activity Log and, if configured, cause a dial-out alarm report. Or, the system may display a state as normal when the log does not show it having been restored from alarm to normal. This is because the system only reports alarms to the log after debounce time or minimum threshold time has elapsed; and it does not report "restore" alarms until after the minimum restore time has elapsed.

For example, the System Status screen may show Contact 1 in an alarm state. However, the system does not report this alarm condition to the log until after the configured debounce time for the alarm has elapsed. If the state returns to normal before the debounce time has elapsed, no alarm is reported to the log.

Similarly, the status screen may show DC Volts 1 in a normal state. However, if an alarm condition for this voltage has previously been reported to the log and the voltage has now returned to the normal range, a restore alarm is not reported to the log until after the configured minimum restore time has elapsed. If the voltage returns to an alarm state before the time elapses, no restore alarm is reported to the log.

States for functions in not config status are not available and not shown. This is always the case with Port 3 when configured as maintenance or modem-monitor, of course.

In addition to state, the screen displays current values for Temperatures 1 and 2, DC Volts 1 and 2, and AC-Line Volts. If a value is greater or less than the measurable range, the system displays the end value in the range with a greater-than (>) sign or the beginning value in the range with a less-than (<) sign.

Understanding Name on Page 1

In the **Function** column on page 1, the system displays the default name for the monitoring function and, if configured, the name your organization has selected and configured for the function. Some names may be too long to be completely displayed. These names are truncated and punctuated with an ellipsis (...) to show the name is not fully displayed.

Page 2—Power, Dial-Tone, Auto Dial-Out Test Status

Page 2 of the System Status screen, shown in Figure 4-2, displays information about Model 125 power and dial-out test status. The following items are displayed:

- Power status

- Internal-battery test status

- Dial-tone test status

- Automatic dial-out test status

Model 125 Power Status

The first item displayed on page 2 is Model 125 power status. Here the system indicates whether the Model 125 is currently powered by the AC-power line or by the internal battery.

The system also displays the real-time voltage across the internal battery. If the Model 125 is being powered by the AC line and the battery is charging, a reading of 6.0 to 6.7 volts is normal. (A fully charged battery consistently reads 6.8 or 6.9 volts.)

```
Gordon Kapes, Inc.                    Model 125            19:16:36 UTC 23-MAR-1994
Skokie, Illinois USA
                              System Status - Page 2


Model 125 Power Status
Power Source:                    AC-LINE
Voltage Across Internal Battery: 6.8V

Internal-Battery Test
Next Automatic Test:             006:17 HOURS:MINS
Last Result (Auto or Manual):    PENDING

Dial-Tone Test
Status:                          ENABLED
Next Automatic Test:             023:41 HOURS:MINS
Last Result (Auto or Manual):    PENDING

Automatic Dial-Out Test
Status:                          ENABLED
Next Test Scheduled:             00:00 SUNDAY



    <F1> for help, <F2> to exit, <F3> for previous page, <F4> for next page
```

Figure 4-2. Page 2 of System Status Screen

If the Model 125 is being powered by the internal system battery, a reading of 5.6 to 6.4 volts is normal. (At 5.5 volts, the Model 125 automatically performs a shutdown of the operating software. At 5.0 volts, a hardware circuit disconnects the battery from all loads. The SRAM memory is powered by a separate lithium battery. Model 125 operation can only resume after AC power is restored.)

Internal-Battery Test

The second item displayed on page 2 is internal-battery test status. In the **Next Automatic Test** field, the display indicates how many hours and minutes must elapse before the system tests the internal battery. In the **Last Result (Auto or Manual)** field, the system displays the result of the last internal-battery test.

The system tests the internal battery automatically every 168 hours. If you test the battery manually, the system reschedules the next automatic test for 168 hours after the manual test has been conducted. When the system is actually conducting the test, it displays TEST IN PROGRESS in the **Next Automatic Test** field.

In the **Last Result (Auto or Manual)** field, the system displays PASS if the last test was passed (battery maintained 5.9 volts or greater during test) and FAIL if criteria for the test was not met (battery 5.9 volts or less anytime during test). If the Model 125 has just been powered up and the system has yet to conduct the test, it displays PENDING in the field.

Dial-Tone Test

As the third item on page 2, the system displays dial-tone test status and, if the test function is enabled, how long before the next test is to be conducted and the results of the last test. The dial-tone test function status can only be enabled or disabled.

If the status is enabled, the display indicates how many hours and minutes must elapse before the system performs the next test (in the **Next Automatic Test** field). In the **Last Result (Auto or Manual)** field, the system displays the result of the last dial-tone test.

The system conducts the dial-tone test automatically 1 hour after power up and every 24 hours thereafter. If you conduct the dial-tone test manually, the system reschedules the next automatic test for 24 hours after the manual test has been conducted.

In the **Last Result (Auto or Manual)** field, the system displays PASS-TONE or PASS-PULSE if the last test was passed for touch-tone or pulse dialing respectively; and FAIL if criteria for the test was not met. If the Model 125 has just been powered up and the system has yet to conduct the test, it displays PENDING in the field.

Automatic Dial-Out Test

The final item on page 2 displays the status (not config, enabled, or disabled) of the automatic dial-out test. If the test function is enabled, the system also displays the hour and day of the week for which the next test is scheduled.

Note: The system displays the most recent result of any dial-out—whether it be from the automatic dial-out test, a manual dial-out test, or an alarm dial-out report initiated by the Model 125—on page 3 of the System Status screen.

Page 3—Destination-Specific Dial-Out Status

Page 3 of the System Status screen, shown in Figure 4-3, displays information about the three Model 125 dial-out destination functions—primary, backup, and secondary. This includes the status for each function (not config, enabled, or disabled), and whether the last dial-out was successful or not successful. The last dial-out can be from the automatic dial-out test, a manual dial-out test, or an alarm dial-out report initiated by the Model 125.

If configured, the system also displays the name your organization has given each destination.

```
Gordon Kapes, Inc.                Model 125        19:20:14 UTC 23-MAR-1994
Skokie, Illinois USA
                             System Status - Page 3

Primary Destination - Hi-Tek Monitoring Center
Status:           ENABLED
Last Dial-Out:    SUCCESSFUL

Backup Destination
Status:           NOT CONFIG
Last Dial-Out:

Secondary Destination
Status:           NOT CONFIG
Last Dial-Out:




     <F1> for help, <F2> to exit, <F3> for previous page, <F4> for next page
```

Figure 4-3. Page 3 of System Status Screen

Page 4—Relay Status

Page 4 of the System Status screen, shown in Figure 4-4, displays information about the two Model 125 relay functions. The status for each function (not config, enabled, or disabled) is displayed as well as the output configuration and the current relay state.

The output configuration is the configured output duration and output mode. Output duration is the length of time during which a relay remains energized once the relay function is triggered. Output mode is either *steady*, *pulsating*, or *follow alarm inputs*. Output mode refers to whether the relay remains energized, energizes and de-energizes periodically once activated, or follows the real-time state of an associated monitoring function. There is no output duration when the relay is in follow mode.

In the **Current Relay State** field, the system displays **ON** or **OFF** to indicate whether the relay is currently energized. (Use this field to activate a relay. Refer to "Changing the Current State of a Relay," later in this chapter.)

If configured, the system also displays the name your organization has given each relay function.

```
Gordon Kapes, Inc.                  Model 125          19:20:46 UTC 23-MAR-1994
Skokie, Illinois USA
                            System Status - Page 4

Relay 1 - Equipment Room Warning Light
Status:                 ENABLED
Output Configuration:   1 SECONDS    STEADY
Current Relay State:    OFF

Relay 2
Status:                 NOT CONFIG
Output Configuration:
Current Relay State:




                    Press Space Bar to select then <Enter>
  Up/Down Arrow, <F1> for help, <F2> to exit, <F3> previous page, <F4> next page
```

Figure 4-4. Page 4 of System Status Screen

Changing the Current State of a Relay

To activate a relay, display the System Status screen by following the procedure described in "Displaying the System Status Screen" later in this chapter. Move the cursor to the **Current Relay State** field. Press the spacebar until **ON** is displayed in the field. This activates the relay for the output duration in the output mode.

To de-activate a relay, display the System Status screen by following the procedure described in "Displaying the System Status Screen" later in this chapter. Move the cursor to the **Current Relay State** field. Press the spacebar until **OFF** is displayed in the field. This terminates relay activity until the next manual or automatic activation.

Pages 5 & 6—ASCII-Data-Match-Word Records

Pages 5 and 6 of the System Status screen, shown in Figure 4-5, display information about ASCII-data-match-word records. Sixteen of the 32 possible match-word records are displayed on page 5, while the remaining 16 are displayed on page 6.

Pages 5 and 6 display the record number, status, match word, monitored port, and name assigned each match-word record.

```
 Gordon Kapes, Inc.                   Model 125           19:21:48 UTC 23-MAR-1994
 Skokie, Illinois USA
                               System Status - Page 5

 No. Status           Port/Match Word        Name
  1  ENABLED          1/ABCDEFGHIJ           PBX 9000
  2  NOT CONFIG
  3  NOT CONFIG
  4  NOT CONFIG
  5  NOT CONFIG
  6  NOT CONFIG
  7  NOT CONFIG
  8  NOT CONFIG
  9  NOT CONFIG
 10  NOT CONFIG
 11  NOT CONFIG
 12  NOT CONFIG
 13  NOT CONFIG
 14  NOT CONFIG
 15  NOT CONFIG
 16  NOT CONFIG


                     Press Space Bar to select then <Enter>
   Up/Down Arrow, <F1> for help, <F2> to exit, <F3> previous page, <F4> next page
```

Figure 4-5. Page 5 of System Status Screen

Understanding Match-Word Record Status

One of the four possible statuses for a match-word record is shown in the **Status** column on pages 5 and 6 of the System Status screen. These are not config, enabled, sleep, and disabled. Table 4-1 summarizes the meaning of each status. (Remember, each match-word record acts like a distinct monitoring function, concerned only with monitoring for its own match word.)

Changing Status

As with the monitoring functions shown on page 1, you can change the status of all match-word records shown on pages 5 and 6. Your authority to do so, however, is restricted by the menu from which you display the System Status screen. If you display the screen from the Operator Menu, you can change status from enabled to sleep or from sleep to enabled.

If you display the screen from the System Menu, you can change status among enabled, sleep, and disabled. You cannot change a function in not config status to any other status.

If you display the screen from the Administrator Menu, you can change among all four statuses. From this menu you can enable a function

currently in not-config status. These authority levels are summarized in Table 4-2.

To change the status of a match-word record, display the System Status screen by following the procedure described in "Displaying the System Status Screen" later in this chapter. Move the cursor to the status you want to change. Press the spacebar.

Additional Fields Displayed on Pages 5 and 6

In addition to status, pages 5 and 6 display record number, match word, monitored port, and name assigned each match record.

The meaning of record number is obvious. You can configure as many as thirty-two records. Each is assigned a number.

In the **Match Word** column, the screen displays the specific match word the record detects at a serial port. Under **Port** the screen displays which port (either 1 or 2) the record is configured to monitor for the match word.

In the **Name** column, the system displays the name your organization has selected and configured for the match-word record. Some names may be too long to be completely displayed. These names are truncated and punctuated with an ellipsis (...) to show the name is not fully displayed.

Displaying the System Status Screen

You can display the System Status screen from the Operator Menu, the System Menu, or the Administrator Menu. Access the menu from which you want to display the System Status screen. Select the Display System Status option.

The following describes these steps in detail:

Note: Access security for the Model 125 can be implemented using several different configurations. Consequently, you may not need to enter passwords as part of the procedure. Should you encounter problems with access or passwords, check with your system administrator.

1. Access the menu system and display the Operator Menu. (For more detailed instructions, refer to "Accessing the Menu System" in Chapter Two.)

2. Do one of the following:

If:	Take this Action:
You want to access the System Status screen from the Operator Menu	Press **4** to select Display System Status.
	The system displays the System Status screen. Proceed to step 7.
You want to access the System Status screen from the System Menu or the Administrator Menu.	Type **system**. Proceed to step 3.

3. Do one of the following:

If:	Take this Action:
The system displays the System-Level Password screen	Type your system-level password. Press ↵.
	The system displays the System Menu. Proceed to step 4.
The system displays the System Menu	Proceed to step 4.

4. Do one of the following:

If:	Take this Action:
You want to access the System Status screen from the System Menu	Press **1** to select Display System Status. The system displays the System Status screen. Proceed to step 7.
You want to access the System Status screen from the Administrator Menu.	Type **admin**. Proceed to step 5.

5. Do one of the following:

If:	Take this Action:
The system displays the Administrator-Level Password screen	Type your administrator-level password. Press ↵. The system displays the Administrator Menu. Proceed to step 6.
The system displays the Administrator Menu	Proceed to step 6.

6. Press **1** to select Display System Status.

   The system displays the System Status screen.

7. You can move the cursor only on pages 1 and 4 of the screen. To turn pages, move the cursor, or perform other activities, refer to the following.

To:	Take this Action:
Change status on page 1	Display page 1. Move the cursor to the status you want to change. Press the spacebar.
To activate a relay	Display page 4. Move the cursor to the **Current Relay State** field. Press the spacebar to display **ON** in the field.
To de-activate a relay	Display page 4. Move the cursor to the **Current Relay State** field. Press the spacebar to display **OFF** in the field.
Move from field to field	Press ↑ or ↓, or press ↵.
Display next page	Press **F4**.
Display previous page	Press **F3**.
Display Online Help	Press **F1**
Return to the previous menu	Press **F2**.

8. To return to the Operator Menu, press **F2** repeatedly.

The system backs out through each prior menu.

Reviewing System Activity

Review system activity by displaying the System Activity Log. You can display the System Activity Log from the Operator Menu, the System Menu, or the Administrator Menu.

The log is a screen showing a comprehensive list of alarms reported to the log and other transactions that have taken place within the Model 125. The most recent page of the log is displayed first with the most recent transaction displayed at the bottom of the list.

Note: When you display the System Activity Log, you are actually seeing a snap-shot of all current log entries. New entries made while you are viewing the log will not be displayed in real-time, but will be correctly stored.

You can also download the contents of the System Activity Log to a personal computer or other remote-access or on-site-access device. This enables you to store the log on a disk or print it.

Those with administrator-level security access can clear the System Activity Log of all entries.

Displaying the System Activity Log

You can display the System Activity Log (shown in Figure 4-6) from the Operator Menu, the System Menu, or the Administrator Menu. Access the menu from which you want to display the System Activity Log. Select the Display or Download System Activity Log option.

```
 Gordon Kapes, Inc.              Model 125          19:23:08 UTC 23-MAR-1994
 Skokie, Illinois USA
                        System Activity Log - Page 3

> Code: 311 Time: 18:16:48 UTC 23-MAR-1994 Administrator Level Accessed
> Code: 310 Time: 18:18:04 UTC 23-MAR-1994 System Level Accessed
> Code: 311 Time: 18:18:09 UTC 23-MAR-1994 Administrator Level Accessed
> Code: 310 Time: 18:20:28 UTC 23-MAR-1994 System Level Accessed
> Code: 311 Time: 18:20:35 UTC 23-MAR-1994 Administrator Level Accessed
> Code: 101 Time: 18:21:15 UTC 23-MAR-1994 Operator Menu Option Modified
> Code: 310 Time: 18:22:04 UTC 23-MAR-1994 System Level Accessed
> Code: 311 Time: 18:22:08 UTC 23-MAR-1994 Administrator Level Accessed
> Code: 101 Time: 18:23:31 UTC 23-MAR-1994 Operator Menu Option Modified
> Code: 105 Time: 18:31:54 UTC 23-MAR-1994 Port 3 Set to Modem Monitor
> Code: 104 Time: 18:33:41 UTC 23-MAR-1994 Port 3 Set to Maintenance
> Code: 106 Time: 18:33:49 UTC 23-MAR-1994 Modem # Rings to Answer Changed
> Code: 220 Time: 18:39:37 UTC 23-MAR-1994 DC Volts 1 <+1V
  Emergency Lighting 12V Power Supply
  Detected low DC voltage.
> Code: 220 Time: 18:39:40 UTC 23-MAR-1994 DC Volts 1 <+1V
  Emergency Lighting 12V Power Supply
  Detected low DC voltage.
              Press <F3> for previous page, <F4> for next page.
                              <F2> to exit
```

Figure 4-6. System Activity Log

The following describes these steps in detail:

Note: Access security for the Model 125 can be implemented using several different configurations. Consequently, you may not need to enter passwords as part of the procedure. Should you encounter problems with access or passwords, check with your system administrator.

1. Access the menu system and display the Operator Menu. (For more detailed instructions, refer to "Accessing the Menu System" in Chapter Two.)

2. Do one of the following:

If:	Take this Action:
You want to access the System Activity Log from the Operator Menu	Press **5** to select Display System Activity Log.
	The system displays the System Activity Log. Proceed to step 8.
You want to access the System Activity Log from the System Menu or the Administrator Menu.	Type **system**. Proceed to step 3.

3. Do one of the following:

If:	Take this Action:
The system displays the System-Level Password screen	Type your system-level password. Press ↵.
	The system displays the System Menu. Proceed to step 4.
The system displays the System Menu	Proceed to step 4.

4. Do one of the following:

If:	Take this Action:
You want to access the System Activity Log from the System Menu	Press **2** to select Display System Activity Log.
	The system displays the System Activity Log. Proceed to step 8.
You want to access the System Activity Log from the Administrator Menu.	Type **admin**. Proceed to step 5.

5. Do one of the following:

If:	Take this Action:
The system displays the Administrator-Level Password screen	Type your administrator-level password. Press ↵.
	The system displays the Administrator Menu. Proceed to step 6.
The system displays the Administrator Menu	Proceed to step 6.

6. Press **2** to select Display or Clear System Activity Log.

   The system displays the System Activity Log Menu.

7. Press **1** to select Display System Activity Log.

   The system displays the System Activity Log.

8. To perform activities with the System Activity Log, refer to the
    following.

To:	Take this Action:
Display previous page	Press **F3**.
Display next page	Press **F4**.
Return to the previous menu	Press **F2**.

9. To return to the Operator Menu, press **F2** repeatedly.

    The system backs out through each prior menu.

Downloading the System Activity Log

You can download the contents of the System Activity Log to the device
you are using to access the Model 125. This can be a personal computer,
or terminal to which a printer is connected. Downloading enables you to
store the System Activity Log on disk or print it.

When you download, the information is sent in ASCII format with a
carriage return and line-feed character separating each line.

Before executing the following procedure, choose the hardware and
software you want to use for receiving the log. For example, you might
wish to use a communications program such as PROCOMM PLUS with a
personal computer. Using the documentation provided with that equipment
or software, investigate the procedure for downloading a file.

You can download the System Activity Log from the Operator Menu, the
System Menu, or the Administrator Menu. Access the menu from which
you want to perform the download. From the Operator or System Menu,
select the Display or Download System Activity Log option. From the
Administrator Menu, select the Display, Download, or Clear System
Activity Log option. At the System Activity Log Menu, select the Download
System Activity Log option.

After ensuring the Download System Activity Log screen is displayed,
ready your chosen hardware and software for download. Press **Y** then ↵
to start the download. When the download is finished, issue any
commands required by your equipment to end the download. Then press
F2 to return to the previous Model 125 menu.

The following describes these steps in detail:

Note: Access security for the Model 125 can be implemented using several different configurations. Consequently, you may not need to enter passwords as part of the procedure. Should you encounter problems with access or passwords, check with your system administrator.

1. Access the menu system and display the Operator Menu. (For more detailed instructions, refer to "Accessing the Menu System" in Chapter Four.)

2. Do one of the following:

If:	Take this Action:
You want to download the System Activity Log from the Operator Menu	Press **5** to select Display or Download System Activity Log. The system displays the System Activity Log Menu. Proceed to step 7.
You want to download the System Activity Log from the System Menu or the Administrator Menu.	Type **system**. Proceed to step 3.

3. Do one of the following:

If:	Take this Action:
The system displays the System-Level Password screen	Type your system-level password. Press ↵. The system displays the System Menu. Proceed to step 4.
The system displays the System Menu	Proceed to step 4.

4. Do one of the following:

If:	Take this Action:
You want to download the System Activity Log from the System Menu	Press **2** to select Display or Download System Activity Log. The system displays the System Activity Log Menu. Proceed to step 7.
You want to download the System Activity Log from the Administrator Menu.	Type **admin**. Proceed to step 5.

5. Do one of the following:

If:	Take this Action:
The system displays the Administrator-Level Password screen	Type your administrator-level password. Press ↵. The system displays the Administrator Menu. Proceed to step 6.
The system displays the Administrator Menu	Proceed to step 6.

6. Press **2** to select Display, Download, or Clear System Activity Log.

   The system displays the System Activity Log Menu.

7. Press **2** to select Download System Activity Log.

   The system displays the Download System Activity Log screen, shown in Figure 4-7. The cursor is located in the **Start Download?** field.

```
This function allows you to download the contents of the System Activity Log.
The information will be sent in ASCII format, with a carriage return and line
feed separating each line.  For additional help press <F1>.

At this time prepare your personal computer or terminal to receive the log.
When the download is finished, issue any commands required by your equipment
to end the download.  Then press <F2> to return to the previous Model 125
menu.  Press <F2> to terminate a download load in progress.

WARNING:  At the end of the download you must press <F2> to continue.  You
will NOT be prompted to do so.

Press Y then <Enter> to start; press N then <Enter> to return to previous
menu.

Start Download? Y
```

Figure 4-7. Download System Activity Log Screen

8. Before starting the download, take any steps necessary for receiving a downloaded file. These steps are described in the documentation accompanying the equipment or software you are using. (Look for a topic such as "Downloading a File.")

   For example, if you were using PROCOMM PLUS, you would press **PageDown**, select ASCII as the download protocol, enter a filename under which to store the log, then press ↵ to return to the Download System Activity Log screen.

9. Do one of the following.

To:	Take this Action:
Start the download	Press **Y**, then ↵.
Return to the previous menu	Press **N**, then ↵.
Display additional help	Press **F1**.
Terminate download in progress or return to menu at end of download	Press **F2**.

10. The system always sends the final text *End of Model 125 System-Activity-Log Download* as a sign that transmission is complete. The Model 125 halts until you press F2. *Before* you press F2, you can signal that download is complete by taking the action appropriate for your equipment or software. For example, if you were using PROCOMM PLUS, you would press **ESC**.

11. Press **F2**.

    The system displays the previous menu.

12. To return to the Operator Menu, press **F2** repeatedly.

    The system backs out through each prior menu.

Clearing the System Activity Log

To clear the System Activity Log of all entries, display the Administrator Menu. Select the Display, Download, or Clear System Activity Log option from the Administrator Menu and the Clear System Activity Log option from the System Activity Log Menu.

The following describes these steps in detail:

Note: Access security for the Model 125 can be implemented using several different configurations. Consequently, you may not need to enter passwords as part of the procedure. Should you encounter problems with access or passwords, check with your system administrator.

1. Access the menu system and display the Operator Menu. (For more detailed instructions, refer to "Accessing the Menu System" in Chapter Four.)

2. At the Operator Menu, type

   system

3. Do one of the following:

If:	Take this Action:
The system displays the System-Level Password screen	Type your system-level password. Press ↵.
	The system displays the System Menu. Proceed to step 4.
The system displays the System Menu	Proceed to step 4.

4. At the System Menu, type

   admin

5. Do one of the following:

If:	Take this Action:
The system displays the Administrator-Level Password screen	Type your administrator-level password. Press ↵. The system displays the Administrator Menu. Proceed to step 6.
The system displays the Administrator Menu	Proceed to step 6.

6. Press **2** to select Display, Download, or Clear System Activity Log.

   The system displays the System Activity Log Menu.

7. Press **3** to select Clear System Activity Log.

   The system displays the Clear System Activity Log screen, shown in Figure 4-8. The cursor is initially in the **Proceed?** field.

```
Gordon Kapes, Inc.                  Model 125           19:27:54 UTC 23-MAR-1994
Skokie, Illinois USA
                            Clear System Activity Log

This function clears all entries in the System Activity Log.
Use carefully as system history will be destroyed.

Proceed? N

















                         Press Y or N then <Enter>
                                 <F2> to exit
```
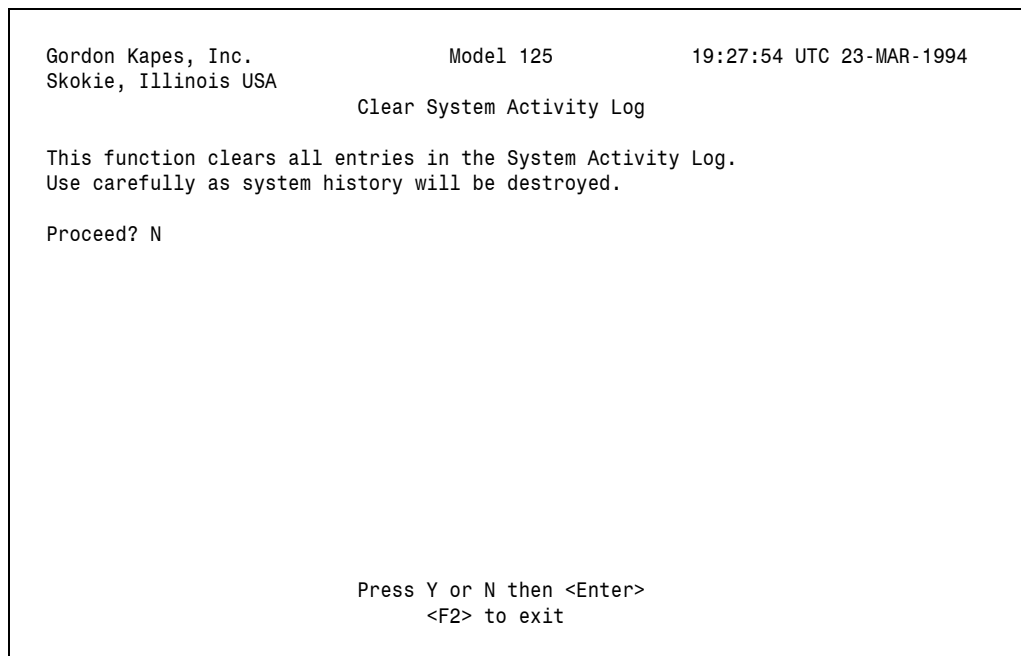
Figure 4-8. Clear System Activity Log Screen

8. To clear the log, press **Y**. Then press ↵.

   The system clears the log and displays the System Activity Log Menu. Viewing the System Activity Log will show a single entry noting that the log has been cleared.

9. To return to the Operator Menu, press **F2** repeatedly.

   The system backs out through each prior menu.

Appendix A
Terminal Emulator Requirements

Overview

The Model 125's menu system is designed to communicate with terminals and personal computers that can emulate the keyboard and screen position commands of a DEC VT100 terminal.

Note: You can also use a terminal set for TTY emulation. However, using a TTY-compatible terminal enables you to connect with serial ports and exit the system only.

Keyboard Commands

For correct operation the Model 125 requires the use of several VT100 cursor-position and function keys. The selected terminal or terminal-emulator software must support the following keys and respective key sequences:

Key Name	Characters Sent	Hex Values
Tab	Ctrl-I	09
Backspace	Ctrl-H	08
Up Arrow	Esc [A	1B 5B 41
Down Arrow	Esc [B	1B 5B 42
Left Arrow	Esc [D	1B 5B 44
Right Arrow	Esc [C	1B 5B 43
F1	Esc O P	1B 4F 50
F2	Esc O Q	1B 4F 51
F3	Esc O R	1B 4F 52
F4	Esc O S	1B 4F 53

Please note that many of the terminal emulator software packages do a very poor job of emulation. We were shocked to find they didn't even support the function keys F1−F4. So before you try to connect with the Model 125, do a careful review of your terminal emulator character set.

We are very fond of DATASTORM TECHNOLOGIES' PROCOMM PLUS software package. Its VT100 terminal emulator implementation is excellent—we highly recommend it. (They refer to it as VT100/102 emulation.) Whatever software you choose, be certain to confirm that the required keys are implemented.

Screen Position Commands

For correct operation the Model 125 requires the use of several VT100 screen position commands. The selected terminal or terminal emulator software must support the following sequences:

Function	Characters Sent	Hex Values
Normal Video	Esc [0 m	1B 5B 30 6D
Bold Video	Esc [1 m	1B 5B 31 6D
Reverse Video	Esc [7 m	1B 5B 37 6D
Clear Screen	Esc [2 J	1B 5B 32 49
Clear from Cursor to End of Line	Esc [0 K	1B 5B 30 4A
Position Cursor at Row rr, Column cc where rr = 1-24 cc = 1-80	Esc [rr ; cc f	1B 5B rr 3B cc 66

Note that dial-out alarm reports do not use VT100 screen-position commands. An ASCII terminal or printer is sufficient to receive dial-out alarm reports.

Appendix B
Serial Port Connections

This appendix is provided as a reference when you are preparing interconnecting cables for use between Model 125 serial ports and serial ports on connected devices. The Model 125 contains three serial communications ports, aptly named Port 1, Port 2, and Port 3. Table B-1 provides detailed connection information for the three ports. Subsequent paragraphs describe how the ports function. At the end of this section examples are provided detailing actual cable implementations.

Table B-1. Serial Port Connection Chart

Pin	Direction	Description
2	To Model 125	Transmitted Data (TD)
3	From Model 125	Received Data (RD)
5	From Model 125	Clear to Send (CTS)
6	From Model 125	Data Set Ready (DSR)
7	To/From Model 125	Signal Ground (SG)
8	From Model 125	Received Line Signal Detect (RLSD)
20	To Model 125	Data Terminal Ready (DTR)

Notes:

1. All ports use individual 25-pin D-Subminiature female connectors.
2. All ports configured as RS-232-C Data Communications Equipment (DCE).
3. Pin 1, shield, is not connected on DCE equipment. Cable shield wire will pick up shield at DTE equipment.
4. Pin 5, CTS, is held high (+8Vdc) and does not change state.
5. Pin 6, DSR, is used to send connection-status information to the connected equipment. It is software configured to provide one of three conditions: continually held high, high when port is active, or momentarily low after port disconnection takes place.
6. Pin 8, RLSD, is held high (+8Vdc) and does not change state.
7. Pin 20, DTR, is used by Model 125 to detect presence of connected equipment.

Understanding the Serial Ports

Correct Model 125 serial port operation depends on the careful preparation of cables linking the Model 125 serial ports to the related equipment. Before preparing cables, it is important to understand how the Model 125's ports are implemented. Each serial port consists of four parts: data transmission to and from the connected equipment, signaling from the Model 125 to the related equipment, signaling from the related equipment to the Model 125, and general purpose pull-up signals.

Data transmission takes place using two pins: one pin for data sent by the Model 125, and one pin for data received by the Model 125. In some applications, these pins, along with signal ground, may be the only connections required to fully interface the Model 125 with another device.

The Data-Set-Ready (DSR) pin can be used to signal the Model 125's serial port connection status to related equipment. DSR can be software configured to go to the high state when the port is active, to momentarily go low when port disconnection takes place, or to remain high at all times. The DSR pin should be used if the related equipment needs a positive indication that a communications path is desired. It may also be important to implement this pin to force a positive disconnect from the related port. On some communications systems, a low state indicates that disconnect has taken place, forcing a log-off command. This can be desirable as it ensures that the next user will be required to enter a password to gain access to the related equipment.

The Data Terminal Equipment (DTR) pin is used by the Model 125 to detect whether a device is connected to the port or not. A high state sent by the related device to the Model 125 indicates that a valid connection is present. Using DTR, along with configuring the DTR-monitoring function (using the menu system), allows an entry in the System Activity Log and an alarm dial-out to take place if the connection is disrupted.

The Model 125 holds the Clear to Send (CTS) and Received Line Signal Detect (RSLD) pins in the high state. These are provided for general purpose use, allowing one or more pins on the related equipment to be pulled to the high state.

Hardware Handshaking

The Model 125's serial ports do not implement hardware data-flow control. The superior XON/XOFF software data-flow control is implemented on all three serial ports and the modem. The DSR and DTR pins do provide some specialized signaling to and from the Model 125, but not true flow control.

Preparing the Serial Cables

Preparing serial cables requires a clear understanding of three topics: Model 125 serial ports, the serial ports on the related equipment, and the goals of the installation. The previous paragraphs provided an overview of how the Model 125's serial ports are implemented.

Determine what hardware connections the serial ports on the related equipment need to function correctly. Some pins may need to be pulled to the high state to allow data flow. One or more pins may need to be controlled by the Model 125's DSR pin. Connecting DSR to the related equipment could be required to ensure a clean log off, assisting with access security.

Finally, you must decide if DTR monitoring is required. In most cases it would be desirable, as DTR monitoring can alert personnel when a serial port is accidentally disconnected.

Nuts and Bolts

Shielded cable and connector housings should be used to minimize interference to and from the Model 125. Be certain to use connectors that contain locking screws. These allow the connectors to be secured to the threaded fasteners contained on the Model 125's serial port connectors.

Sample Cable Implementations

The following pages detail cable implementations for a number of common devices. These are provided for reference only and may not have been thoroughly tested. Please contact us with details of your successful cable designs. We'll include them in future issues of this guide and send you a Gordon Kapes, Inc. coffee mug to boot!

ROLM CBX 8000 Teleprinter Port

Interconnection between Model 125 Serial Port and ROLM CBX 8000 Teleprinter Port.

Model 125 Serial Port		ROLM CBX 8000 Teleprinter Port
3 (TD)	⟶	2
2 (RD)	⟵	3
6 (DSR)	⟶	20
7 (SG)	⟷	7
20 (DTR)	⟵	5

Notes:

1. Required connectors:
   Model 125 end: 25-pin D-Subminiature male.
   ROLM CBX end: 25-pin D-Subminiature male.
2. Use shielded cable and connector housings.
3. Model 125 port-configuration parameters: 7-EVEN-1, XON/XOFF.

ROLM PhoneMail Maintenance Port

Interconnection between Model 125 Serial Port and ROLM PhoneMail Maintenance Port.

Model 125 Serial Port		ROLM PhoneMail Maintenance Port
3 (TD)	⟶	2
2 (RD)	⟵	3
6 (DSR)	⟶	20
7 (SG)	⟷	7
20 (DTR)	⟵	5

Notes:

1. Required connectors:
   Model 125 end: 25-pin D-Subminiature male
   ROLM PhoneMail end: 25-pin D-Subminiature male.
2. Use shielded cable and connector housings.
3. Model 125 port-configuration parameters: 8-NONE-1, XON/XOFF.

This page intentionally not left blank.