

3980xpi/3980/3900 V8.2 User Notes

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IMPORTANT: TaskLink™ DOS users need to upgrade to V2.09 or greater in order to have access to all supports in this UniFam V8.2 software update. Version 2.09 of TaskLink DOS is available on the UniFam V8.2 CD or from the Data I/O Web site. See Readme.txt in the TaskLink DOS directory for installation.

IMPORTANT: For issues regarding floppy diskette support, see "Creating Floppy Diskette Set from CD" on page 7.

Note: You do not need to update your software if you received these User Notes with a new programmer.

IMPORTANT: All 3980xpi/3980 programmers are shipped with a hard drive installed. To determine if your (legacy) 3900 has a hard drive, see "Determining if 3900 Has Hard Drive" on page 6.

To use this update, your 3980xpi/3980/3900 must have a minimum of 2 MB of RAM available (displayed at the top of the 3980xpi/3980/3900 screen). However, to make maximum use of the programmer, 8 MB of RAM is required. If you need additional RAM, call your Customer Support office as listed in the Preface of your User Manual. In the U.S., call 1-800-332-8246.

What's New in Version 8.2

- ◆ **Device Lists on “UniFam 8.2/TaskLink 6.0” CD**
Lists of new and updated devices can be found on the “UniFam 8.2/TaskLink 6.0” CD in \Update_Info.
- ◆ **Update Now Available from “UniFam 8.2/TaskLink 6.0” CD**
The “UniFam 8.2/TaskLink 6.0” CD contains all the software required for updating your programmer. TaskLink™ for Windows® allows for easy installation of “UniFam 8.2” CD contents (Boot File, System Files, and Algorithm Sets).

For instructions on how to install “UniFam 8.2” programmer software from CD, see TaskLink for Windows Help and select “How to Update System Software.”

Please note that after inserting the “UniFam 8.2/TaskLink 6.0” CD into your CD drive, the TaskLink install program will begin. If you do not wish to install the latest version of TaskLink, simply close the TaskLink install program. You must use TaskLink 4.50 or greater to install your UniFam V8.2 programmer software update.

Note: Software updates from CD work only on programmers with a hard drive. To check if your programmer has a hard drive, see “Determining if 3900 Has Hard Drive” on page 6. Contact Data I/O Sales for information on upgrading your programmer to a hard drive.

- ◆ **Philips Semiconductor Changes**
Effective in V7.3, Philips Semiconductor requested that we update the following device menu selections to conform with their latest programming specification changes:

| Old Name | Now Called |
|---------------|----------------|
| 89C51RB2 | 89C51RB2H |
| 89C51RB2-PLC | 89C51RB2H-PLCC |
| 89C51RC2 | 89C51RC2H |
| 89C51RC2-LQFP | 89C51RC2H-LQFP |
| 89C51RC2-PLCC | 89C51RC2H-PLCC |
| 89C51RD2 | 89C51RD2H |
| 89C51RD2-PLCC | 89C51RD2H-PLCC |

◆ **Devices Now Listed under SST Only**

Prior to the V7.9 update, the devices listed below were located under both Manufacturer: SST and Manufacturer: Silicon Stor. Starting with V7.9 and thereafter, these devices are listed only under Manufacturer: SST.

| Device Name | Package | Pins |
|--------------|---------|------|
| 39VF512 | DIP | 32 |
| 39VF512-PLCC | PLCC | 32 |
| 39VF512-TSOP | TSOP | 32 |
| 39VF010 | DIP | 32 |
| 39VF010-PLCC | PLCC | 32 |
| 39VF020 | DIP | 32 |
| 39VF020-PLCC | PLCC | 32 |
| 39VF020-TSOP | TSOP | 32 |
| 39VF040 | DIP | 32 |
| 39VF040-PLCC | PLCC | 32 |
| 39VF040-TSOP | TSOP | 32 |
| 29EE512 | DIP | 32 |
| 29EE512 | PLCC | 32 |
| 29EE512 | TSOP | 32 |
| 29EE010 | DIP | 32 |
| 29EE010 | PLCC | 32 |
| 29EE010 | TSOP | 32 |
| 29EE020 | DIP | 32 |
| 29EE020 | PLCC | 32 |
| 29EE020 | TSOP | 32 |

◆ **TaskLink DOS Version Requirement**

TaskLink DOS users need to upgrade to V2.09 or greater in order to have access to all supports in this V8.2 software update. Version 2.09 of TaskLink DOS is available on the UniFam V8.2 CD or from the Data I/O Web site. See **Readme.txt** in the TaskLink DOS directory for installation instructions.

- ◆ **Mitsubishi Electric and Hitachi Transferred to Renesas Technology Corp**

On April 1, 2003, the semiconductor operations of Mitsubishi Electric and Hitachi were transferred to Renesas Technology Corporation. These operations include microcomputer, logic, analog and discrete devices, and memory chips other than DRAMs (flash memory, SRAMs, etc.). Beginning in V7.4, a new menu selection appeared for Renesas Technology Corporation.

As a result of this transfer:

All devices currently distributed by Renesas Technology Corporation are found under the "Renesas Tech" menu selection.

All new supports (devices) distributed by Renesas Technology Corporation, regardless of the Mitsubishi or Hitachi part markings, are found only under the "Renesas Tech" menu selection.

All existing supports for Mitsubishi or Hitachi devices currently marketed by Renesas Technology Corporation are found under both their previous menu selections and the "Renesas Tech" menu selection. This dual listing prevents problems with customer Tasks.

- ◆ **Parallel Port Upgrade Available**

Software support for parallel port upgrade configurations of the 3980 and the 3900 with hard drive became available at V6.6. The parallel port makes data download up to 600% faster using TaskLink™ for Windows®.

To obtain this upgrade, please call your Customer Support Office as listed in the Preface of your User Manual. In the United States, call 1-800-3-DATAIO.

- ◆ **3980xpi**

The 3980xpi offers many advantages in device programming. The new parallel port interface allows for quick data downloads for large devices, with data throughput up to 600% faster than on the 3980. With its integrated Mass Storage Module, the 3980xpi provides fast algorithm selection and high-capacity local data storage. And the 3980xpi is fully backwards compatible with previous software revisions and pre-compiled TaskLink Tasks or Kits. TaskLink™ for Windows® is included with the 3980xpi.

For information on how to connect and configure the 3980xpi, see TaskLink online Help (version 4.21 or newer).

- ◆ **What's New with TaskLink 6.0 for all Data I/O Programmers**

Expanded the size of Tasks to provide more room for parameter storage.

Added reference material about translation file formats (available from TaskLink's Help menu).

Reminders

- ◆ **Changes to Computer Remote Control (CRC) in V6.8**

Beginning with V6.8, new CRC commands were added for:

- Programmer type query
- Device type query
- Device Electronic ID query
- Fill RAM with non-repeating test pattern
- Device list query
- Selection for checksum type
- Stand-alone device erase operation
- Updating programmer software

For specific information about these new CRC commands, please see the updated UniSystem Computer Remote Control application note (983-0490-005) available on the Data I/O Web site at <http://www.dataio.com>.

Beginning in V6.7, the 49] command in CRC mode first issues a prompt before returning to Terminal Mode so that XPI programmers can return an error message if nothing is connected to the serial port.

- ◆ **Changes to Terminal Mode in V6.8**

Beginning with V6.8, the “Device Configure Edit” screen appears under the Main Menu in Terminal Mode when a device is selected with options that can be edited. For all other device types, the **More Commands** menu is positioned lower on the screen than in previous versions. Note that the “Device Configure Edit” screen is also still available from the **More Commands/Device Checks/Device Configure** menu.

The appearance of the “Device Configure Edit” screen changed in V6.8. With some newer sectored devices, it became possible to set the Begin Device and Device Block Size parameters from the “Device Configure Edit” screen. Also, the control-K option (^K) was added in V6.8. Pressing ^K changes the display and entry of sector information to an abbreviated mode useful for devices with a large number of sectors. Please refer to the Help feature for more information.

Device operation block limit parameters are reset to defaults when a new device type is selected (V6.8). In earlier versions, device operation block limit parameters were reset only if their values exceeded the size of the newly selected device.

- ◆ **Improved Checksum Calculation With Devices Using Sector Protect**

This change only affects filling the programmer RAM with “FF” before you program a 16-bit device. In versions of software before V5.9, if you entered sector protect data, only the least significant byte of the 16-bit word in RAM was changed. For example, if you entered sector protect data “01”, the 16-bit word would read “FF01”. All sectors were protected correctly but a different device checksum was calculated because the “FF” in the most significant byte (“FF01”) was added into the device checksum. In software version 5.9 and later, when you enter sector protect data “01”, the 16-bit word in the programmer’s RAM will be entered as “0001”. This modification was made so the high order byte does not change the device checksum reported at the end of the programming cycle.

- ◆ **Data I/O's Web Site Replaces 'Device List on Disk'**

As we announced in an earlier edition of these User Notes, we have upgraded our device support and information tools to take advantage of the power, speed, and accessibility of the World Wide Web. Since the release of V6.0, all our device support information, device footnotes, and capacitor block configuration information is on the Web. Our Web address is <http://www.dataio.com>. Data I/O has stopped distributing the Device List on Disk. If you would like a device list, download it from http://www.dataio.com/ftp/device_lists/3900.txt

Determining if 3900 Has Hard Drive

All 3980xpi/3980 programmers are shipped with a hard drive installed.

To determine if your (legacy) 3900 has a hard drive, go to the Main Menu (press F1 to return to the Main Menu) and go to:

More Commands/Configure System/Mass Storage

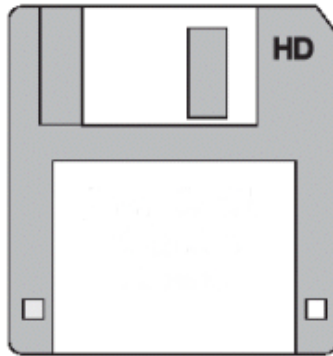
- ◆ If you do see **Mass Storage** at the lower left side of the **Configure Systems/Parameters** menu, you have a hard drive.
- ◆ If you do not see **Mass Storage** at the lower left side of the **Configure Systems/Parameters** menu, you do not have a hard drive.

Turn to the Table of Contents on page 9 of these User Notes to select the appropriate Quick Update Steps for your programmer.

Creating Floppy Diskette Set from CD

If your programmer does not have a Mass Storage Module (MSM), you will need to perform the following steps to create a set of system floppy diskettes from the "UniFam 8.2/TaskLink 6.0" CD. If you would like more information regarding upgrade options, call your Customer Support office as listed in the Preface of your User Manual. In the U.S., call 1-800-332-8246 (1-800-3-DATAIO).

You will need high density 1.44 MB 3.5" floppy diskettes for the complete disk creation process. High density disks have the "HD" logo embossed on the plastic disk jacket:.

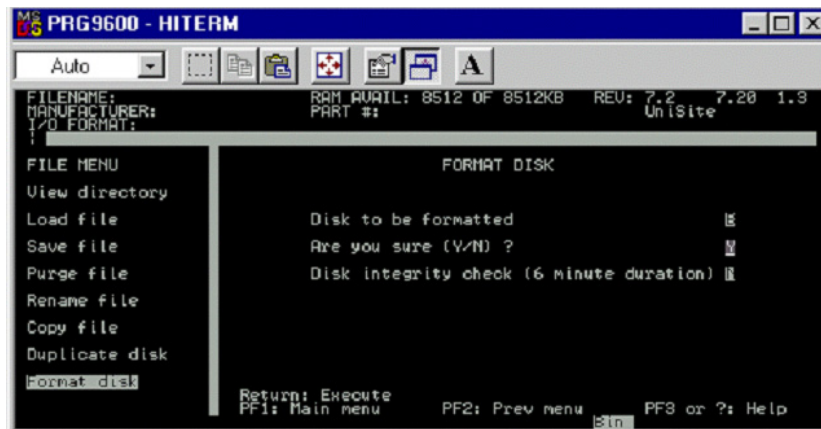


High Density Diskette

Blank 3.5" floppy diskettes are probably available at your local computer or office supply store. Additionally, these online vendors ship internationally and carry diskettes suitable for use with Data I/O products:

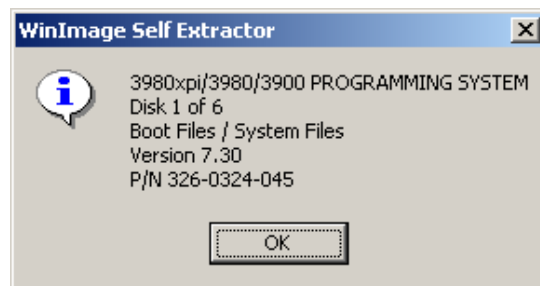
<http://www.compusa.com> or <http://www.cdw.com>

- 1 Boot your programmer using a previous version of software. After the programmer is booted, enter terminal mode. If using TaskLink for Windows, click **Tools >Programmer Interface** to enter terminal mode. If using TaskLink for DOS, click **Utilities > Programmer Interface**.
- 2 In terminal mode, press the following keys: **F1, M, F, F**. This moves you through the menu to the FORMAT DISK screen as shown below.



FORMAT DISK screen

- 3** On the FORMAT DISK screen, move the cursor to “Are you sure (Y/N)?” and press **Y**.
- 4** Insert a blank 1.44 MB floppy disk into the floppy disk drive on your programmer. Press **ENTER** on your keyboard to format the floppy disk.
- 5** Repeat the formatting process for the remainder of the disks.
- 6** Insert the “UniFam 8.2/TaskLink 6.0” CD into your PC's CD-ROM drive.
- 7** Browse to the 'X:\floppies\3900_v82' directory (where X is the CD-ROM drive).
Note: When you insert the “UniFam 8.2/TaskLink 6.0” CD into your PC, the TaskLink v6.0 install program will auto-launch. You may either install TaskLink at this time, or cancel and install it at a later time.
- 8** Click on the first file in the directory to launch the WinImage Self Extractor.
- 9** A status window will pop up describing the disk contents for this image. To create a label for the disk, copy the content information from the monitor onto a floppy diskette label for use in Step 11 below.



Status window describing disk contents

- 10** When prompted, insert a disk (formatted as described above) into your PC's floppy diskette drive. Click **OK** to start the disk creation process.
- 11** After the disk is created, attach the floppy diskette label.
- 12** Repeat Step 8 through Step 11 and select the next file in the directory until you have completed the entire disk set.

Quick Update Steps

Note: You do not need to update your software if you received these User Notes with a new programmer.

| If you are using: | Go to page: |
|---|--------------------|
| TaskLink (DOS) or PROMlink and 3980xpi/3980 (or 3900 with Hard Drive) . . . | 9 |
| TaskLink (WIN) and 3980xpi/3980 (or 3900 with Hard Drive) | 11 |
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TaskLink (DOS) or PROMlink and 3980xpi/3980 (or 3900 with Hard Drive)

Note: Regardless of the interface you use to operate your programmer, you must use TaskLink for Windows 4.50 or greater to update your system software and algorithms from CD. For instructions on how to update system software and algorithms, install TaskLink for Windows and see TaskLink online Help topic "How to Update System Software." Once the update is completed, you may uninstall TaskLink for Windows and continue to use your preferred interface to operate your programmer.

Note: TaskLink DOS users will need to upgrade to V2.09 or greater in order to have access to all supports in this UniFam V8.2 software update.

- 1** Turn off the programmer. Ensure that the RS-232C cable from the PC is connected to the programmer's **Remote** port. If a cable is connected to the Terminal port, disconnect it.
- 2** Type **tl a** (for TaskLink) or **pl** (for PROMlink) at the DOS prompt.
- 3** From the **Options** menu, select **Programmer Port** and verify that the PC's COM port is set to 9600 baud (the default baud rate on the programmer system disks) and the Host port is set to None.
- 4** From the **Utilities** menu, select **VT100 on Programmer Port**. A blank screen is displayed.
- 5** Insert the copy of the new Boot Files Disk in the programmer drive, and turn on the programmer.

- 6** When the programmer reboots, the following message is displayed:

```
Disk revision does not match ROM
  Disk revision = y.yy
  ROM revision = x.xx
```

Do you want to update ROM to new disk revision (Y, N)

Type **Y** to update the system ROM.

- 7** The programmer responds with the following message:

```
Current ROM contents will be overwritten.
WARNING: Removing power during update process damages the 3900!
Are you really sure? (Y, N)
```

CAUTION: Turning off system power or removing the Boot Files Disk while the 3900 is updating system ROM damages the 3900.

Press **Y** to confirm the update of the system software.

- 8** After the ">" is displayed, press **Z** (capital Z) and then **ENTER**. The powerup screen displays the following prompt: **Do you want to select a new terminal type? (Y/N)**

- a) If the current terminal type is **DEC VT100**, press **N** and then **ENTER**. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.
- b) If the current terminal type is not **DEC VT100**, press **Y** and then **ENTER**, and select the terminal type you want to use. Press **ENTER** to accept the selection.

At the **Save terminal type as power on default? (Y/N)** prompt, press **Y** and then **ENTER** to save the current terminal as the powerup default and return to the Main Menu. Go to "Updating the Hard Drive" on page 15.

TaskLink (WIN) and 3980xpi/3980 (or 3900 with Hard Drive)

Note: For instructions on how to install "UniFam 8.2" programmer software from CD, please see TaskLink™ for Windows® on-screen Help and select "How to Update System Software."

- 1** Turn off the 3890xpi/3980/3900. Ensure that the RS-232C cable from the PC is connected to the **Remote** port on the 3890xpi/3980/3900. If a cable is connected to the Terminal port, disconnect it.
- 2** Open by clicking on the TaskLink (WIN) icon on the desktop or by clicking on the **Start** window, opening **Programs**, and launching the TaskLink (WIN) application.
- 3** From the **System** menu, select **Options**, go to the **Port Settings** tab and verify that the PC's COM port is set to 9600 baud (the default baud rate on the programmer system disks) and the Host port is set to None.
- 4** From the **Tools** menu, select **VT100 on Programmer Port**. A blank screen is displayed.
- 5** Insert the copy of the new Boot Files Disk in the disk drive and turn on the 3890xpi/3980/3900.

- 6** When the programmer reboots, the following message is displayed:

```
Disk revision does not match ROM
  Disk revision = y.yy
  ROM revision = x.xx

Do you want to update ROM to new disk revision (Y, N)
Type Y to update the system ROM.
```

- 7** The programmer responds with the following message:

```
Current ROM contents will be overwritten.
  WARNING: Removing power during update process damages the 3900!

Are you really sure? (Y, N)
```

CAUTION: Turning off system power or removing the Boot Files Disk while the 3900 is updating system ROM damages the 3900.

Press **Y** to confirm the update of the system software

- 8** After the ">" is displayed, press **Z** (capital Z) and then **ENTER**. The powerup screen displays the following prompt: **Do you want to select a new terminal type? (Y/N)**
 - a) If the current terminal type is **DEC VT100**, press **N** and then **ENTER**. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.

Quick Update Steps

- b) If the current terminal type is not **DEC VT100**, press **Y** and then **ENTER**, and select the terminal type you want to use. Press **ENTER** to accept the selection.

At the **Save terminal type as power on default? (Y/N)** prompt, press **Y** and then **ENTER** to save the current terminal as the powerup default and return to the Main Menu. Go to "Updating the Hard Drive" on page 15.

HiTerm and 3980xpi/3980 (or 3900 with Hard Drive)

Note: Regardless of the interface you use to operate your programmer, you must use TaskLink for Windows 4.50 or greater to update your system software and algorithms from CD. For instructions on how to update system software and algorithms, install TaskLink for Windows and see TaskLink online Help topic "How to Update System Software." Once the update is completed, you may uninstall TaskLink for Windows and continue to use your preferred interface to operate your programmer.

- 1** Turn off the programmer. Make sure the cable connecting the programmer and the PC is connected to the programmer's Terminal or Remote port and that the programmer is set up properly as described in Chapter 2 of the User Manual.
- 2** Ensure that communication parameters are set as follows: DEC VT-100 terminal emulation, 9600 baud, no parity, 8 data bits, 1 stop bit, and the COM port (usually COM1) connected to the programmer. If necessary, edit the **prg9600.cfg** file to match these settings.
- 3** Type **program** at the DOS prompt to start HiTerm.
- 4** Insert the copy of the new Boot Files Disk in the programmer drive. Turn on programmer.
- 5** Once the programmer has completed the boot process, one of the following will apply depending on which port your PC is connected to.

- a) If the PC is connected to the programmer's Terminal port, the following prompt is displayed:

Do you want to select a new terminal type (Y/N) [N]

If the current terminal type is **DEC VT100**, press **ENTER**. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.

If the current terminal type is not **DEC VT100**, press **Y** and then **ENTER**. Select the appropriate terminal type and press **ENTER** to accept the selection. The programmer responds with the following prompt:

Save terminal type as power on default (Y/N) [N]

Press **Y** and then **ENTER** to save this terminal type as the powerup default. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.

- b) If the PC is connected to the programmer's Remote port, at the ">" prompt, press **Z** (capital Z) and then **ENTER**. The following prompt is displayed:

Do you want to select a new terminal type? (Y/N) [N]

If the current terminal type is **DEC VT100**, press **ENTER**. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.

If the current terminal type is not **DEC VT100**, press **Y** and then **ENTER**. Select the appropriate terminal type and press **ENTER** to accept the selection. The programmer responds with the following prompt:

Save terminal type as power on default (Y/N) [N]

Press **Y** and then **ENTER** to save this terminal type as the powerup default. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.

Approved Terminal and 3980xpi/3980 (or 3900 with Hard Drive)

Note: *Regardless of the interface you use to operate your programmer, you must use TaskLink for Windows 4.50 or greater to update your system software and algorithms from CD. For instructions on how to update system software and algorithms, install TaskLink for Windows and see TaskLink online Help topic "How to Update System Software." Once the update is completed, you may uninstall TaskLink for Windows and continue to use your preferred interface to operate your programmer.*

- 1** Turn off the programmer. Make sure the cable connecting the programmer and the terminal is connected to the programmer's Terminal or Remote port and that the programmer is set up properly as described in Chapter 2 of the User Manual.
- 2** Insert the copy of the new Boot Files Disk in the programmer drive, and turn on the programmer.
- 3** Once the programmer has completed the boot process, one of the following will apply, depending on which programmer port you are using.
 - a) If you are using the programmer's Terminal port, the following prompt is displayed:

```
Do you want to select a new terminal type (Y/N) [N]
```

If the current terminal type is **DEC VT100**, press **ENTER**. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.

If the current terminal type is not **DEC VT100**, press **Y** and then **ENTER**. Select the appropriate terminal type and press **ENTER** to accept the selection. The programmer responds with the following prompt:

```
Save terminal type as power on default (Y/N) [N]
```

Press **Y** and then **ENTER** to save this terminal type as the powerup default. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.
 - b) If you are using the programmer's Remote port, at the ">" prompt, press **Z** (capital Z) and then **ENTER**. The following prompt is displayed:

```
Do you want to select a new terminal type? (Y/N) [N]
```

If the current terminal type is **DEC VT100**, press **ENTER**. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.

If the current terminal type is not **DEC VT100**, press **Y** and then **ENTER**. Select the appropriate terminal type and press **ENTER** to accept the selection. The programmer responds with the following prompt:

```
Save terminal type as power on default (Y/N) [N]
```
 - c) Press **Y** and then **ENTER** to save this terminal type as the powerup default. The Main Menu is displayed. Go to "Updating the Hard Drive" on page 15.

Updating the Hard Drive

Note: Regardless of the interface you use to operate your programmer, you must use TaskLink for Windows 4.50 or greater to update your system software and algorithms from CD. For instructions on how to update system software and algorithms, install TaskLink for Windows and see TaskLink online Help topic "How to Update System Software." Once the update is completed, you may uninstall TaskLink for Windows and continue to use your preferred interface to operate your programmer.

- 1** Go to the **More commands/Configure System/Mass Storage** screen.
- 2** Choose **Y** (Yes) for installation of new software.
- 3** If the new system software is to be used with the configuration currently installed on the hard drive, select **Maintain the previous configuration** and press **Y**.

Note: If the new Boot Files Disk is not write-protected, the programmer will automatically update it with the previous configuration parameters installed on the hard drive to provide the user with a backup of the installed system.

- 4** Press **ENTER** to start the update and follow the instructions displayed on the screen. For instance, if the message **Insert Algorithm Set 3 Disk** appears, insert the Algorithm disk containing Algorithm Set 3.

CAUTION: Do not remove disks from the programmer during this operation unless you are prompted to do so.

CAUTION: Interrupting or aborting the update process may leave the programmer hard drive without the files it needs for proper operation.

The hard drive software update is complete when **OPERATION COMPLETE** is displayed in the message bar. The Revision Status fields should now contain the new version number in parentheses.

- 5** Remove floppy disks. Press **Esc**, then **CTRL+W**. The programmer will be rebooted with the software located on the hard drive and ready for operation.

NOTE: **TaskLink or PROMlink users should also perform the following steps:**

- 6** To exit the Terminal mode:
 - a) For TaskLink (DOS) or PROMlink, after the ">" is displayed, press **ALT+F1** to return to the TaskLink or PROMlink menu.
 - b) For TaskLink (WIN), from the **Hyper Terminal** menu, select **File**. Click **Exit** to return to the TaskLink menu.
- 7** Select **Device List Update** from the **Utilities** menu to update the device file so that it includes the new devices supported by the 3890xpi/3980/3900.

TaskLink (DOS) or PROMlink and 3900 without Hard Drive

If you only want to update your software, perform steps 1 through 9. If you want to carry the configuration file (**sysparm.sys**) forward from your old Boot Files Disk to the new Boot Files Disk, continue with steps 10 through 13.

Note: TaskLink DOS users will need to upgrade to V2.09 or greater in order to have access to all supports in this UniFam V8.2 software update.

- 1** Turn off the 3900. Ensure that the RS-232C cable from the PC is connected to the **Remote** port on the 3900. If a cable is connected to the Terminal port, disconnect it.
- 2** Type **tl a** (for TaskLink) or **pl** (for PROMlink) at the DOS prompt.
- 3** From the **Options** menu, select **Programmer Port** and verify that the PC's COM port is set to 9600 baud (the default baud rate on the programmer system disks) and the Host port is set to None.
- 4** From the **Utilities** menu, select **VT100 on Programmer Port**. A blank screen is displayed.
- 5** Ensure that a Base is installed in the 3900, insert the copy of the new Boot Files Disk in the floppy disk drive, and turn on the 3900.
- 6** When the programmer reboots, the following message is displayed:

```
Disk revision does not match ROM
  Disk revision = y.yy
  ROM revision = x.xx

Do you want to update ROM to new disk revision (Y, N)
Type Y to update the system ROM.
```

- 7** The programmer responds with the following message:

```
Current ROM contents will be overwritten.
WARNING: Removing power during update process damages the 3900!
Are you really sure? (Y, N)
```

CAUTION: Turning off system power or removing the Boot Files Disk while the 3900 is updating system ROM damages the 3900.

Press **Y** to confirm the update of the system software.

- 8** After the ">" is displayed, press **ALT+F1** to exit VT100 terminal mode and return to the TaskLink or PROMlink menu.
- 9** From the **Utilities** menu, select **Device List Update** to update the TaskLink or PROMlink device file so that it includes the new devices supported by the 3900.

The update is now complete. If you wish to carry the configuration file (**sysparm.sys**) forward from your old System Disk to the new Boot Files Disk, continue with step 10.

10 Return to the DOS prompt, insert the old System Disk (with the files you wish to carry forward) into the PC's disk drive, and copy the **sysparm.sys** file to your hard drive by entering

copy drive1: sysparm.sys drive2 (*drive 1 is the System Disk drive; drive2 is where the file will be stored*)

11 Remove the System Disk, insert the new Boot Files Disk (write-enabled), and copy the **sysparm.sys** file to the Boot Files Disk by entering

copy drive2: sysparm.sys drive1:sysparm.sys (*drive2 is the location of the stored file*)

12 From the **Utilities** menu, select **VT100 on Programmer Port**. A blank screen is displayed. Type **49]** and then press **ENTER** to enter Terminal mode. Press **F1** (turn on Caps Lock).

13 Remove the Boot Files Disk from the PC and insert it into the 3900. In the **More/Configure System/Restore** screen, press **F4** to reconstruct the parameter list.

*Note: If you do not follow step 13, the next time you boot up the 3900 with the new Boot Files Disk, **System parameter field is out of date. Do you want to update it?** will be displayed. Press **Y** and then **ENTER** to reconstruct the parameter list.*

14 Press **F1**. From the **More Commands** menu, select **Remote**. After the ">" is displayed, press **ALT+F1** to exit Terminal mode and return to the TaskLink or PROMlink menu.

HiTerm and 3900 without Hard Drive

If you only want to update your software, perform steps 1 through 7. If you want to carry the configuration file (**sysparm.sys**) forward from your old Boot Files Disk to the new Boot Files Disk, continue with steps 8 through 12.

- 1** Turn off the 3900. Make sure the cable connecting the 3900 and the PC is connected to the 3900's Terminal or Remote port and that the 3900 is set up properly as described in Chapter 2 of the programmer User Manual.
- 2** Ensure that the communication parameters are set as follows: DEC VT-100 terminal emulation, 9600 baud, no parity, 8 data bits, 1 stop bit, and the COM port (usually COM1) connected to the 3900. If necessary, edit the **prg9600.cfg** file to match these settings.
- 3** Type **program** at the DOS prompt to start HiTerm.
- 4** Ensure that a Base is installed, insert the copy of the new Boot Files Disk in the floppy disk drive, and turn on the 3900.
- 5** When the programmer reboots, the following message is displayed:

```
Disk revision does not match ROM
  Disk revision = y.yy
  ROM revision = x.xx

Do you want to update ROM to new disk revision (Y, N)
Type Y to update the system ROM.
```

- 6** The programmer responds with the following message:

```
Current ROM contents will be overwritten.
WARNING: Removing power during update process damages the 3900!
Are you really sure? (Y, N)
```

CAUTION: Turning off system power or removing the Boot Files Disk while the 3900 is updating system ROM damages the 3900.

Press **Y** to confirm the update of the system software.

- 7** Once the programmer has completed the boot process, one of the following will apply depending on which port your PC is connected to.
 - a) If the PC is connected to the 3900 Terminal port, the following prompt is displayed:

```
Do you want to select a new terminal type (Y/N) [N]
```

If the current terminal type is **DEC VT100**, press **ENTER**. The Main Menu is displayed and the software is updated.

If the current terminal type is not **DEC VT100**, press **Y** and then **ENTER**. Select the appropriate terminal type and press **ENTER** to accept the selection. The 3900 will respond with the following prompt:

Save terminal type as power on default (Y/N) [N]

Press Y and then ENTER to save this terminal type as the powerup default. The Main Menu is displayed and the software is updated.

- b) If the PC is connected to the 3900 Remote port, at the ">" prompt, press Z (capital Z) and then ENTER. The following prompt is displayed:

Do you want to select a new terminal type? (Y/N) [N]

If the current terminal type is DEC VT100, press ENTER. The Main Menu is displayed and the software is updated.

If the current terminal type is not DEC VT100, press Y and then ENTER. Select the appropriate terminal type and press ENTER to accept the selection. The 3900 will respond with the following prompt:

Save terminal type as power on default (Y/N) [N]

Press Y and then ENTER to save this terminal type as the powerup default. The Main Menu is displayed and the software is updated.

The update is now complete. If you wish to carry the configuration file (**sysparm.sys**) forward from your old System Disk to the new Boot Files Disk, continue with step 8.

- 8** Return to the DOS prompt and insert the old System Disk (with the files you wish to carry forward) into the PC's disk drive.

- 9** Copy the **sysparm.sys** file to your hard drive by entering

copy drive1:sysparm.sys drive2 (*drive1 is the System Disk drive; drive2 is where the file will be stored*)

- 10** Remove the System Disk and insert the new Boot Files Disk (write-enabled).

- 11** Copy the **sysparm.sys** file to the Boot Files Disk by entering

copy drive2:sysparm.sys drive1:sysparm.sys (*drive2: location of stored sysparm.sys file*)

- 12** Remove the Boot Files Disk from the PC and insert it into the 3900. In the **More Commands/Configure System/Restore** screen, press **F4** to reconstruct the parameter list.

*Note: If you do not follow step 12, the next time you boot up the 3900 with the new Boot Files Disk, **System parameter field is out of date. Do you want to update it?** will be displayed. Press Y and then ENTER to reconstruct the parameter list.*

Approved Terminal and 3900 without Hard Drive

If you only want to update your software, perform steps 1 through 5. If you want to carry the configuration file (**sysparm.sys**) forward from you old Boot Files Disk to the new Boot Files Disk, continue with steps 6 through 10.

1 Turn off the 3900. Make sure the cable connecting the 3900 and the terminal is connected to the 3900's Terminal or Remote port, and that the 3900 is set up properly as described in the "Connecting to a Terminal" section in Chapter 2 of the User Manual. The default baud rate is 9600.

2 Insert the copy of the new Boot Files Disk in the floppy disk drive and turn on the 3900.

3 When the programmer reboots, the following message is displayed:

```
Disk revision does not match ROM
  Disk revision = y.yy
  ROM revision = x.xx

Do you want to update ROM to new disk revision (Y, N)
Type Y to update the system ROM.
```

4 The programmer responds with the following message:

```
Current ROM contents will be overwritten.
WARNING: Removing power during update process damages the 3900!
Are you really sure? (Y, N)
```

CAUTION: Turning off system power or removing the Boot Files Disk while the 3900 is updating system ROM damages the 3900.

Press **Y** to confirm the update of the system software.

5 Once the programmer has completed the boot process, one of the following will apply depending on which programmer port you are using:

a) If you are using the Terminal port, the following prompt is displayed:

```
Do you want to select a new terminal type (Y/N) [N]
```

If the current terminal type is **DEC VT100**, press **ENTER**. The Main Menu is displayed and the software is updated.

If the current terminal type is not **DEC VT100**, press **Y** and then **ENTER**. Select the appropriate terminal type and press **ENTER** to accept the selection. The 3900 will respond with the following prompt:

```
Save terminal type as power on default (Y/N) [N]
```

Press **Y** and then **ENTER** to save this terminal type as the powerup default. The Main Menu is displayed and the software is updated.

b) If you are using the Remote port, at the ">" prompt, press **Z** (capital Z) and then **ENTER**. The following prompt is displayed:

Do you want to select a new terminal type? (Y/N) [N]

If the current terminal type is DEC VT100, press ENTER. The Main Menu is displayed and the software is updated.

If the current terminal type is not DEC VT100, press Y and then ENTER. Select the appropriate terminal type and press ENTER to accept the selection. The 3900 will respond with the following prompt:

Save terminal type as power on default (Y/N) [N]

Press Y and then ENTER to save this terminal type as the powerup default. The Main Menu is displayed and the software is updated.

The update is now complete. If you wish to carry the configuration file (**sysparm.sys**) forward to the new Boot Files Disk, continue with step 6. You need an IBM-compatible PC to perform the following steps.

- 6** Go to the DOS prompt and insert the old Boot Files Disk (with the files you wish to carry forward) into the PC's disk drive.
- 7** Copy the **sysparm.sys** file to your hard drive by entering
copy drive1:sysparm.sys drive2 (*drive1 is the System Disk drive; drive2 is where the file will be stored*)
- 8** Remove the old Boot Files Disk and insert the new Boot Files Disk (write-enabled).
- 9** Copy the **sysparm.sys** file to the Boot Files Disk by entering
copy drive1:sysparm.sys drive2 (*drive1 is the System Disk drive; drive2 is where the file will be stored*)
- 10** Remove the Boot Files Disk from the PC and insert it into the 3900. In the **More Commands/Configure System/Restore** screen, press **F4** to reconstruct the parameter list.

*Note: If you do not follow step 10, the next time you boot up the 3900 with the new Boot Files Disk, **System parameter field is out of date. Do you want to update it?** will be displayed. Press Y and ENTER to reconstruct the parameter list.*