Remote Programming Manager II Pro
User's Guide

C O N T E N T S

1

Introduction

What is RPM/2 Pro?

Remote Programming Manager II Pro (RPM/2 Pro) is a software program which runs on a DOS based personal computer. Using state-of-the-art techniques, RPM/2 Pro provides the ability to remotely program many of the newest security system control panels. It features an easy-to-understand Graphical User Interface (GUI) and a context sensitive help key <F1> to explain the various commands.

What's New!

RPM/2 Pro is a major upgrade to the proven line of RPM/2 software. A few of the new features are shown below.

- Network Ready. When installed on a network file server, RPM/2 Pro can safely service multiple workstations.

- Improved Graphical User Interface. RPM/2 Pro uses high resolution graphics to provide a cleaner, more detailed user interface.

- Reduced Conventional Memory Requirement. RPM/2 Pro takes advantage of a technology called "Protected Mode". This technology allows RPM/2 Pro to fully utilize a PC's extended memory, greatly reducing conventional memory requirements.

- More Modems. RPM/2 Pro is compatible with a wider range of modems, including many of the newest high speed modems.

- Improved Help. In addition to context sensitive help, users can easily access any one of RPM/2 Pro's help topics by simply pressing the F1 key.

- Fault Tolerant Communications. RPM/2 Pro uses advanced telecommunication techniques, providing more reliable on-line connections with security system control panels.

- Security. In addition to operator passwords, RPM/2 Pro allows users to password protect individual accounts.

- Account Sharing. When properly configured, RPM/2 Pro will allow multiple remote programming sites to share access to customer accounts.

- System Bulletins. RPM/2 Pro can be configured to display system bulletins to operators after they log in.

Security Features

RPM/2 Pro utilizes extensive error checking and safeguards for security, including data encryption, cyclic redundancy codes (CRC16), and control ID and agency codes. To prevent unauthorized use, individual operators may be assigned unique passwords and authority levels.

The Control ID Code (often referred to as Customer ID) is used by RPM/2 Pro to identify the control during initialization of a remote session. A unique Control ID Code is assigned to every customer account created by RPM/2 Pro.

The Agency Code is used by the Control to identify the Remote Programmer during the initialization of a remote session. By default this code is 000000. This code can only be programmed into the control by the Remote Programmer and cannot be viewed or displayed at the control by the Installer. The Agency Code is used to prevent takeover of the control by another RPM/2 Pro computer. For this reason we recommend extreme caution when selecting a custom Agency Code.

IMPORTANT NOTE AND REMINDER: Customer account files should be backed up on a regular basis. If you do not back up your customer account files and the hard disk on your computer ever fails, you will lose valuable embedded security information. Without this information, it will be virtually impossible to unlock and regain control of your customers' panels.

Panel Support Modules

A complete RPM/2 Pro installation consists of a Shell and a set of Panel Support Modules (PSMs). The Shell is used to maintain the customers database, the operators list, and the system configuration. Panel Support Modules are added to the Shell to maintain panel configurations and conduct on-line sessions with particular control panels. A unique PSM must be added to the Shell for each type of control panel you will be

supporting. This system allows you to add support for new types of control panels while still maintaining a single customer database. Also, the Shell and PSMs all have the same look and feel. This means that once you learn how to program a control panel using one PSM you will be able to program any control panel supported by RPM/2 Pro. Figure 1.1 shows a graphical representation of a typical RPM/2 Pro installation.

Figure 1.1
A Typical RPM/2 Pro
System

C   H   A   P   T   E   R
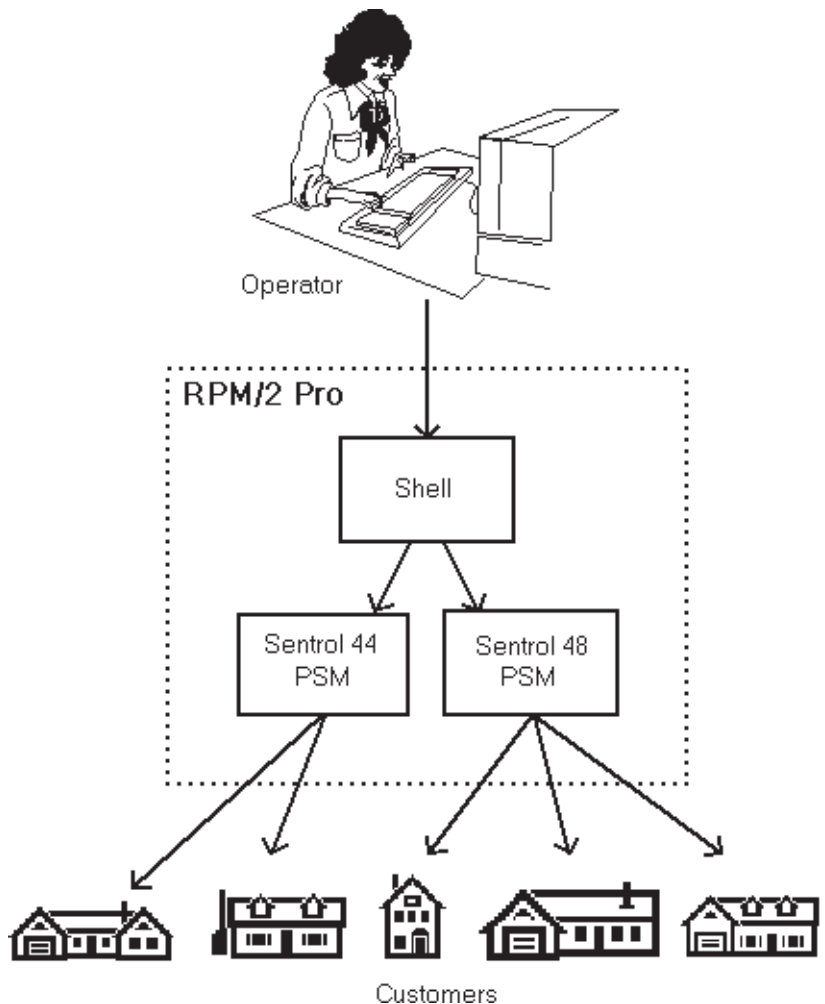
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Installation

DOS Systems Requirements

In order to use RPM/2 Pro, you need:

- An personal computer with a 80386DX processor or better.

- MS-DOS 5.0 or above.

- DOS's SHARE or other compatible file sharing driver.

- 2 MB of extended memory (RAM).

- A VGA, or Super VGA graphics adapter and monitor.

Note: The actual amount of free hard disk space required is determined by the number of PSMs supported and the number of customers maintained .

- For stand-alone PC operation, a hard disk with at least 5MB of free space.

- Optionally a mouse or equivalent pointing device compatible with the Microsoft© or Logitech© mouse drivers. A mouse is HIGHLY recommended.

- For remote programming, a Hayes© compatible modem. See the on-line help for a list of modems that are currently supported.

Making a Backup of Your Master Diskettes

Before you begin the installation procedure, make backup copies of your master RPM/2 Pro diskette(s). Then follow the procedure in this manual to install the RPM/2 Pro software on your system using these backup diskettes. Once you have made working copies of the RPM/2 Pro diskettes, store the master disks in a safe place to make certain you will always have a good copy of the original RPM/2 Pro files in case of a hard disk failure, a bad diskette, or user error.

Please consult your DOS manual on using the FORMAT and DISKCOPY commands to make backups of your diskettes.

Installing RPM/2 Software on Your System

RPM/2 Pro can be installed on either a stand-alone PC or on a network file server. Installing the RPM/2 Pro software involves three simple steps: loading SHARE or compatible network drivers; installing the Shell; and installing the Panel Support Module(s). The Shell program is used to maintain the customer database and system configuration. The Panel Support Module(s) are individually tailored to particular control panels and are used by the Shell to maintain panel configurations and to conduct on-line sessions.

Loading SHARE

RPM/2 Pro requires DOS's SHARE or other compatible file sharing or network driver(s). Use <u>one</u> of the following procedures to install SHARE on your system:

Note: After adding the SHARE driver to either your AUTOEXEC.BAT or CONFIG.SYS file you must reboot your machine for the driver to be loaded.

• Add the line C:\DOS\SHARE to the beginning of your AUTOEXEC.BAT file. (*Note: This assumes that your DOS software, including the SHARE driver, is located in the directory C:\DOS. If your DOS software is located in a different directory, simply follow the example, substituting your DOS path for C:\DOS.*)

- Or add the line INSTALL=C:\DOS\SHARE.EXE to your CONFIG.SYS file.

- Or at the DOS prompt, type SHARE and press <Enter>. (*Note: This assumes that the SHARE driver is in your path. If you load SHARE in this manner you will need to reload SHARE every time you reboot your PC.*)

Installing the Shell

Use the following procedure to install the Shell:

WARNING: Do NOT install RPM/2 Pro in the same directory as an existing copy of RPM/2.

- Place the diskette labeled "Shell" in drive A. (*Note: RPM/2 Pro software can be installed from any floppy drive, not just the A: drive. To install from a different drive, simply follow the example, substituting the letter of your drive for A:.*)

Note: If you have previously installed the Shell and are simply adding a new PSM, proceed to the following section "Installing a Panel Support Module."

- Type A:INSTALL and press <Enter>.

- Follow the instructions on the screen. The INSTALL program will give you the option to copy the software to either you hard disk or a network file server. The INSTALL program will also assist you in configuring your DOS environment.

Figure 2.1
Install Program
Title Screen


```
Shell                                                    Version X.XX


                   ▄▄▄   ▄▄▄   ▄▄   ▄ ▄▄▄             R
                                      ▄

                   RPM/2

                 PROFESSIONAL
                RPM/2 PRO, Copyright (c) Sentrol Inc
       Loading the installation routine, one moment please...
```

If you are installing the software on a stand-alone PC we recommend that you accept INSTALL's default configuration settings. If you are installing the software on a network file server we recommend that the only change you make to the default configuration is to the System File Drive.

Installing a Panel Support Module

Use the following procedure to install a Panel Support Module (PSM):

- Place the diskette labeled "Panel Support Module" in drive A. Ensure that the Panel Support Module disk bears the same panel name as the panel you are programming.

- Type A:INSTALL and press <Enter>.

- Follow the instructions on the screen. <u>PSM(s) must be installed in the same drive and directory as the Shell.</u>

Creating A New Network Station

Note: This section is only for <u>network</u> installations. For stand-alone PC installations please see "Starting Up RPM/2 Pro."

When RPM/2 Pro is installed to run from a network, all of the data files and core executable files are located on a network file server. This allows multiple <u>stations</u> (PCs) to access the customer database and conduct remote programming sessions.

To add a new station (PC) to the system you must run the program RPMSETUP <u>from the PC you want to add</u>. The RPMSETUP program is located in the System File Base Directory (ex. P:\RPM2PRO). This program will prompt you for a station name (ex. "BOB'S DESK"), and a local directory (ex "C:\RPM2PRO"). RPM/2 Pro uses the local directory to store the station's configuration information.

```
┌──────────────────────────────────────────────────────────────┐
│                    RPM/2 Pro Setup Utility                     │
│  ❓  Please enter the following information about the new station.│
│         drive: │C: (fixed)              │ ▼│                    │
│    local path: │\RPM2PRO                           │            │
│  station name: │BOB'S DESK                         │            │
│                                                                │
│  ❶  The system/network software is located in the following directory. │
│                          P:\RPM2PRO                            │
│  ┌──────────────────┐              ┌──────────┐               │
│  │ Create A Station │              │  Quit    │               │
│  └──────────────────┘              └──────────┘               │
│                   RPM2 Pro Setup vX.XX                         │
└──────────────────────────────────────────────────────────────┘
```

*Note: The use of
RPMSETUP is not
required for stand-alone
PC installations.*

The RPMSETUP program will install a small batch file with
the name "RPM2PRO.BAT" in both the local root directory
(ex. "C:\") and in the local directory (ex "C:\RPM2PRO").
RPMSETUP will also copy a small loader program to the
local directory. The loader program is used to load and run the
RPM/2 Pro software from the network file server.

After a new station is created using RPMSETUP you can load
and run RPM/2 Pro by entering RPM2PRO at the DOS
prompt. Please see *Starting Up RPM/2 Pro* for additional
information.

Starting Up RPM/2 Pro

To run the RPM/2 Pro software, follow these steps:

• Type C: and press <Enter> (*assuming you have either
  installed RPM/2 Pro on drive C or you have created a
  network station which uses drive C for storing it's local
  configuration setting*s).

• Type CD \RPM2PRO and press <Enter> (*assuming you
  have either installed RPM/2 Pro in the RPM2PRO
  directory or you have created a network station which uses
  the RPM2PRO directory for storing it's local configuration
  settings*).

• Type RPM2PRO and press <Enter>.

Figure 2.3
Logging On

```
┌─────────────────────────────────────┐
│  Remote Programming Manager II PRO  │
│  ┌──┐        RPM/2 PRO SHELL        │
│  │  │          SENTROL INC          │
│                                      │
│  USER ID CODE  [SYSOP        ]      │
│                                      │
│     PASSWORD  [*****         ]      │
│                                      │
│  ┌──────────┐      ┌──────────┐    │
│  │   OK     │      │   QUIT   │    │
│  └──────────┘      └──────────┘    │
└─────────────────────────────────────┘
```
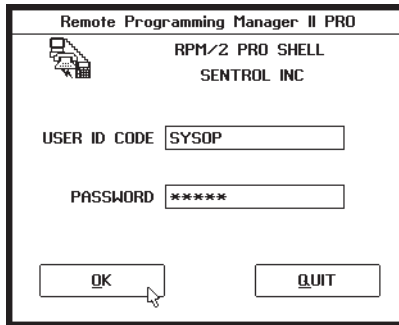
The first time you run RPM/2 Pro (or RPMSETUP for
network users) a small batch file with the name
RPM2PRO.BAT is copied to the root directory of your hard
disk. So if your DOS PATH command includes the root
directory (PATH C:\), you can start RPM/2 Pro from any
directory by typing RPM2PRO and pressing <Enter>. Please
refer to your DOS manual for additional information on the
PATH command.

When the Shell is installed for the first time, it sets up a single
operator whose User ID Code is "**SYSOP**" and who has no
password. We highly recommend that you assign the system
operator (SYSOP) a password during your first RPM/2 Pro
session.

Starting Up RPM/2 Pro From Microsoft Windows v3.1

Although RPM/2 Pro is a DOS program, it can still be run from Microsoft Windows v3.1. You RPM/2 Pro local directory (i.e. C:\RPM2PRO) contains both an example Window's Program Information File (RPM2PRO.PIF) and an Icon File (RPM2PRO.ICO). The PIF file has been configured to optimize the performance of RPM/2 Pro when executed from Windows v3.1. This example PIF file turns off all of Windows' monitor ports. Turning off the monitor ports speeds up RPM/2 Pro graphics but prevents you from switching back and forth between RPM/2 Pro and other Windows' programs. To toggle between RPM/2 Pro and other Windows' program you will need to turn on the High Graphics Monitor Port.

When adding a new item to Window's Program Manager select the RPM2PRO.PIF file and then change the icon to RPM2PRO.ICO. If you did not use the default options when installing RPM/2 Pro you may need to edit the PIF file to match your installation settings. Please consult your Windows v3.1 documentation for more information on using PIF files to add DOS programs to Windows.

Starting Up RPM/2 Pro From Microsoft Windows 95

RPM/2 Pro can also be run from Microsoft Windows 95. The easiest way to add RPM/2 Pro to Windows 95 is to create a shortcut to either RPM2PRO.BAT or LOADER.EXE . Both of these files are normally located in the directory C:\RPM2PRO. You can also add RPM/2 Pro to the Start menu. Look up "*Shortcuts, adding to the Start menu*" in Windows 95 on-line help for additional information.

Upgrading From RPM/2

RPM/2 stores customer and panel information in files with the extensions CUS and PNL. These files are <u>fully</u> compatible with RPM/2 Pro. However, if you have a copy of RPM/2 on your system make sure that you do <u>NOT</u> install RPM/2 Pro in the same directory. Normally RPM/2 is installed in the directory C:\RPM2 and RPM/2 Pro is installed in the directory n:\RPM2PRO, where n: is either a local drive or a network file server drive.

After you have installed RPM/2 Pro on your system, including all of the necessary Panel Support Modules (PSMs), you can copy all of your CUS and PNL files to the RPM/2 Pro directories. The easiest way to do this is to use DOS's XCOPY utility.

The following example shows how to use the XCOPY command to copy all of your customer and panel files to the RPM/2 Pro directories.

```
xcopy   c:\rpm2\*.cus   n:\rpm2pro\*.cus   /s
xcopy   c:\rpm2\*.pnl   n:\rpm2pro\*.pnl   /s
```

Before copying theses files, make sure that there are no duplicate customer IDs (panel IDs) between your RPM/2 Pro and your RPM/2 installations. The RPM/2 Pro accounts with duplicate IDs will be overwritten when you copy the CUS and PNL files from you RPM/2 directories.

> **WARNING: Make sure that you back up all of your CUS and PNL files before upgrading from RPM/2 to RPM/2 Pro.**

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Learning The Basics

This chapter assumes that you have successfully installed RPM/2 Pro on your system. It is now time to learn how to take full advantage of the software. Within this chapter you will learn all about the mouse and keyboard commands used by RPM/2 Pro, and for those of you not familiar with Graphical User Interfaces (i.e. Windows©, OS/2©, GeoWorks©, etc), this chapter describes the visible components used by the RPM/2 Pro GUI.

Using the Mouse

The RPM/2 Pro Graphical User Interface (GUI) only uses the left mouse button. The following is a list of the available mouse commands.

<Left-down-click>   Pressing the left mouse button selects the field position under the mouse cursor (if the field is selectable).

<Left-drag>   If the current field is a field that can be edited, holding down the left button and dragging the mouse marks a section of the field.

<Left-release>   If the current field is a field that can be edited, releasing this button completes the select operation.

Keyboard Commands

The following is a partial list of the available keyboard commands.

General Keys

<F1>
: If available, displays context sensitive help information regarding the current field.

<F3>
: Exits help.

<Tab>
: Moves from the current (or selected) window field to the next selectable window field. If the last window field is currently selected, pressing <Tab> cycles to the first selectable window field.

<Shift-tab>
: Moves from the current (or selected) window field to the previous selectable window field. If the first window field is currently selected pressing <Shift-tab> cycles to the last window field.

Movement Keys

<Left-arrow>
: Moves the cursor one character to the left.

<Right-arrow>
: Moves the cursor one character to the right.

<Down-arrow>
: In a multi-line field, moves the cursor down one line.

<Up-arrow>
: In a multi-line field, moves the cursor up one line.

<PgDn>
: In a multi-line field, moves the cursor down one page.

<PgUp>
: In a multi-line field, moves the cursor up one page.

<End>
: Moves to the end of the field or list.

<Home>
: Moves to the beginning of the field or list.

Editing Keys

<Del>   When text is marked, deletes the marked text from the current window field. When text is not marked, deletes the character beneath the cursor, leaving the position of the cursor unchanged.

<Backspace>   Moves the cursor left one position, deleting the character to the left of the cursor (i.e. the character immediately to the left of the cursor before it is moved).

<Ins>   Toggles the edit mode from insert to overstrike mode or vice-versa.

Visible Components

This section describes the visible components used by the RPM/2 Pro Graphical User Interface (GUI).

Scroll Bars

Scroll bar are horizontal or vertical bars (See the example on the left). You use these bars with a mouse to scroll the contents of a window or list. Click the arrow at either end to scroll one line at a time. (keep the mouse button pressed to scroll continuously.) You can click the shaded area to either side of the scroll box to scroll a page at a time. Finally, you can drag the scroll box to any spot on the bar to quickly move to a spot in the window or list relative to the position of the scroll box. If you're using a mouse, click on an action button to activate

Action Buttons
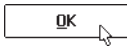
it. When you're using the keyboard, press Alt and the under-scored letter to activate it. For example Alt+O selects the *OK* button because the O in OK is underscored. Alternately, you can press <Tab> or <Shift-Tab> to move forward or back from one button to another. A button is highlighted when it is the current selection. Press <Enter> to activate the selected button.

Radio buttons are like car-radio buttons. They come in groups,

Radio Buttons

and only one radio button in the group can be on at any one time. To choose a radio button, click on it or its text. From the keyboard press <Tab> until the group is highlighted. Once the group is selected, use the arrow keys to select the item you want, and then press <Spacebar> to select it. Press <Tab> or <Shift-Tab> again to leave the group with the new radio button chosen.

Check boxes differ from radio buttons in that you can have

Check Boxes
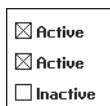
any number of check boxes checked at any time. When you select a check box, an X appears in it to show you it's on. An empty box indicates it's off. To change the status of a check box, click on it or its text. From the keyboard press <Tab> until the group is highlighted. Once the group is selected, use the arrow keys to select the item you want, and then press <Spacebar> to check or uncheck it.

RPM/2 Pro provides a context sensitive help system. Select

.

the item (i.e. input field, menu item, etc.) that you need some help with and then press the <F1> key.   Some windows also contain a *Help* button. Pressing this button will give you general help information.

From the help window you can select *Show Index* to view the

Figure 3.1
Context Sensitive Help
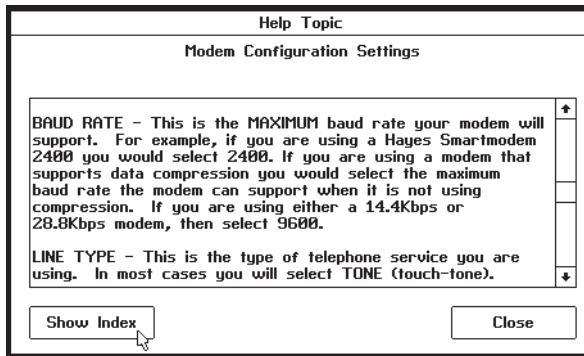
entire list of available help topics. To view a help topic, select the desired topic from the list and press the *Show Topic* button.

RPM/2 Pro provides range checking on data entry fields. If

Figure 3.2
Help Topics
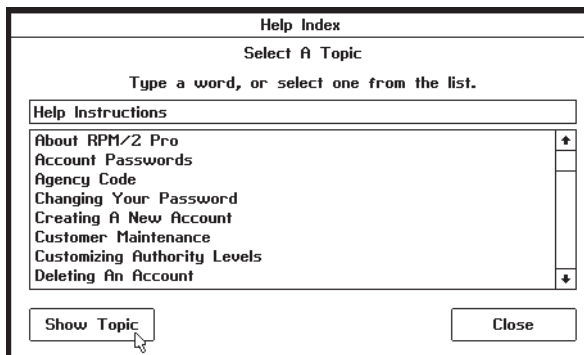
Saving Data To Disk

When you make changes to a configuration item (i.e. modem settings), press the *Save* button to save the data to the hard disk. If you try to close a window without saving your changes, RPM/2 Pro will prompt you to either Save or Not Save the changes before the window can be closed.

Do you want to save data to disk?

Save Data To Disk

Do Not Save Data

Cancel
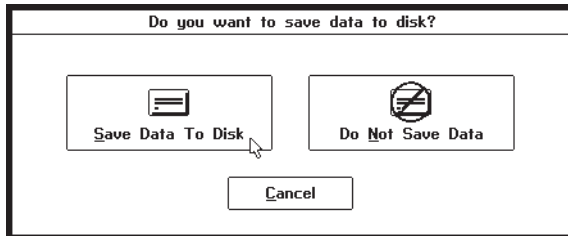
Range Checking

you enter invalid data, an error message window will appear. This window will display the proper range for the current field.

Error

The number 15 is not in the range 1..10.

OK

Cancel

4
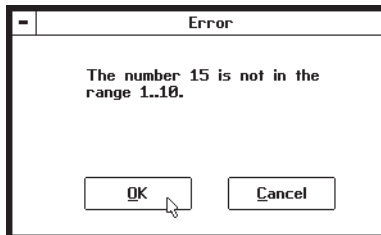
The Main Menu

After successfully logging into RPM/2 Pro, the first thing you will see is the Main Menu. The Main Menu window displays several pieces of important information including the name of the station, the name of the current operator, and the authority level of the current operator. This window also displays the version number of the "Shell". This chapter briefly describes the items that can be selected from the Main Menu.

Figure 4.1
The Main Menu

```
┌──────────────────────────────────────┐
│        Welcome to RPM/2 PRO          │
│  User: SYSOP              Level: 10  │
│  Station: WILTON'S DESK              │
│   ┌──────────────────────────────┐   │
│   │     Customer Maintenance     │   │
│   │     Maintain Panel Data      │   │
│   │      Change Password         │   │
│   │     Local/Modem Settings     │   │
│   │     System Administration    │   │
│   │          Utilities           │   │
│   └──────────────────────────────┘   │
│                                      │
│   ┌─────────┐      ┌─────────┐       │
│   │  Quit   │      │  Help   │       │
│   └─────────┘      └─────────┘       │
│        RPM PRO SHELL vX.XX           │
└──────────────────────────────────────┘
```
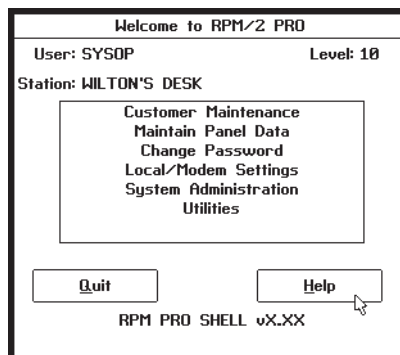
Exiting RPM/2 Pro

To exit RPM/2 Pro, press the *Quit* button located on the Main Menu window.

```
┌──────────────────────────────────────────────────┐
│       Remote Programming Manager II Pro            │
├──────────────────────────────────────────────────┤
│  ┌────┐                                            │
│  │STOP│    Do you really want to leave RPM/2 Pro?  │
│  └────┘                                            │
│                                                    │
│  ┌──────────────┐  ┌──────────┐  ┌──────────┐     │
│  │ Exit Application │  │ Log Out  │  │ Cancel   │     │
│  └──────────────┘  └──────────┘  └──────────┘     │
└──────────────────────────────────────────────────┘
```
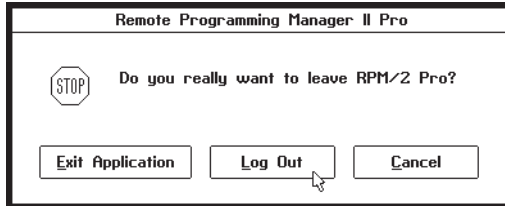
When you press the *Quit* button you will be presented with several options. Press the *Exit Application* button to completely exit the RPM/2 Pro application. Press the *Log Out* button to log out the current operator and return back to the Log In window. Or press the *Cancel* button to return back to the Main Menu.

Customer Maintenance

Note: After selecting this menu item, you will first be asked to enter search criteria. Please see chapter 5 for more information.

Select the *Customer Maintenance* menu item to make changes to the customer database. After selecting this menu item, you will see the Customer Maintenance window. From the Customer Maintenance window you can do the following: create a new customer account; edit information on an existing account; delete an existing account; and maintain a customer's panel data. *Please refer to chapter 5 for additional information on customer maintenance*.

Maintain Panel Data

Select the *Maintain Panel Data* menu item to maintain an existing customer's panel data. Panel data is maintained by executing a Panel Support Module (PSM) for a selected account. *Please refer to chapter 5 for additional information on maintaining panel data*.

Change Password

Select the ***Change Password*** menu item to change the password of the current operator. The name and authority level of the current operator (user) is displayed on the main menu window. *Please refer to chapter 6 for additional information on changing passwords*.

Local/Modem Settings

Select the ***Local/Modem Settings*** menu item to view the station settings and to make changes to the station's modem configuration. This menu item is also available in the System Administration menu. *Please refer to chapter 7 for additional information on modem settings*.

System Administration

Select the ***System Administration*** menu item to make changes to the system's configuration. After selecting this menu item you will see the System Administration menu. From the System Administration menu you can do the following: configure the modem; manage the operators database; modify the system bulletins; and set the agency code. *Please refer to chapter 7 for additional information on system*

Utilities

administration.
Select the ***Utilities*** menu item to execute a utility program. After selecting this menu item you will be presented with a list of available utility programs. *Please refer to chapter 8 for additional information on utility programs*.

C   H   A   P   T   E   R

5
The Customer Database

This chapter describes how to maintain the customer database. The Customer Database stores information such as a customer's name, address, and telephone number. This database is also linked to the Panel Database to provide access to the function map (a.k.a. memory map or programming data) stored in the customer's control panel.

Search Criteria

When you select **Customer Maintenance** or **Maintain Panel Data** from the main menu, RPM/2 Pro will prompt you with the Customer Account Search Criteria window. The search criteria provides you with a means of quickly locating a specific customer account. You may enter as little or as much search criteria as you feel is necessary. The search criteria is not case or position sensitive. If you leave all of the fields blank, you will be presented with a list of all of the customer accounts when the **OK** button is pressed.

Figure 5.1
Customer Account
Search Criteria

```
┌─────────────────────────────────────────┐
│      Customer Account Search Criteria     │
│                                           │
│         Panel ID: [            ]          │
│   Subscriber Name: [WI          ]         │
│  Telephone Number: [704         ]         │
│                                           │
│   NOTE: Leave all of the search fields blank to list the │
│         entire customer database.  Press F1 for          │
│         additional help.                                 │
│                                           │
│   ┌─────────┐              ┌─────────┐    │
│   │   OK    │              │ Cancel  │    │
│   └─────────┘              └─────────┘    │
└─────────────────────────────────────────┘
```

For example, if you want to see a list of all of the subscribers whose name contains 'WI' and whose control telephone number contains '704'. You would enter a 'WI' in the Subscriber Name field and a '704' in the Telephone Number Field. When the *OK* button is pressed, the requested list will appear.

Customer Maintenance

When you select *Customer Maintenance* from the main menu you will see the Customer Maintenance window. From this window you can do the following: add a new account; delete an account; and edit an existing account. When you are finished updating the customer database you can select the *Quit* button to return to the main menu. You can also press the *Search* button at any time to modify the search criteria (*see "Search Criteria"*).

```
                            Customer Maintenance
   ID        Subscriber Name           Control Telephone Number
  10000001  Ackoury, Rhonda           9W1-704-555-6936          ▲
  10000002  Wilton, Bob               9W1-704-555-7600
  10000023  Bolick, Eddie             9W1-617-555-7881
  10000483  Gordon, Robert            9W1-704-555-9276
  10002329  Kirkpatrick, Byron        9W1-508-555-9808
  10005489  Melton, Charles           9W1-603-555-8417
  10007343  Keels, Cameron            9W1-218-555-5413
  10008493  Price, Rosemary           9W1-801-555-8193
  10032465  Brunell, Alex             9W1-603-555-2414
  10045689  Irwin Marine              9W1-813-555-7110
  10124789  Lakeport Aviation         9W1-206-555-2523
  10293711  Wilton, Raymond           9W1-603-555-4814
  10327501  Dracopoulos, Linda        9W1-407-555-8393
  10349006  Duncan, Larry             9W1-407-555-7209
  10658788  American Contruction      9W1-207-555-9234
  10894353  Master Automotive         9W1-719-555-9108          ▼

   Selected Account

   10008493   Price, Rosemary        9W1-801-555-8193


    [   Add   ]   [  Delete  ]   [   Edit   ]   [  Search  ]   [   Quit   ]
```

Creating a New Account

To create a new customer account, press the ***Add*** button. After
pressing this button you will see the New Customer Account
window. All new accounts must be assigned a Control Panel
Type and a unique Customer ID number.

```
                    New Customer Account
               Available Control Panel Types

    Discovery 3000 v2.1x                      ▲
    Discovery 3000 v3.0x
    Discovery 5000 v2.0x
    Discovery 5000 v2.1x
    Discovery 5000 v3.0x
    Impact 300 v1.02/v1.03
    OEM 44 v3.0x
    OEM 48 v1.1x
    OEM 48 v3.0x
    OEM 64 v3.0x
    Sentrol 44 v3.0x
    Sentrol 48 v3.0x
    Sentrol 64 v3.0x
    Z1200 v2.0x
    Z1200 v2.1x
    Z1200 v3.0x
    Z1250 v2.0x                               ▼

   New Customer ID            New Control Type

   40964                      Sentrol 48 v3.0x

   [ Create Account ]              [ Cancel ]
```

The New Customer Account window contains a list of all of the control panel types supported by your RPM/2 Pro installation. You must select a control panel type from this list. If you do not see the control panel type you need, contact your vendor for information on obtaining additional Panel Support Modules (PSMs).

After you select a Control Panel Type and enter a unique Customer ID number, press the *Create Account* button to create the account. After you press the *Create Account* button, RPM/2 Pro will prompt you for additional information on the account, such as the Subscriber Name and Control Telephone Number (*see "Editing Customer Information"*). If you decide not to create the account, press the *Cancel* button.

Editing Customer Information

The Edit Customer Information window is where you store general information about a subscriber. At a minimum, you must enter a Subscriber Name and a Control Telephone Number. You will see this window when you create a new account or when you select an account from the list of accounts and press the *Edit* button.

Figure 5.4
Edit Customer Information

Edit Customer Information	
Subscriber Name: Sentrol Engineering	
Contact: Technical Support	Customer ID: 40964
Address: Sentrol Inc.	
Post Office Box 2904	Customer Type
1510 Tate Boulevard S.E.	0: Commercial
City: Hickory State: NC	
Zip Code: 28603-2904	Control Type
	Sentrol 48 v3.0x
Voice Telephone: 800-800-2626	
Control Telephone: 9,704-555-2333	Account Password (optional)
	ARITECH
Comments: System Works Great !!!	
FAX #: 704-555-7985	Maintain Panel Data
	Save Close

The Subscriber Name is used throughout the RPM/2 Pro Shell and Panel Support Modules to identify the account. The Control Telephone Number is used when calling a control panel for a remote programming session. The Control Telephone Number is the actual dial string sent to the modem.

If the modem you are using is compatible with the Hayes© AT command set the following characters may be used in the Control Telephone Number.

0-9 * #   - regular telephone digits
W   - wait for a second dial tone
,   - programmable delay
Please refer to you modem manual for additional information.

After you are finished entering information on the customer, you can press the *Close* button to return to the Customer Maintenance window or you can press the **Maintain Panel Data** button to execute the Panel Support Module (PSM) for the current account. Using the PSM you can edit the customer's function map.

Account Passwords

Individual customer accounts can be protected with a password. Account passwords are entered in the Customer Information window. Operators with an authority level less than 10 will be prompted to enter a password when they attempt to view, edit, or delete a protected account. Leave the Account Password field blank to disable account password protection.
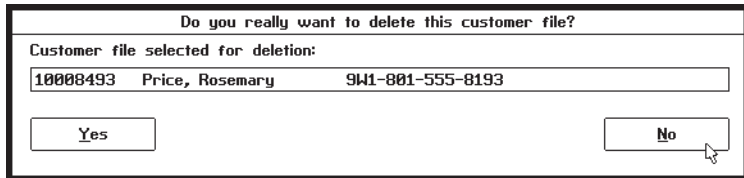
Figure 5.5
Account Password
Protection

```
┌─────────────────────────────────────────┐
│            Account Password              │
│  ┌────┐                                  │
│  │STOP│  This account is password protected. │
│  └────┘  Please enter the account password   │
│          below.                          │
│                                          │
│     ┌──────────────────────────┐         │
│     │ ******                   │         │
│     └──────────────────────────┘         │
│                                          │
│   ┌──────────┐      ┌──────────┐         │
│   │    OK    │      │  Cancel  │         │
│   └──────────┘      └──────────┘         │
└─────────────────────────────────────────┘
```

Deleting An Account

To delete an existing account, select the account from the list and then press the *Delete* button. When you delete an account from the hard disk, both the Customer Database entry and the Panel Database entry for the selected account will be erased. Any Event Log Dump associated with the account will also be deleted. All other files associated with this account, such as Function Maps dumps, will remain on the hard disk.

Figure 5.6
Deleting A Customer
Account

```
┌──────────────────────────────────────────────────────────────┐
│         Do you really want to delete this customer file?       │
│ Customer file selected for deletion:                           │
│ ┌────────────────────────────────────────────────────────────┐ │
│ │ 10008493   Price, Rosemary        9W1-801-555-8193         │ │
│ └────────────────────────────────────────────────────────────┘ │
│ ┌──────────┐                                   ┌──────────┐    │
│ │   Yes    │                                   │    No    │    │
│ └──────────┘                                   └──────────┘    │
└──────────────────────────────────────────────────────────────┘
```

WARNING: Be sure to UNLOCK the associated control panel before deleting an account. See your PSM documentation for more information.

Maintaining Panel Data

To edit the programming data of an account which already exists, you can select *Maintain Panel Data* from the main menu. After selecting *Maintain Panel Data* you will see the Maintain Panel Data window. This window works like the Customer Maintenance window, except that you can not make any changes to the Customer Database (i.e. add, edit, or delete).

Figure 5.7
Maintain Panel Data

Shortcut: To execute a PSM, you can simply double click on the desired account from the list.

To edit an account's function map or conduct a remote programming session, select the desired account from the list and then press the *Edit Account* button. After the *Edit Account* button is pressed the PSM for the selected account will be executed. To return to the main menu press the *Cancel* button. Also, if you want to modify the search criteria you can press the *Search* button.

Note: Please see your Panel Support Module documentation for additional information on editing a function map and conducting an online programming session.
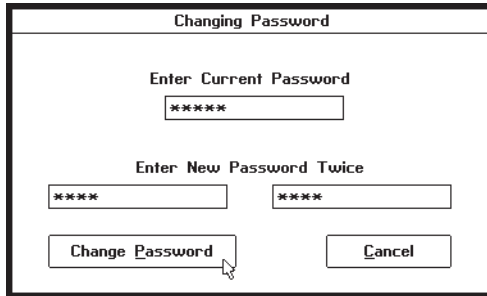
6

Changing Passwords

Each operator, including the System Operator (SYSOP), can have a unique password. The password is used during the log-in process (*see "Starting Up RPM/2 Pro"*). When a new operator is created (*see "Manage Operators"*) an initial password may be assigned. It is recommended that each operator, including the SYSOP, change their password during their first RPM/2 Pro session.

Only the current (active) operator can change their password. The name of the current operator is displayed on the main menu window in the upper left hand corner. To change to a different operator, the current operator needs to logout by pressing the *Quit* button on the main menu. Then the new operator must log in.

To change your password, select **Change Password** from the main menu. You will be prompted to enter your current password and the new password. The new password must be entered twice.
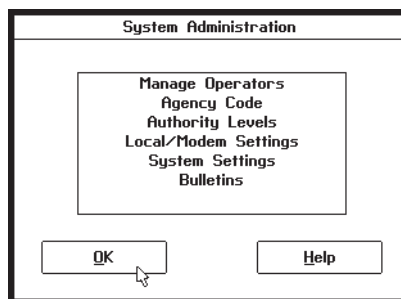
Figure 6.1
Changing Your
Password

When you finished entering the information press the ***Change Password*** button. If you want to abort the process and retain your original password press the ***Cancel*** button.

WARNING   If an operator forgets or loses their password there is no way for that operator to log in to RPM/2 Pro. In the event that this happens, the SYSOP will need to delete the operator and then re-add the operator to the system (*see "Manage Operators"*). This will effectively erase the operator's password, allowing the operator to log in and recreate their password. **Exception: There is no way to recover a lost SYSOP password.**

C   H   A   P   T   E   R

7

System Administration

Select *System Administration* from the main menu to view the System Administration menu. All of the system configuration items can be accessed from this menu. Note: Only operators with a sufficient authority level can access this menu (*see "Authority Levels"*).
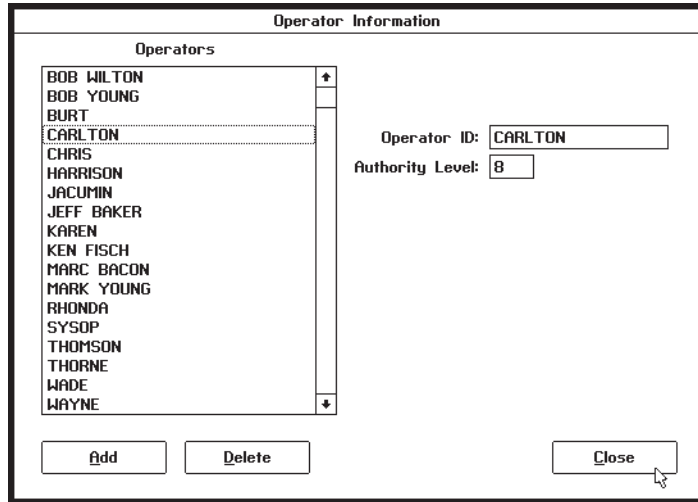
Figure 7.1
System Administration
Menu

```
        System Administration
    ┌─────────────────────────────┐
    │        Manage Operators     │
    │         Agency Code         │
    │        Authority Levels     │
    │      Local/Modem Settings   │
    │        System Settings      │
    │           Bulletins         │
    └─────────────────────────────┘

    ┌──────────┐       ┌──────────┐
    │    OK    │       │   Help   │
    └──────────┘       └──────────┘
```

Manage Operators

Select *Manage Operators* from the System Administration menu to manage the list of users/operators. Each operator is assigned an ID (usually their last name), and an authority level.
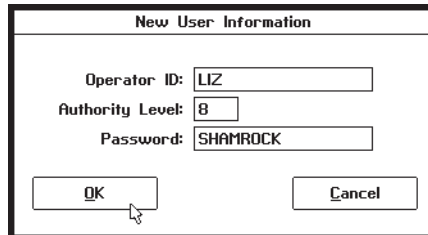
Figure 7.2
Operator Information

Add Operator

To add a new operator, press the *Add* button.

Figure 7.3
Adding An
Operator/User

Each new operator must be assigned an *Operator ID* (usually their first or last name) and an *Authority Level*. The authority level is used to determine which functions an operator is allowed to access (*see "Authority Levels"*). You also have the option of assigning each new operator an initial *Password*. The passwords of existing operators can not be viewed or edited from the New User Information window.

Edit Operator

To edit an existing operator, first select the operator from the list. After the operator has been selected simply make the necessary changes in the *Operator ID* and *Authority Level* fields.

Note: You can not change the Authority Level of the SYSOP.
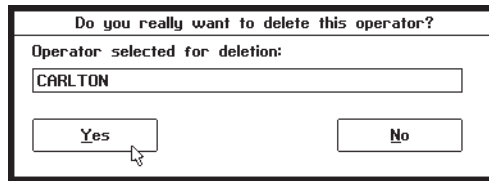
In a typical system only the SYSOP should have an authority level of 10. To have complete access to customer accounts, including upload and download ability, an operator will typically need an authority level of 8 (*see "Authority Levels"*).

Delete Operator

To delete an operator, select the operator from the list and then press the *Delete* button.

Figure 7.4
Deleting an Operator

Note: You can not delete the SYSOP.
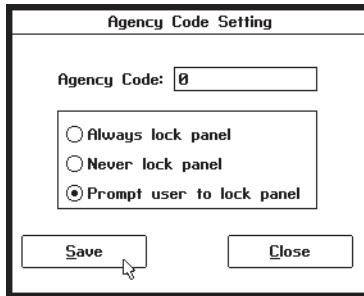
```
┌─────────────────────────────────────────────────┐
│     Do you really want to delete this operator?  │
│ Operator selected for deletion:                  │
│ ┌─────────────────────────────────────────────┐ │
│ │CARLTON                                      │ │
│ └─────────────────────────────────────────────┘ │
│ ┌───────────────┐         ┌───────────────┐     │
│ │      Yes      │         │      No       │     │
│ └───────────────┘         └───────────────┘     │
│          ⇗                                       │
└─────────────────────────────────────────────────┘
```

Changing the Agency Code

To change your agency code, select *Agency Code* from the *System Administration* menu. The Agency Code is used every time a remote session is started with a control panel. It identifies your agency to the panel. Control panels are programmed to allow access to only one agency.

Agency Code Setting

Agency Code: 0

○ Always lock panel
○ Never lock panel
◉ Prompt user to lock panel

Save   Close

There are three anti-takeover options available from the Agency Code Setting window:

Always lock panel - During each on-line session, RPM/2 Pro will ensure that the control panel is *locked* with an Agency Code and Panel ID.

Never lock panel - RPM/2 Pro will not *lock* a previously *unlocked* panel.

Prompt User To Lock Panel - When RPM/2 Pro goes on-line with an *unlocked* panel, the user will be given the option to *lock* the panel.

If you change the Agency Code, the first time you call a previously programmed panel, the old Agency Code will be used to gain access to the panel and then the new Agency Code will be programmed into the panel for future access.

Unlocking A Control Panel

Most Panel Support Modules support an "Unlock" feature. This feature is normally found in the PSM's Administration menu. When a panel is "unlocked", the Panel ID and Agency Code are erased from the control panel's memory. When an RPM/2 Pro computer connects with an unlocked panel, it will program in a new Panel ID and Agency Code. Please refer to your PSM documentation for additional information.

Authority Levels

To modify the system authority levels, select *Authority Levels* from the System Administration menu. From the Authority Levels "notebook" you can modify the minimum operator authority levels required to access various features of RPM/2 Pro. To modify these settings you must have an authority level of 10. Typically, authority level settings are only managed by the SYSOP.

The *Shell* page of the notebook displays the authority levels used by the Shell program.

Figure 7.6
Shell Authority
Level Settings

```
┌──────────────────────────────────────────────────────────────────┐
│                       Authority Level Settings                     │
│  ┌─────────────┬──────────────────────────┬──────────────────┐     │
│  │    Shell    │   Panel Support Module   │     Utilities    │     │
│                                                                    │
│              Log-In: 1  ⬍     Access System Admin. Menus: 8  ⬍     │
│     Create an Account: 3  ⬍       Edit Local Modem Settings: 8  ⬍  │
│  Edit Customer Information: 3  ⬍     Edit Operators Database: 10 ⬍  │
│       Delete an Account: 4  ⬍          Modify Agency Code: 10 ⬍    │
│          Access a PSM: 2  ⬍         Modify System Settings: 10 ⬍   │
│   Access a Utility Program: 2  ⬍     Modify System Bulletins: 10 ⬍ │
│                                                                    │
│                                         ┌──────┐   ┌──────┐        │
│                                         │ Save │   │ Close│        │
│                                         └──────┘   └──────┘        │
└──────────────────────────────────────────────────────────────────┘
```

The *Panel Support Module* page of the notebook displays the authority levels used by the PSMs.

The *Utilities* page of the notebook displays the authority levels which can be used by the add-on utility programs.

Authority level settings can be edited by entering a new value in the associated authority level field, or by clicking on the up and down arrows to raise and lower the respective setting. In most cases, the default authority level settings should meet the needs of your RPM/2 Pro installation.

Local/ Modem Settings

To view the local station settings and/or to modify the modem settings select ***Local/Modem Settings*** from the System Administration. The modem configuration data is used by the Panel Support Modules (PSMs) to set up and communicate with the control panels.

Local Station Settings

The *View Station Settings* page of the Local Configuration notebook displays the local station settings. These settings include the Loader/Kernel ID, the station name, and the directory paths for both the local configuration file and the application software. These settings can not be modified from this notebook page, and are displayed for your information only.

Figure 7.9
Local Station Settings
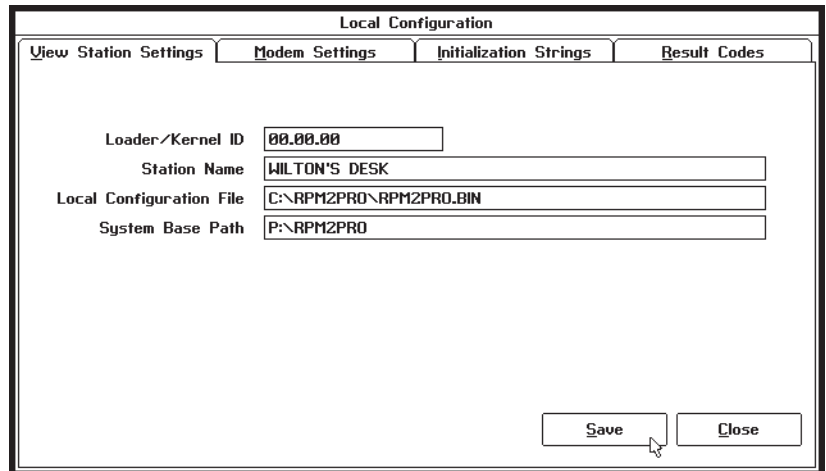
Modem Settings

Select the *Modem Settings* page of the Local Configuration notebook to view and modify the local modem settings. Some of these settings require significant knowledge of modem operations. For additional information please refer to your modem manual.

Figure 7.10
Modem Settings

*Note: See "Default Modem
Configurations" to learn
how to quickly set up your
modem.*

Local Configuration

| View Station Settings | Modem Settings | Initialization Strings | Result Codes |

Port
○ COM 1
◉ COM 2
○ COM 3
○ COM 4

Baud Rate
○ 300
○ 1200
◉ 2400
○ 9600

Line Type
◉ Tone
○ Pulse

Options
☐ Silent Answer
☒ Reverse Dial

[Defaults] [Advanced]   [Save] [Close]

Port This is the communication port used by your modem. In most cases this will be either COM 1 or COM 2. When using a mouse, make sure that the communication ports used by the mouse and the modem do not conflict. For example, most systems will <u>not</u> allow you to use two even numbered or two odd numbered COM ports. It is recommended that you connect your mouse to COM 1 and your modem to COM 2.

Line Type This is the type of telephone service you are using. In most cases you will select Tone (touch-tone).

Baud Rate

Warning: Check your modem specifications to ensure it will communicate at the baud rate(s) required by your control panel(s).

This is the maximum baud rate your modem will support. For example, if you are using a Hayes Smartmodem 2400 you would select 2400. If you are using a modem that supports data compression, you would select the maximum baud rate the modem can support when it is not using compression. The maximum baud rate is used by the PSM to initialize the modem. After a connection is established with a control panel, the PSM will drop down to the baud rate supported by the control panel.

Silent Answer

Note: This option is particularly useful with old Hayes© 1200 baud modems

Select this option to append the @ symbol to end of all modem dial strings. This instructs the modem to listen for period of silence before continuing. For additional information please refer to your modem manual.

Reverse Dial

RPM/2 Pro uses a reverse mode carrier when communicating with most security system control panels. This mode is normally selected by using an 'R' dial modifier. If your modem supports the 'R' dial modifier then select this option. If this option is not selected then RPM/2 Pro will attempt an alternate method for reversing the carrier of the modem.

Initialization Strings

Select the *Initialization Strings* page of the Local Configuration notebook to view and modify the local modem initialization strings. Modifying these strings requires significant knowledge of modem operations. For additional information please refer to your modem manual.

Figure 7.11
Initialization Strings

Local Configuration

| View Station Settings | Modem Settings | Initialization Strings | Result Codes |

Init #1 ATE0Q0V1X1
Init #2 ATM1L1
Init #3 ATS0=0
Init #4 ATS7=255
Init #5 ATS9=1
Init #6 ATS10=255
Init #7 ATS1=15
Init #8 AT&C1&Q0&K0N0

Hangup ATH0

Defaults   Save   Close

These are Hayes© AT command strings used to initialize the modem. The command strings are sent to the modem in order starting with Init #1. The PSM will wait for the modem to respond with an OK message before sending the next command string. It is critical that these command strings are properly configured. For additional information please refer to your PSM and modem manuals.

Note: The OK message can be modified by selecting Result Codes.

Hangup

This is a Hayes© AT command string used to hang-up the modem. When the PSM attempts to disconnect from a control panel it will first lower the Data Terminal Ready (DTR) line and then it will put the modem back into a command state after which it will send this hang-up string. Most modems will hang up when the DTR signal is lowered. This command string is sent as an added precaution.

Result Codes

Select the *Result Codes* page of the Local Configuration notebook to view and modify the local modem result codes. Modifying these result codes requires significant knowledge of modem operations. For additional information please refer to your modem manual.

Figure 7.12
Modem Result Codes

Local Configuration

| View Station Settings | Modem Settings | Initialization Strings | Result Codes |

Command executed	OK
Connection	CONNECT
Ring signal detected	RING
Carrier signal not detected, or lost	NO CARRIER
Invalid command	ERROR
No dialtone detected	NO DIALTONE
Busy signal detected	BUSY
No silence detected	NO ANSWER

Defaults   Save   Close

These fields represent the result code strings returned from the modem. The fields must match with your modem or RPM/2 Pro will not function properly. RPM/2 Pro is initially configured to work with all 100% Hayes© compatible modems. It should not be necessary to make any changes to the result codes strings. Please exercise extreme caution when modifying these strings.

Default Modem Configurations

The quickest and safest way to configure a modem is to select the *Defaults* button from any one of the modem settings pages of the local configuration notebook.

Figure 7.13
Default Modem
Configurations

```
                    Default Modem Configurations
┌──────────────────────────────────────────────────────────┐ ▲
│ BEST DATA PRODUCTS SMART ONE 2400X (EXT)                 │
│ BOCAMODEM 14.4KBPS (EXT)                                 │
│ BOCAMODEM 14.4KBPS (INT)                                 │
│ CARDINAL 14.4 FAX/MODEM (INT)                            │
│ HAYES ACCURA 14400 (EXT)                                 │
│ HAYES ACCURA 28800 (EXT)                                 │
│ HAYES OPTIMA 2400 (EXT)                                  │
│ HAYES SMARTMODEM 1200 (EXT)                              │
│ HAYES SMARTMODEM 2400 (EXT)                              │
│ INTEL 2400B CLASSIC (INT)                                │
│ PRACTICAL PERIPHERALS PC144MT (EXT)                      │
│ PRACTICAL PERIPHERALS PC144MT II (EXT)                   │
│ PRACTICAL PERIPHERALS PM144HC II (INT)                   │
│ SUPRAEXPRESS 144 PLUS (EXT)                              │
│ USROBOTICS SPORTSTER 14.4 FAXMODEM (EXT)                 │ ▼
└──────────────────────────────────────────────────────────┘

Selected Modem Configuration:
┌──────────────────────────────────────────────────────────┐
│ HAYES ACCURA 28800 (EXT)                                 │
└──────────────────────────────────────────────────────────┘

   ┌─────────────────────┐              ┌─────────────┐
   │  Configure Modem    │              │   Cancel    │
   └─────────────────────┘              └─────────────┘
```

This list of modems has been configured and tested with RPM/2 Pro. If the modem you are using appears on this list simply select the desired modem and press the *Configure Modem* button. It will still be necessary for you to select the proper communication port (COM 1 -COM 4) and line type (Tone or Pulse).

Many serial I/O cards and internal modems have the ability to
set both the *base address* and the *interrupt level*. By default,
RPM/2 Pro uses industry standard settings for the serial
communication ports. These defaults are shown below.

	base address	interrupt level
COM1	0x3F8	IRQ4
COM2	0x2F8	IRQ3
COM3	0x3E8	IRQ4
COM4	0x2E8	IRQ3

Normally you should use these default values. However, if
your serial communication port uses non-standard values you
will will need to modify the settings in the Advanced Modem
Settings window. This window is accessed by pressing the
Advanced button on the Modem Settings page of the Local
Configuration notebook.

Figure 7.14
Advanced Modem
Settings
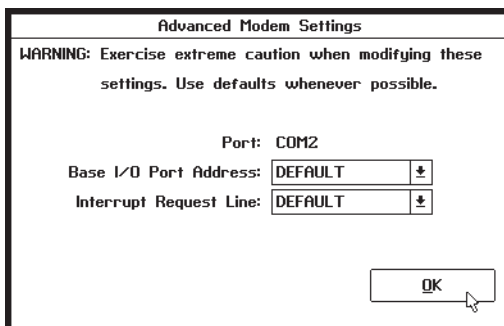
From the Advanced Modem Settings window you can modify
the Base I/O Port Address and the Interrupt Request Line
values. When these settings are set to DEFAULT the values
shown in the table above will be used.

System Settings

Select *System Settings* from the System Administration window to modify the global system settings. In a network configuration these settings apply to all stations.

Figure 7.15
System Settings

```
┌──────────────────────────────────┐
│          System Settings          │
│  ┌────────────────────────────┐   │
│  │ ⊠ Require User Passwords    │   │
│  │                            │   │
│  └────────────────────────────┘   │
│  ┌─────────┐      ┌─────────┐      │
│  │  Save   │      │  Close  │      │
│  └─────────┘      └─────────┘      │
└──────────────────────────────────┘
```

Check the *Require User Passwords* box to require users to select a login password. When this box is checked, operators must select a password of at least three characters in length. If a user with no password or a password with less than three characters attempts to login, he/she will be prompted for a new password before gaining access to the Main menu.

System Bulletins

Select *Bulletins* from the System Administration menu to modify the system bulletins.

Figure 7.16
System Bulletins

```
┌──────────────────────────────────────────┐
│              System Bulletins              │
│  ┌────────────────────────────────────┐▲  │
│  │ Welcome to RPM/2 Pro !!!           ││  │
│  │                                    ││  │
│  │ Reminder: There will be a company  ││  │
│  │ wide meeting next Tuesday.         ││  │
│  │                                    ││  │
│  │ Bill, please set up account #3615. ││  │
│  │ Use our standard residential       ││  │
│  │ template. Thanks!                  ││  │
│  │                                    ││  │
│  │                                    ││  │
│  │                                    ││  │
│  │                                    ││  │
│  │                                    ││▼  │
│  └────────────────────────────────────┘   │
│  ⊠ Display bulletins after operator log in.│
│  ┌─────────┐            ┌─────────┐        │
│  │  Save   │            │  Close  │        │
│  └─────────┘            └─────────┘        │
└──────────────────────────────────────────┘
```
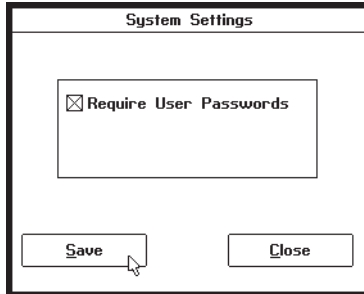
Chapter 7, System Administration   45
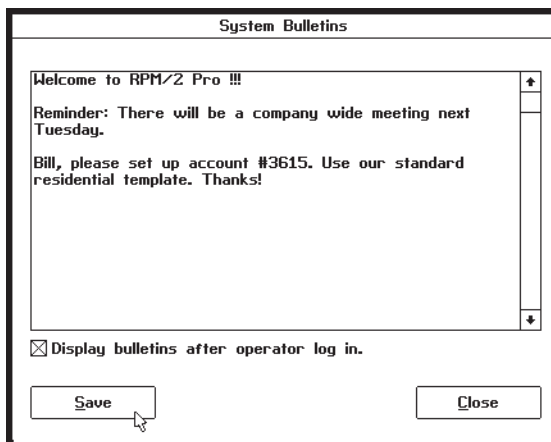
The system bulletins are displayed after an operator completes a successful log in. System bulletins are turned on by selecting the checkbox labeled "*Display bulletins after operator log in*." Clearing this checkbox will suppress the bulletins.

8

Utilities

Running A Utility

RPM/2 Pro has the ability to execute (run) external utility programs from the Shell. Utility programs can be used to view log files, print function maps, etc. To execute a utility program, select ***Utilities*** from the main menu. After making this selection, the Utilities window will be displayed.
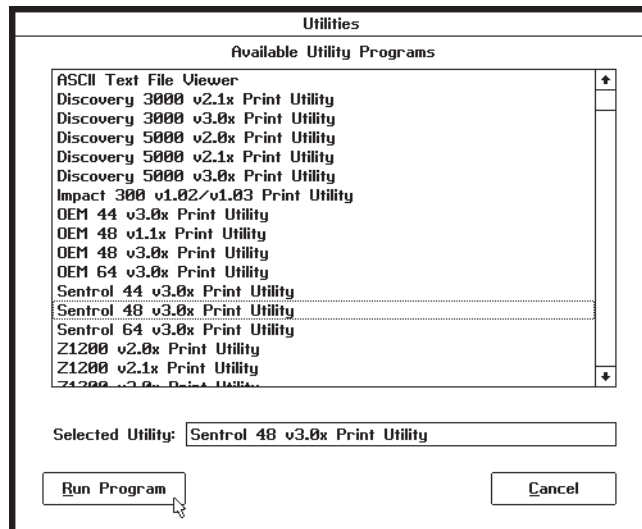
Figure 8.1
Utility Programs

Shortcut: You can simply double click on the desired utility to execute it.

Utilities

Available Utility Programs

```
ASCII Text File Viewer
Discovery 3000 v2.1x Print Utility
Discovery 3000 v3.0x Print Utility
Discovery 5000 v2.0x Print Utility
Discovery 5000 v2.1x Print Utility
Discovery 5000 v3.0x Print Utility
Impact 300 v1.02/v1.03 Print Utility
OEM 44 v3.0x Print Utility
OEM 48 v1.1x Print Utility
OEM 48 v3.0x Print Utility
OEM 64 v3.0x Print Utility
Sentrol 44 v3.0x Print Utility
Sentrol 48 v3.0x Print Utility
Sentrol 64 v3.0x Print Utility
Z1200 v2.0x Print Utility
Z1200 v2.1x Print Utility
Z1200 v3.0x Print Utility
```

Selected Utility: Sentrol 48 v3.0x Print Utility

Run Program   **Cancel**

The Utilities window displays the list of utility programs available on your RPM/2 Pro installation. To execute a utility, simply select the desired utility program from the list and press the **Run Program** button. Press the **Cancel** button to return to the main menu without running a utility program.

What is Freeware?

Several Freeware utility programs are available for RPM/2 Pro. As the name implies, Freeware software is free of charge. Freeware software is provided "AS-IS" and without warranty of any kind. We do not promise that the Freeware utilities will be free of bugs or program errors. If you report a program error or bug to us, we will use our best efforts to correct it. Please keep in mind that Technical Support is not available for Freeware software.

9

Tutorial

This chapter presents a brief tutorial on setting up your first customer account. This chapter assumes that you have successfully installed the Shell and at least one Panel Support Module.

First, start up RPM/2 Pro. Normally, you can start up RPM/2 Pro by typing **RPM2PRO** at the DOS prompt followed by pressing the **<Enter>** key. After RPM/2 Pro starts up, log into the program. The User I.D. Code is your operator name. If this is the first time the software has been run, then there is only one operator available. This operator's I.D. is "SYSOP", and it initially has no password. When you have finished entering your User I.D. Code and Password press the *OK* button.

Please see "Starting Up RPM/2 Pro" for more information on logging into the RPM/2 Pro software.

To set up a customer account, select *Customer Maintenance* from the Shell's main menu. You will be asked to provide "Search Criteria" for compiling the customer account list. To view the entire list, simply leave all of the fields blank and press the *OK* button.

From the Customer Maintenance window, press the *Add*

button to create a new customer account. After pressing the *Add* button, you will be asked to pick the customer's control panel type from a list of panel types supported by your RPM/ 2 Pro installation. You will also need to assign the new account a unique ID code. After you have entered this information, press the ***Create Account*** button. You will then be presented with a window where you can enter additional information on the account such as the name, address and telephone number of the subscriber. At a minimum, you must enter a "Subscriber Name" and "Control Telephone Number" for each account.

When you have finished entering the customer information, you can press the ***Close*** button to return to the Customer Maintenance window or press the ***Maintain Panel Data*** button to start up the appropriate Panel Support Module (PSM) for this account.

To edit or delete an existing customer account you must first select the account from the list of accounts in the Customer Maintenance window and then press either the ***Edit*** or ***Delete*** button. When you delete an account, all information related to the account, including any event log information, will be remove from the hard disk. Exercise extreme caution when using the delete command.

10

File System

This chapter explains the file system used by RPM/2 Pro. The information presented in this chapter is very technical in nature and is only provided for the benefit of the System Operator. This chapter assumes that the reader has a basic understanding of MS-DOS© or PC-DOS©. It is not necessary to understand the information presented in this chapter to use the RPM/2 Pro software.

> **WARNING: Except where noted, never modify any files related to RPM/2 Pro outside of the Shell or PSM programs.**

Directory Structures

RPM/2 Pro can be installed on either a stand alone PC or on a network file server. In the standalone PC configuration the following directory structure is used.

▤ Local Hard Disk (ex C:)
   ▱ rpm2pro
      ☐ customer
      ☐ event
      ☐ log
      ☐ maps
      ☐ modems
      ☐ panel
      ☐ system

In the standalone configuration, all files are stored on a local hard disk. Normally this is the "C:" drive. As the name implies, this configuration allows a single operator to access the database on a stand-alone (non-networked) workstation (PC).

Note: The Install program and the RPMSETUP program automatically install the Loader program and configuration files.

In the network configuration all of the data files and core executable files are located on a network file server. This allows multiple operators to access the database from multiple workstations (networked PCs). Local configuration files and a small loader program must be installed on each workstation (PC). These local files are normally located on a local hard disk (ex C:), but they can also be stored on a removeable floppy disk (ex A: or B:).

In the network configuration the following directory structure is used.

⊟ Local Hard Disk (ex C:)
　▱ rpm2pro

⊠ Network File Server (ex P:)
　▱ rpm2pro
　　▢ customer
　　▢ event
　　▢ log
　　▢ maps
　　▢ modems
　　▢ panel
　　▢ system

Local Directory

In a default installation, the Local directory is "C:\RPM2PRO". This directory contains local configuration information and a loader program. In a standalone configuration, the Local directory and the Base directory are the same (*see "Base Directory"*). The following is a partial list of the files you will find in the local directory.

rpm2pro.bat	- A batch file used to startup RPM/2 Pro.
loader.exe	- The RPM/2 Pro loader program.
rpm2pro.ini	- Local configuration information (ASCII)
rpm2pro.bin	- Local configuration information (binary)

See "File Formats" for more information on the local configuration files.

Base Directory

In a default standalone installation, the Base directory is "C:\RPM2PRO", the same as the Local directory. In a default network installation, the Base directory is located on a network file server , for example "n:\RPM2PRO" where "n:" is the drive letter associated with the network file server. This directory contains all of the executable files and all of the GUI resource data files.

The executable files include the Kernel, Shell, PSMs, and utility programs. Executable files are identified by the "EXE" extension. Most of the RPM/2 Pro executable files require a GUI resource data file in order to function properly. GUI resource data files are identified by the "DAT" extension.

The following is a partial list of some of the files that you might find in the base directory.

kernel.exe	- The RPM/2 Pro kernel program.
monitor.exe	- A program used to monitor system activity,
rpmsetup.exe	- A program used to create a new station.
shell.exe	- The Shell program.
shell.dat	- The Shell's GUI resource data file
viewer.exe	- An ASCII text file viewer utility.
readme.doc	- A text file containing some notes.
s48_v30x.exe	- A typical PSM program, this one is for the Sentrol 48 v3.0x
s48_v30x.dat	- The GUI resource data file for the above program.
s44_p30x.exe	- A typical utility program, this one prints the function map of a Sentrol 44 v3.0x to an ASCII text file and/or a standard (non-postscript) printer.
s44_p30x.dat	- The GUI resource data file for the above program.

System Directory

In a default installation, the System directory is "n:\RPM2PRO\SYSTEM", where "n:" is either a local drive or a network file server drive. This directory is where RPM/2 Pro stores system configuration files. There are four primary types of files stored in this directory. (1) Files with a "DAT" extension are default and/or startup configuration files. (2) Files with a "DBF" extension are system database files. (3) Files with an "INI" extension are used to register the installed PSMs with the Shell program. (4) Files with a "UTL" extension are used to register the installed Utility programs with the Shell. Most of these files are encrypted binary files.

The following is a partial list of some of the files that you might find in the system directory.

```
jobs.dbf        - Database file used to track active jobs.
users.dbf       - Database file used to track operators.
bulletin.dat    - System bulletin data.
levels.dat      - Security data.
activity.lok    - A lock file used to assist file sharing.
evt_view.utl    - This file registers a file viewer utility with the Shell.
s48_v30x.ini    - This file registers a Sentrol 48  PSM with the Shell
```

Modems Directory

In a default installation, the Modems directory is "n:\RPM2PRO\MODEMS", where "n:" is either a local drive or a network file server drive. This directory contains default configuration files for a number of different modems. These files all have a "DEF" extension. For example, the file "ACCURA28.DEF" contains the default configuration for a Hayes© Accura 28.8 Kbps modem. These files are all readable ASCII text files. See "File Formats" for more information.

Customer Directory

In a default installation, the Customer directory is "n:\RPM2PRO\CUSTOMER", where "n:" is either a local drive or a network file server drive. This directory contains the customer data files. These files all have a "CUS" extension. Information contained in these files include the subscriber's name, address, and telephone numbers. For example, the file "00003023.CUS" contains subscriber information for customer ID (a.k.a. control ID) number 3023. Customer data files are binary files.

Panel Directory

In a default installation, the Panel directory is "n:\RPM2PRO\PANEL", where "n:" is either a local drive or a network file server drive. This directory contains the panel data files. These files all have a "PNL" extension. A panel data file stores the function map data for a customer's control panel. For example, the file "00003023.PNL" contains the function map data for customer ID number 3023.

Also contained in this directory are the default function map data files. These files provide the initial function map of each new account created. There is one default file for each PSM program installed. For example, the file "S48_V30X.PNL" is a default function map file for a Sentrol 48 PSM program. Panel data files are binary files.

Log Directory

In a default installation, the Log directory is "n:\RPM2PRO\LOG", where "n:" is either a local drive or a network file server drive. This directory contains the activity logs. The file "CURRENT.LOG" contains the current activity log, all new events are appended to this file. When this file grows larger than 20K bytes, it is renamed to "OLD.LOG" and a new (empty) "CURRENT.LOG" file is created. Log files are readable ASCII text files. See "File Formats" for more information.

Event Directory

In a default installation, the Event directory is "n:\RPM2PRO\EVENT", where "n:" is either a local drive or a network file server drive. This directory is where the event logs retrieved from control panels are stored. These files all have a "EVT" extension. For example, the file "00003023.EVT" contains the panel event log for customer ID number 3023. Each time a panel event log is stored to disk, the information is appended to the end of the appropriate panel event log file. If the file does not exist it will be created. The size of these files are only limited by the amount of available hard disk space. These files are readable ASCII text files.

Note: Each time that a panel event log is stored to disk, RPM/2 Pro will display the approximate size of the file just affected. If periodic dumps are being performed, then these files will grow quickly. To alleviate wasting disk space with these files, they may be backed-up and then deleted from the hard disk or they may be edited to remove older log data.

Maps Directory

In a default installation, the Maps directory is "n:\RPM2PRO\MAPS", where "n:" is either a local drive or a network file server drive. This directory is where function map dumps are stored. Most PSMs include a utility program which will dump (print) an account's customer and panel data to an ASCII text file. These files all have a "MAP" extension. For example, the file "00003023.MAP" contains a customer and panel data dump for customer ID number 3023.

File Formats

This section describes a few of the file formats used by the RPM/2 Pro filesystem.

Modem Defaults

A modem default file is an ASCII text file which contains configuration data for a specific modem. Modem default files are located in the Modems directory. New modem default configurations can be added to the RPM/2 Pro system simply by creating a modem default file and adding it to the Modems directory. These files must have a "DEF" extension. The following is an example of a modem default file.

This modem default file is named "accura28.def".

```
HAYES ACCURA 28800 (EXT)

BAUD_RATE     = 9600
QUIET_ANSWER  = NO
REVERSE_DIAL  = YES

INIT1         = "ATE0Q0V1X1"
INIT2         = "ATM1L1"
INIT3         = "ATS0=0"
INIT4         = "ATS7=255"
INIT5         = "ATS9=1"
INIT6         = "ATS10=255"
INIT7         = "ATS1=15"
INIT8         = "AT&C1&Q0&K0N0"
HANGUP        = "ATH0"

M_OK          = "OK"
M_CONNECT     = "CONNECT"
M_RING        = "RING"
M_NO_CARRIER  = "NO CARRIER"
M_ERROR       = "ERROR"
M_NO_DIALTONE = "NO DIALTONE"
M_BUSY        = "BUSY"
M_NO_ANSWER   = "NO ANSWER"
```

The first line of the file is the name of the modem configuration. This name will appear on the Default Modem Configurations list.

Local Configuration

The local configuration file (RPM2PRO.INI) is an ASCII text file which contains configuration data for the local station (PC). This file is located in the Local directory. A compiled, binary version of this file (RPM2PRO.BIN) is also located in the Local directory. The ASCII text version of this file can be edited if needed. The following is a sample configuration file.

```
#===================
#   SYSTEM SETTINGS
#===================

STATION_NAME = "WILTON'S DESK"

BASE_PATH    = "P:\RPM2PRO"

#===================
#   MODEM SETTINGS
#===================

COMM_PORT     = COM2
BASE_ADDR     = DEFAULT
IRQ_LINE      = DEFAULT
BAUD_RATE     = 2400
LINE_TYPE     = TONE
QUIET_ANSWER  = NO
REVERSE_DIAL  = YES

INIT1         = "ATE0Q0V1X1"
INIT2         = "ATM1L1"
INIT3         = "ATS0=0"
INIT4         = "ATS7=255"
INIT5         = "ATS9=1"
INIT6         = "ATS10=255"
INIT7         = "ATS1=15"
INIT8         = "AT&C1&Q0&K0N0"
HANGUP        = "ATH0"

M_OK          = "OK"
M_CONNECT     = "CONNECT"
M_RING        = "RING"
M_NO_CARRIER  = "NO CARRIER"
M_ERROR       = "ERROR"
M_NO_DIALTONE = "NO DIALTONE"
```

Activity Log

The RPM/2 Pro kernel maintains an activity log. The current activity log file is named "CURRENT.LOG" and can be found in the Log directory. When the activity log file grows larger than 20K bytes, it is renamed to "OLD.LOG" and a new (empty) "CURRENT.LOG" file is created.

The following is an example of the type of data found in the activity log.

```
======================================================================
TIME: 14:04:33  11/20/1995   STATION [WILTON'S DESK]
STARTUP
Local path is [C:\RPM2PRO\RPM2PRO.BIN]
======================================================================
TIME: 14:05:17  11/20/1995   STATION [WILTON'S DESK]
User [BOB WILTON] started a program
PROGRAM [s48_v30x.exe]   ACCOUNT [00000003]   COMMMAND [LOAD]
======================================================================
TIME: 14:36:16  11/20/1995   STATION [WILTON'S DESK]
User [BOB WILTON] returned to SHELL
======================================================================
TIME: 14:38:23  11/20/1995   STATION [TECH SUPPORT]
STARTUP
Local path is [C:\RPM2PRO\RPM2PRO.BIN]
======================================================================
TIME: 14:40:35  11/20/1995   STATION [TECH SUPPORT]
User [RHONDA] started a program
PROGRAM [s44_v30x.exe]   ACCOUNT [00001976]   COMMMAND [LOAD]
======================================================================
TIME: 14:41:51  11/20/1995   STATION [WILTON'S DESK]
EXIT
======================================================================
```

The activity log keeps track of when stations go on and off line. The activity log also tracks the activity of operators at each station. When a PSM is executed, both the name of the PSM and the customer account accessed is listed. When a

utility program is executed, the name of the utility program is listed.

Customer account files should be backed up on a regular basis. If you do not back up your customer account files and the hard disk on your computer ever fails, you will lose valuable embedded security information. Without this information, it will be virtually impossible to unlock and regain control of your customers' panels.

When backing up your database, you should back up all the files in both the Customer directory and the Panel directory. The best way to do this is to create a batch file which runs an archive utility, such as the PKZIP© utility. PKZIP/PKUNZIP is a very popular archive utility program. Shareware versions of the program can be found on just about any online service (ex. CompuServe©, America Online©, Genie©, etc). Commercial versions of PKZIP/PKUNZIP can be found at many major software resellers. As of this writing the latest version of the shareware PKZIP/PKUNZIP utility was 2.04g.

The following is an example of a PKZIP command which will backup your customer and panel databases.

Suggestion: Put this command in a batch file called "backup.bat" and place it in the RPM/2 Pro Base directory.

pkzip -upr a:\rpm2pro.zip c:\rpm2pro*.cus c:\rpm2pro*.pnl

The above pkzip command will archive all of the customer data files and all of the panel data files into a single archive file ("RPM2PRO.ZIP") on a floppy disk (A:).

To restore the data you could use the following pkunzip command.

pkunzip -d a:\rpm2pro.zip c:\rpm2pro

The above pkunzip command will extract all of the files from the archive and place them back in their original directories.

11

Questions And Answers

Why don't I see the mouse cursor when I run RPM/2 Pro?

To use the mouse you must load a mouse driver before starting RPM/2 Pro. Mouse drivers are normally loaded in either the "CONFIG.SYS" or "AUTOEXEC.BAT" files in your system's root directory. The name of the mouse driver is normally "MOUSE.SYS" or "MOUSE.COM". See your mouse documentation for more information.

Why does my mouse stop working when I connect to a control panel?

Your mouse and modem ports are probably conflicting. Make sure you only have one serial device (i.e. mouse, modem, etc.) connected to an odd numbered port (i.e. COM1 or COM3) and only one serial device connected to an even numbered port (i.e. COM2 or COM4).

How do I get a printout of a control panel's function map?

Most Panel Support Modules include a utility program which will dump a control panel's function map to an ASCII text file and/or a standard (non-postscript) printer.

How do I copy the function map of one account to another account?

Most Panel Support Modules support a "Copy" feature. To copy a function map, first select the account from the Shell that will be copied <u>to</u> and execute the PSM for that account. Next, select "Edit Account Data" from the PSM's main menu, then press the "Copy" button. Follow the instructions on the screen to copy the function map data <u>from</u> another account.

What is a template account?

A template account is a dummy customer account which contains a default configuration. For example, you might create a Residential Customers template account and a Commercial Customers template account. To use a template, first create a new customer account, and then use the PSM's copy feature to copy the function map data from the template account to the customer's account. **<u>WARNING: Do NOT connect to a control panel using a template account!!</u>**

How do I connect to a control panel that has an answering machine bypass feature enabled?

First, select *Initiate Call* from the PSM's main menu. After you hear the phone ring one or two times (listen to the modem's speaker), press the *Cancel Connection* button. When the button title changes from Cancel Connection to OK, press the *OK* button. After pressing the *OK* button you will be returned to the PSM's main menu. Immediately re-select *Initiate Call*. The control panel should now pick up the phone and establish a connection on the first ring. See your PSM documentation for more information.

My serial I/O card has several "base address" and "interrupt level" jumper settings, which ones should I select when using RPM/2 Pro?

RPM/2 Pro uses industry standard settings for the serial communication ports. Use the following table to set up your serial I/O card.

	base address	interrupt level
COM1	0x3F8 IRQ4	
COM2	0x2F8 IRQ3	
COM3	0x3E8	IRQ4
COM4	0x2E8	IRQ3

**Why can't I access accounts created by another operator/
station on the network?**

The file/drive protections on your network should be modified
to grant all users READ, WRITE, and EXECUTE privileges
to the RPM/2 Pro directories. Ask your network administrator
for assistance.

**I accidentally deleted a customer account, and I forgot to
make backups. Is there anyway to access a "locked"
panel?**

If you know both the Agency Code and the Panel ID code of
the "locked" panel you might be able to regain access. First,
make sure the Agency Code in the Shell matches the Agency
Code in the panel. Next, create a new account with a Panel ID
which matches Panel ID of the panel. If these security codes
match you will be able to access the panel. Note: This will
only work in RPM/2 Pro.

Please make regular backups of your data files! See "Backing
Up The Databases" for additional information.

**How can I tell who else on the network is currently logged
into RPM/2 Pro?**

From the System File Base directory (ex "n:\RPM2PRO"), run
the program MONITOR. This program will display the
current activity of each RPM/2 Pro station on the network.