

## XEROX Software System Unit

May 1990

Enclosed you will find a new version of XEROX Expert 4.0.2 Software disks for the 8010 Workstation. This Software is provided by the Systems Software Unit of XEROX in response to any problems you were having with the previous version on Expert. Please replace the existing XEROX Expert software that you are presently using with the new version enclosed.

### DOCUMENTATION

Documentation is included that will discuss installation of the new software as well as its enhancements. *A Users Guide Revision Record for Using Expert* is also provided so the proper pages can be replaced in your existing documentation.

### SUPPORT:

Xerox will support this software through your normal channels. If you experience a problem with your system, and you contact Customer Support, please notify them that you are running Expert 4.0.2 software.

### CONFIRMATION:

Please contact the SCSC when you have received the software and tested it. Your feedback will insure that future problems can be resolved quickly, and we can provide quality support to you.

Product Support Consulting Office

Software Systems Unit

# **Expert 4.0.2 Release Document**

All text and illustrations in this document were prepared on the Xerox 6085 Professional Computer System.

This publication could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in any new editions of this publication.

Xerox® and all Xerox products mentioned in this publication are trademarks of Xerox Corporation.

VAX® is a trademark of Digital Equipment Corporation.

Versatec, Versatec Plot Server, and ServeWare are trademarks of Versatec, Inc.

©1990, Xerox Corporation. All rights reserved.

Publication number: 610E21780

Copyright protection claimed includes all forms and matters of copyrightable material and information now allowed by statutory or judicial law or hereinafter granted, including without limitation material generated from the software programs which are displayed on the screen such as icons, screen displays, looks and so forth.

Printed in USA

---

# Table of Contents

|   |      |
|---|------|
| <b>1. Introduction</b>                                  | 1-1  |
| <b>2. New Features in Release 4.0.2</b>                 | 2-1  |
| General   | 2-1  |
| Expert Drafting   | 2-1  |
| <b>3. Changes to the User.cm File</b>                   | 3-1  |
| The 4.0.2 User.cm File                                  | 3-1  |
| <b>4. Revised and Updated Documentation</b>             | 4-1  |
| Overview  | 4-1  |
| Using Expert  | 4-1  |
| Expert Schematics                                       | 4-1  |
| Expert Drafting   | 4-1  |
| <b>5. Notes and Cautions</b>                            | 5-1  |
| Overview  | 5-1  |
| All Applications  | 5-1  |
| Expert Schematics                                       | 5-4  |
| Expert Placement and Routing                            | 5-7  |
| Routing   | 5-8  |
| Board Definition  | 5-9  |
| Output  | 5-9  |
| Expert Drafting   | 5-10 |
| Expert Illustrator                                      | 5-12 |
| Expert Electronics Library                              | 5-13 |
| <b>6. Software Installation</b>                         | 6-1  |
| Introduction  | 6-1  |
| Installing Expert 4.0.2 on 6085 and 6085-2 Workstations | 6-2  |
| Overview  | 6-2  |
| Installation Procedure                                  | 6-3  |
| Installing Expert 4.0.2 on an 8010 Workstation          | 6-11 |
| Overview  | 6-11 |
| Installation Procedure                                  | 6-12 |

|   |      |
|---|------|
| Installing Expert 4.0.2 on a 6080 Color Workstation | 6-19 |
| Overview  | 6-19 |
| Installation Procedure                              | 6-20 |

**7. Appendixes**

|   |     |
|---|-----|
| Overview  | 7-1 |
| Workstation Checklist                             | 7-3 |
| Expert 4.0.2 Floppy Disk Software List            | 7-5 |
| 6085 and 6085-2 Floppy Disk Set                   | 7-5 |
| 8010 and 6080 Floppy Disk Sets                    | 7-6 |
| Expert Schematics Function Keys                   | 7-7 |
| Function Keys on the 6085 and 6085-2 Workstations | 7-8 |
| Function Keys on the 8010 Workstation             | 7-9 |

This document accompanies the 4.0.2 release of Expert software. If you notice any problems or discrepancies in these materials, please notify the Xerox Customer Support Center at the following telephone number.

- **(214) 420-0599**

Release 4.0.2 contains a number of fixes to SPARs (Software Performance Action Requests) as well as new features. Section 2 details the new features in this release.

In release 4.0.2, the **VP Expert** application has been divided into five smaller applications. This allows for easier upgrade of specific Expert applications in future software releases. It also lets the user run those applications he or she chooses, thereby improving system performance. Expert 4.0.2 consists of the following software modules:

- **VP Expert Foundation**
- **VP Expert Drafting** (optional)
- **VP Expert Schematics** (optional)
- **VP Expert Placement and Routing** (optional)
- **VP Expert Common Software**

Depending on the software licenses your company purchased, you will load some or all of these software modules on the workstation.

Complete instructions for installing software on your workstations are detailed in Section 6. This section, as well as the appendixes in Section 7, are designed to be separated from the rest of the release document to facilitate the installation process.

Please be sure every workstation user saves everything he or she values on the workstation's disk to a file service or to floppy disks before beginning software installation; if it is necessary to partition a disk, anything not saved will be lost forever.

Section 3 details changes made to the User.cm since the last release of Expert. Incorporating these changes into your User.cm is optional.

Section 4 describes the changes that have been made to the Expert documentation. Updated documentation is automatically included with the software.

Section 5 contains notes and cautions about the 4.0.2 release.

Read through the sections of this document that apply to your needs. If you are a system administrator, be sure to inform Expert users at your site of the information in those sections.



---

## 2. New Features in Release 4.0.2

---

### General

---

- Expert supports the Innovative Data Technology 1054 magnetic tape drive. The IDT 1054 is a local tape drive that connects to the workstation's RS232C port.
- You can now send drawings and schematics to Versatec plotters connected to Versatec 890 and 895 Plot Servers. Additionally, Expert supports the Versatec ServeWare System. These Versatec products use the TCP/IP communication protocol.
- Expert application software now runs on the Xerox 6085 Model 2 workstation.

---

### Expert Drafting

---

- You can produce IGES files that meet CALS (Computer-Aided Acquisition and Logistic Support) requirements for Class 1 documents.



### 3. Changes to the User.cm File

For the 4.0.2 release of Expert, we made modifications to the User.cm file. These changes are shown below. After reviewing the changes, you can decide whether you wish to either replace your current User.cm with the new one or modify it based on the changes we've made.

#### The 4.0.2 User.cm File

| Section/Entry   | Type of Change      | Description  |
|---|---------------------|--|
| [Schematic Output]<br>Device:   | New default setting | The default setting for Device: is VRF.  |
| [ARPA]<br>HostAddress:<br>Plotters:<br><br>[Plotter]<br>Model:<br>Bytes per scanline:<br>ServerType:<br>Device:       | New sections*       | These sections are used by Expert when communicating with a Versatec Plot Server: Models 890 or 895, or ServeWare. Refer to <i>Using Expert</i> , Appendix 8.2 for a complete description of these parameters and options.                               |
| [Output Server Tool]<br>Host:   | New entry*          | The Host: entry lets you specify the name of either an Output Server or a Plot Server.   |
| [IGES]<br>CALs class:<br>Max bend:<br>Vectorize splines:<br>EOL:  | New entries         | This section includes new entries for IGES CALs conversion.<br><br>CALs class:, Max bend:, Vectorize splines:, and EOL: are described in <i>Expert Drafting</i> , Chapter 6, Section 6.1.3.  |
| [IDT 1054]<br>Device type:<br>Protocol:<br>Line speed:<br>Parity:<br>Character length:<br>Stop bits:<br>Flow control: | New section         | Use this section to define the default settings for the IDT 1054 local tape drive.<br><br>Device type:, Protocol:, Line speed:, Parity:, Character length:, Stop bits:, and Flow control: are described in <i>Using Expert</i> , Chapter 6, Section 6.4. |

\* These sections and entries were included in the 4.0 User.cm file, but were not operational.



---

**Overview**

---

In release 4.0.2, three manuals were revised: *Using Expert*, *Expert Schematics*, and *Expert Drafting*. Included with your software are the updated pages for each manual.

The following sections provide a summary of the significant changes made to the user manuals.

---

**Using Expert**

---

- Sections 6.2 and 6.4 include the information and procedures needed to use the IDT 1054 tape drive. Section 6.2 also provides information on the Versatec ServeWare System.
- A description of the Versatec ServeWare System is included in Appendix 8.2, *Using Versatec Plot Servers*.

---

**Expert Schematics**

---

- Information specific to using both Versatec Plot Servers and the IDT 1054 tape drive with the Expert Schematics package has been added to Section 12.1, *The Schematic Output Tool Window*.

---

**Expert Drafting**

---

- Additional information about the conversion of Expert drawings to and from IGES format is provided in Section 6.1.3, *IGES*, including instructions for producing CALS-compliant IGES files.
- Section 6.2, *Plot*, describes the use of Versatec Plot Servers. Also, the discussion of plot formats has been revised.



---

## Overview

---

This section contains notes and cautions on release 4.0.2. All previous Expert notes and cautions, if still relevant, are repeated here; they are preceded by a filled circle (●). Those notes and cautions preceded by a box (□) are new to Expert 4.0.2. Read through this section and inform users of its contents. Items which are of particular importance are framed by large grey arrows.

---

## All Applications

---



- **Incompatibility of 4.0.2 files with previous versions.** Schematic, drafting, library, and placement and routing files created in release 4.0.2 are not compatible with pre-4.0 versions of Expert. Opening any of these files on a workstation running 3.8 or pre-3.8 Expert software will cause the system to crash. It is a good idea to make archive copies of all your design files in case you need to open them on workstations that are not running release 4.0.2.
- **Copying files from ViewPoint to Expert.** You can copy the following types of files from ViewPoint to Expert: binary files (file type 0), text files (file type 2), print format documents, and bitmap canvases. If you try to copy any other type of file from ViewPoint to Expert, the conversion process will damage the file and you will not be able to reopen it in ViewPoint.
- **Floppy drive usage with Expert and ViewPoint files.** When storing Expert files to a floppy disk using Expert's floppy commands, retrieve the files from that floppy disk to Expert. Likewise, when storing ViewPoint files to a floppy disk using ViewPoint commands, retrieve the files from that floppy disk to the ViewPoint desktop.
- **Powering off an Expert color workstation.** The **Power Off** command is no longer functional for 6080 color workstations. Although **Power Off** is listed in the Boot from Menu, do not select the command.
- **Number of workstation disk pages.** When there are approximately 1000 free disk pages remaining on your workstation's rigid disk, you should either store files on a file

Server or floppy disk, or delete files. Your workstation could either hang or crash when it runs out of disk pages.

- **Remote workstations.** Expert does not support remote workstations.



- **Copying Expert to other workstations.** When you copy the VP Expert Common Software file to the ViewPoint Application Loader icon, Expert is product factored to the workstation. Therefore, you cannot copy the file to other workstations.
- **Changing the software password for Expert.** To change the software password for Expert, you must install a new copy of VP Expert Common Software in the Application Loader icon. You cannot boot the workstation and then change the software password.
- **File Tool and MFileServer restrictions on a ViewPoint workstation running Expert software.** When using the File Tool on a ViewPoint workstation running Expert software to access files on another workstation, the version of Expert installed on the other workstation must be 4.0 or 4.0.x. Although, you can use the File Tool on a workstation running a previous release of Expert software (e.g., release 3.8) to access files on a ViewPoint workstation running Expert 4.0 or 4.0.x software.
- **Copying folders from ViewPoint to Expert.** If you copy a ViewPoint folder to Expert, the system creates a subdirectory instead of an Expert design folder. It is recommended that you open the ViewPoint folder and copy the individual files to Expert.
- **Do not create an Expert Essential Data folder.** The ViewPoint folder named Expert Essential Data is used by Expert for software loading. The files in this folder are copied to Expert when you run Expert from the Application Loader icon. If you create a folder named Expert Essential Data, the system would copy the files from that folder when starting Expert.
- **Deleting VP Expert from a workstation.** Deleting the Expert applications from the Application Loader icon removes the applications from your workstation but does not delete the Expert file system, which consumes considerable disk space. To recover the disk pages used by Expert, you have two options. You can either repartition the workstation disk and re-install ViewPoint software; or delete all of the Expert files, which leaves a very small Expert file system on your disk. The latter option is less time-consuming. If you decide to delete the Expert files, type the following commands in the Executive window:

```
Zap Fonts > * Msgs > * Tip > * * RETURN  
Delete Fonts Msgs Tip RETURN
```

- **Pen plotter dashes: option in User.cm.** The **Pen plotter dashes:** option in the [HARDCOPY] section of the User.cm is not operational for Hewlett-Packard and Houston Instrument pen plotters. Make sure this option is set to **false** when plotting to either of these types of plotters.
- **Printing on a local 4045 Laser CP printer.** To print an Expert file on a 4045 Laser CP, you must first copy the file to ViewPoint using the **Expert to VP** command. Once the file is on the ViewPoint desktop, you can copy or move it to the printer icon.

ViewPoint 2.0 supports printing of text files, provided the file is smaller than 64 KBytes.

- **Floppy erase command changes the floppy disk's name.** The **floppy erase** command erases the contents of the floppy disk and also changes the name of the floppy disk to the name of the disk that was previously inserted in the floppy disk drive. To preserve the floppy disk's name, use either the **floppy delete** or the **floppy format** command.
- **Design folder displays incorrect file size.** The design folder may display an incorrect size for a file when it is created. The correct file size will be displayed when the file is opened and then saved.
- **Plotter pen width settings in the User.cm.** When entering a value for the **Pen widths:** parameter in the plotter sections in the User.cm, make sure you enter a pen width value converted to the nearest and lowest whole mil. For example, 13.8 mils should be entered as 13 mils. Failure to use the correct values will make your plot files larger than they need to be, and may also produce undesirable plotting results.
- **User.cm entries for vector plotting.** If you make changes to the User.cm that affect the way vector plots are created, you will need to recreate any existing plot files in order for these changes to become evident.
- **Automatic backup to empty directory.** In the design folder, when setting the **Directory:** for automatic file backup, you must specify a directory with at least one file in it. If you specify an empty directory, the system responds with an error message stating that the directory does not exist.
- **Writing IGES files adds carriage returns.** Writing an IGES file to a labeled tape will add carriage returns to the file written to tape. When reading the tape back in, set **CR** and **LF:** in the Char-Options window to **del CR**.
- **Text in file windows may disappear on Expert color workstations.** Occasionally, when editing text in a file window, some text disappears. If this should happen, first tiny the file window and then size it. The text will reappear.
- **Setting options in the Executive window.** To avoid problems when using options (e.g., *d, l, t*) with any of the Executive window commands, use lowercase letters. In other words, do not use uppercase letters for the options.
- **Automatic backup to VAX.** If you decide to utilize the automatic backup to VAX feature, you must complete the appropriate parameters for the desired file(s) in the design

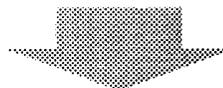
folder (as described in the *Using Expert User's Guide*). You must also ensure that the correct options have been specified in your User.cm for the MFileServer Tool and the Terminal Tool. For the MFileServer Tool, make sure that the InitialState: parameter has been set to either *tiny* or *active* and that the Running: parameter has been set to *true*. For the Terminal Tool, make sure that the Login parameter has been set to *false*.

- **User.cm entries for the Output Server Tool.** If you need to edit the [Output Server Tool] section of the User.cm, be sure to include at least one entry for the **Formats:** parameter.
- **Plotting from a 6085 or 6080 color workstation.** You cannot plot from a 6085 or 6080 color workstation connected to a plotter through a 290 Personal Plotter Interface Unit.

---

## Expert Schematics

---



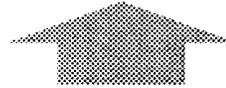
- **Pause bus command.** The **Pause bus** and **Pause bus and apply** commands perform the same function.
- **Replaying schematic edits.** Do not use the **Replay changes!** command.
- **Avoid making connections between a net segment and a bus segment with two bus connectors.** If you wish to tie two bus lines together, use two different segments of the same net to attach to the bus.
- **Having a net on two different bus lines of one bus.** A bus can carry a single net on more than one of its lines. You should, however, avoid this situation, especially when the bus may be copied or moved to another page in the same schematic or to a different schematic.
- **Use of sub-buses.** Refrain from using sub-buses when creating buses. Although this feature works, it is complicated, making it easy to make connections to the wrong lines in the bus.
- **Connectivity of nets.** Separate net segments do not need to be connected to connectivity symbols to be part of the same net. They need only have the same net name or net number. As a result, when you copy a named net, the copied net segment, which has the same net name, is part of the original net even though no graphic connection is visible on the schematic. Expert asks you to confirm such a connection, and notice of it appears in the message window.

Separate bus segments also are treated as parts of the same bus if they have the same bus name. If you separate a bus into two pieces by deleting a segment, each of the pieces

assumes a distinct identity as a bus in its own right; both buses will, however, have the same nets.

When you connect a net to a bus, the net is assigned a line number on the bus. Expert displays the line number in the property sheet when the connection is created. Nets connected to the same bus line are connected to one another. Be sure that two nets do not share the same line number on the same bus unless you intend them to be connected.

- **Access rights.** Do not attempt to change access rights to a schematic while the schematic is open.



- **Display of fill styles.** Depending on a symbol's shape and the scale of the window that contains the symbol, the fill style may not display correctly on a ViewPoint workstation running Expert software. In addition, the symbol may not raster plot correctly.
- **Symbols with points.** While it is now possible to include several styles of points as part of a symbol when creating it in the Library Editor, these points are not displayable when the symbol is placed in a schematic (other symbol graphics will still display).
- **Symbol line styles.** Symbols that have lines, with a thickness greater than one, such as *medium* or *thick*, do not display properly. To work around this, your librarian should make sure that the line's **Line style:** property has a value of *solid* and a **Thickness:** value greater than one.
- **Vector plotting of filled areas.** When plotting symbols which have area fills, only solid fills are printed for areas other than ellipses. In filled ellipses of any kind, only the outline is printed.
- **System ignores Extending: parameter field.** The busing software provides special property sheets which enable you to establish which bus lines carry signals. The **Extending:** parameter field that appears in these property sheets does not currently function.
- **Plotting B size schematics to VRF.** To plot a full size B or half size D schematic to a V-80 electrostatic plotter in VRF format, you must reduce the plot scale or change the schematic page size. Changing the schematic page size so that you can plot VRF files to the V-80 will cause the plotter to feed paper continuously if there are graphic objects outside the schematic boundaries.
- **Library symbol and schematic symbol object types.** If you take advantage of user-defined properties, be sure you understand the contrasting use of these object types. You should be sure that your librarian assigns those properties to the library symbol object type whose default values are likely to be changed across your designs and assigns those properties to the schematic symbol object type whose

default values are likely to remain stable. Note that this discussion applies equally to the library pin and schematic pin object types.

When an instance of a particular type of logic symbol (such as a NAND gate) is created in a schematic and includes properties assigned to the *library symbol* object type, the default values for these properties can be changed in the Library Editor. Thereafter every instance of the symbol, in all designs associated with the library containing the revised symbol, is updated with the new value automatically. In contrast, when an instance of a particular logic symbol is created in a schematic and includes properties assigned to the *schematic symbol* object type, the default values for those properties can only be changed through the symbol's property sheet; there is no way to propagate the change automatically to all instances of that particular symbol.

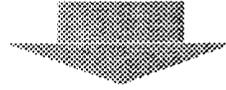
Please be sure you realize that a change made to a default value in the Dictionary Defaults Sheet is propagated equally to all symbols (or symbol pins) in a particular schematic. The system makes no distinction between particular types of symbols and updates only the symbols of the schematic containing the Dictionary Defaults Sheet.

- **Data truncation in the Extractor Tool.** When you extract information from a schematic and the system must truncate some data, it does so without providing a warning to you. In the future the system will present an appropriate warning when a truncation is unavoidable. To prevent this condition from arising in the first place, always make sure that the field width indicated in the report format is large enough to accommodate the data to be extracted.
- **Accessing other files in the Formatter and the Extractor tools.** Very rarely, you may encounter the situation in which the system cannot access a particular file (usually a library) and displays the message "Cannot access file. File is in use." This message may be displayed even when the file in question is not actually in use. The workaround for it is to reboot your system.
- **Limited number of extraction algorithms available in Formatter Tool.** You can extract information from symbol, net, line, and pin objects. You cannot currently extract information from schematic, page, bus, and bus connector objects.
- **Formatter Tool specification files.** When you load an existing specification file into the Formatter Tool, the system reads the file and checks the integrity of the section that is currently selected. If you need to be certain that all the sections of the file are acceptable to the system before you perform any edits, invoke the **Save changes!** command. This will check the whole file and report to you any discrepancies found.

---

## Expert Placement and Routing

---



- **Crash when bringing up Display Properties sheet for place and route file with a long name.** If the name of your place and route file (.pcb file) is approximately 25 characters long, the system will crash when you select the **Display props!** command. To avoid this, you can rename the file.
- **Potential crash if connection segment is colinear with place and route boundary.** If you edit a vertical connection on a horizontal layer or a horizontal connection on a vertical layer so that one of its segments becomes colinear with an edge of a placement and routing area, the system may crash when you subsequently run automatic global or automatic etch routing, space etch, or update channel density. While you may place segments as close as 1 mil from the boundary, make sure you do not overlay the boundary. If this problem exists, it will be marked as a violation when **Check board** is run.
- **ValueToEnter: parameter and part packaging.** If the **ValueToEnter:** parameter in the [SchematicEditor] section of your User.cm is set to **abbreviation**, then use symbol abbreviations instead of ID numbers when placing symbols on a schematic. If you wish to use either symbol ID numbers or a combination of ID numbers and abbreviations, then set the **ValueToEnter:** parameter to **none**. When placing symbols on a schematic Expert updates the **Physical part:** field in the Symbol Properties sheet with symbol information that is based on the entry specified for **ValueToEnter:**. If you don't set the **ValueToEnter:** parameter appropriately, you will have part packaging problems.
- **Physical parts containing circles.** When using Expert Drafting to create shapes for physical parts, any circle in the shape must be dissected before storing the part to the library. If you do not dissect the circle(s) and then read the part into a drawing window, the system will either display a message stating that the shape does not contain any geometry (if the part consists of circles only) or remove the circle(s) from the part (if the part also includes other geometry).
- **Opening the place and route file and converting the associated schematic.** Prior to opening the place and route file associated with a 2.4-level schematic, you should convert the schematic to operate with the current release. To do so, you must open the .df file, make it editable, and then select either the **Save!** or **Save and close!** command. Note that a schematic design created under 2.4-level software can be read during board open; the system converts the schematic information it requires in order to permit you to perform placement and routing. However, the converted schematic is not saved automatically when you save the board. Nor is it

possible for you to save the schematic separately since a schematic cannot be edited when the .pcb file is open.

- **Etch in no route areas.** The system lets you interactively put etch through no route areas. **Space etch** will not automatically remove etch from these areas. **Check etch** will mark the etch you put through no route areas as invalid. Note: Automatic etch route will not put etch through no route areas.
- **Space etch** cannot move the following:
  - ▶ Part pins
  - ▶ Vias
  - ▶ Junctions formed by three etch segments
  - ▶ Etches that cross a horizontal channel on a horizontal layer or a vertical channel on a vertical layer.



- **Changing the width of etch with vias.** When modifying a piece of etch, the system appears to make the necessary corrections to any vias on that etch segment. After you create a photoplot of the board you will discover that the system did not correct the vias. You must manually change the aperture(s) in the photoplot drawing.

## Routing

---

- **Vias.** During automatic global routing of your board, the system occasionally places vias next to or on top of part pins. This can be unsightly, but the etch router will move these vias.
- **Restore net width.** This property, in the Routing Properties sheet, affects only power and ground etch; the property has no effect on signal traces.
- **Automatic etch route.** When you select this command, the system routes all etch incomplete routes on the board. If your board has no etch incomplete routes, the system will display the following message "0 segments were completed out of 0 total (100%), 0 etch incompletes were not completed, 0 feed-throughs were added." Any incomplete connections you see on your board at this point are global incompletes, created as each part was placed. To etch route these connections, first select the **Automatic global route** command and then the **Automatic etch route** command.
- **Via grid.** Because Expert uses a gridless router, vias can be positioned off-grid. The **Automatic global route** and **Drop** commands do not observe the via grid. You may place vias off-grid using the **Edit etch** command, provided you turn the **Manually edited vias on grid** property off. **Check etch** will

mark vias violating design rules as invalid. You will need to correct manually any such violations.

When you use the **Edit etch** command with the **Manually edited vias on grid** property on, the system places vias on-grid. The **MOVE** key, automatic etch routing, and manual global routing operations always place vias on-grid.

Note that the size of a via always reflects the default etch rule assigned to its net. Even if you select an etch segment or segments, open the associated Net Properties sheet, and specify an etch rule different from the default etch rule assigned in the schematic, any vias between the affected segments will not change size.

---

## Board Definition

---

- **Placement and keepout areas.** You must use **Box** commands to create these areas in the boardblank. Once they have been created they can be modified only in ways that preserve their identity as *boxes*. They may not be unclustered, modified, and reclustered again, or stretched into non-orthogonal shapes.

---

## Output

---

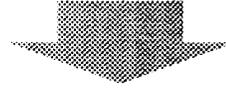
- **Checkplots ignore via pad setting.** When you create checkplots of the pad master layer or top soldermask layer of a pc board, the system plots all pads as though they were part pads, and ignores the setting you have chosen for **Via Pads Display** in the checkplot drawing's Pad Table.
- **Checkplots contain global incompletes and vias.** Even if you set the tables in the checkplot drawing so as to exclude global incompletes or vias from your checkplot drawing, the system will ignore your decision and plot all global incompletes and vias on your pc board. You can quickly remove all vias from a checkplot drawing by bringing up the **Select** command window, setting the **Objects** parameter field to **points** and the **Choice** parameter field to **select**, selecting the command **Everything**, and pressing the **DELETE** key.
- **Creating a checkplot drawing.** As released in 2.5, the system automatically copies the master checkplot drawing into your design folder when you use the **Checkplot** command. Do not copy and rename the master checkplot drawing before editing the checkplot drawing tables. In other words, skip Steps 2 through 4 on page 12-9, Chapter 12, Section 12.1.3, *Creating a Checkplot Drawing*.
- **Drill tapes.** The EIA-formatted file created with the **Generate drill tape** command cannot be successfully output to a drill tape machine. Because the **Write drill tape** command appearing in the pc board display subwindow's CAM Menu only operates on files with this format, do not select this command. Instead, to write a drill tool path file to a tape punch machine, you must first create an ASCII-formatted file and then output it using the RS232C Tool. Note that you must reset the following properties in the

RS232C Tool Options property sheet to the indicated default values: **XOff (Octal)**= 223B; **Character length**: {8}.

---

## Expert Drafting

---



- **Unclustering drafting parts that contain text fields.** Use the **Uncluster part** command to uncluster drafting parts that contain text fields. Failure to do this causes the system to delete any text in the fields when you close and reopen the drawing.
- **Unconditional uncluster command and dimensions.** After unclustering a dimension using the **Unconditional uncluster** command, you cannot re-cluster the dimension objects (text, lines, arrowheads) into a dimension. Therefore, we recommend that you delete the dimension objects and create a new dimension.
- **Objects outside the drawing page.** Whenever you create an object that falls outside the limits of the drawing page, the system issues a message warning you to either delete the object or modify the page size. Note that these objects are often created within sections of the drawing that you cannot currently see. Never disregard this message. Immediately pressing the **UNDO** key will delete all objects created by the most recent command.

To delete objects outside the drawing page, first display the full drawing. Then press the **SHIFT** and **SAME** keys simultaneously to select all unprotected objects in the drawing. Next, from the **Select** commands page, issue the **Within rectangle** command with the **Choice:** option set to **deselect**. When the mouse-shaped cursor appears, deselect all objects within the drawing format by dragging the rectangle from one corner of the format to the opposite corner and releasing. Finally, press the **DELETE** key to delete all objects lying outside the format.



- **Command window overlapping Library Editor window.** When you select a command from a command window that overlaps the Library Editor window, the system will either initiate the **Move** command or display the following message: "Library Editor for Library: xxx, ID: xxxxx not in edit mode."
- **Editing an existing drafting part.** After you've edited an existing drafting part in a drawing window and written the part to the library, the system does not immediately update other references of the part in the drawing. You must close

and reopen the drawing to update all references of the part. The same is not true for other open drawings that contain this part; the system updates those part references after you write the part to the library.

- **IGES conversion and special characters.** When converting an IGES file to Expert format, you no longer need to delete either carriage return or line feed characters from the IGES file. Expert automatically removes these characters when they follow an IGES record; Expert ignores carriage return and line feed characters that appear in locations other than the ends of IGES records.
- **Dissecting ellipses.** When dissecting an ellipse into more than two pieces, Expert does not always cut every segment.
- **Intersections of hyperbolas and parabolas.** When attempting to modify geometry at an intersection of either a hyperbola or parabola, make sure neither object has unlimited endpoints. Otherwise the system may have trouble finding the intersection.
- **Drawings scales cannot be deleted.** Expert Drafting supports up to 16 drawing scales per drawing. However, once a drawing scale has been assigned to a drawing, there is no way of removing that scale from the drawing. If you customize your drawing formats, assign only a few drawing scales to your ANSI\*.dwg and ISO\*.dwg drawings to prevent exhausting available scale values.
- **Margins for Interpress output.** When outputting drawings to a Xerox laser printer using the **Plot to local file on disk:** command with the parameter field set to **Interpress**, the system adds a 0.1 inch margin to all sides of the printed page. This is intended to prevent the printing of the image onto the very edges of the page. As a result, the **Show scale** command on the **Plot** page will not permit you to output an 8½ x 11 inch drawing to a sheet of the same size at a scale of 1. Adjust your drawing formats, drawing scale, or output scale to accommodate this margin.
- **Deleting class name properties.** The **Delete properties** command in the **Forms and properties** command subwindow will not delete the selected item's class name. Items can, however, have a number of class names without normally affecting the performance of the forms design package.
- **Dimension and tolerance styles.** The parameter settings in the **Dimension style** and **Tolerance style** command windows reflect those most recently used in the drawing shown in the *current view*. (Selecting within a window makes it the current view.) When you switch to a drawing with dimension styles different from those of the previous drawing, the system resets all parameter values in the **Dimension style** command window and the **Units:** parameters in the **Tolerance style** command window. The parameters used for the last dimension made in the drawing are saved with the drawing.
- **Erasing changes destroys overview.** When you select **Erase changes** with an overview window on your display, the

overview window loses its functionality and becomes a standard view of a drawing window.

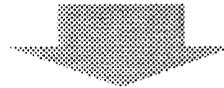
- **The position of the dimension style symbols** for both radius and diameter is dependent on the type of dimension unit (i.e., English versus metric). If you are dimensioning using English units, then the dimension symbols appear after the dimension value. If you are dimensioning using metric units, then the dimension symbols appear before the dimension value.

You can alter the dimension unit in the **Tolerance style** command window. The position of these symbols applies only to primary units.

---

## Expert Illustrator

---



- **Set Pen plotter dashes: to true to facilitate converting large drawings from Expert to ViewPoint.** ViewPoint places a limitation on the number of objects that a graphics frame can contain. If you set the **Pen plotter dashes:** option in the [HARDCOPY] section of your User.cm to **true**, the system will map Expert line styles to equivalent ViewPoint line styles. The system will not vectorize Expert lines, thereby reducing the number of objects placed in a ViewPoint graphics frame.
- **Graphic object placement in ViewPoint.** Due to different means of rounding coordinate values between Expert and ViewPoint, graphic objects may appear to be slightly "off" (e.g., two intersecting lines may pass somewhat beyond their common point).



- **New font mapping not used when merging Interpress graphics.** When merging Interpress masters, the system uses the fonts from the Interpress file created in Expert.
- **Specifying a landscape orientation.** Specifying the *landscape* value in either the Illustrator command window or the Schematic Output Tool does not cause the page in which ViewPoint graphics appear to be rotated. To work around this, you can specify dimensions for a *portrait* setting to yield the equivalent of a landscape orientation (e.g., with a width of 11" in place of 8 1/2" and a height of 8 1/2" in place of 11").
- **Special keyboard characters.** These characters (described in *Expert Drafting*, Chapter 9) do not transfer to ViewPoint. The Illustrator substitutes a solid, black rectangle for each

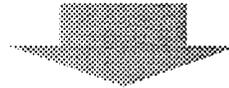
special character. Some of these characters have equivalents in supplemental font packages, such as Greek or Math. Substitute those for the black rectangles by using normal ViewPoint text editing techniques.

- **Multiple merged masters on a single page.** The Illustrator allows you to merge only one Interpress master per ViewPoint page. You may include on the same page a single image frame and additional graphics frames, if you choose. More than one image frame can be used in the same document so long as no two image frames fall on the same ViewPoint page.

---

## Expert Electronics Library

---



- **Library names for drafting parts.** Expert Drafting does not allow the use of hyphens in library names.
- **Creating a symbol with more than 255 pins.** There is a 255 limit on the number of pins that can be added to a symbol.
- **Maximum length of part name.** The name for a physical part should not exceed 15 characters. Otherwise, the library file may be damaged and become inaccessible.
- **Assigning swap codes to unspecified pins.** When creating a symbol and part packaging rule in which specified pins in the symbol are to match unspecified pins in the part, you must be sure the unspecified pins have the highest number swap code, unused by any other pins. If a duplex, power, ground, input and output pin have a swap code of 5, then the swap code of the unspecified pin should be 6. The reason this is so crucial is that an unspecified pin in a part is a wildcard match with any pin in the symbol that has the same swap code. If you had a symbol with duplex, power, and ground input and output pins with the swap code of 1, and a part with an unspecified pin with the swap code of 1, this latter pin would match all of the corresponding symbol pins. The system has no way of determining which symbol pin to associate with the part pin.
- **Avoiding problems in a schematic for an edited symbol.** If you add a pin or change the location of a pin on a symbol in the Library Editor, the symbol's pin numbers in the schematic will be inconsistent with the symbol's pin numbers in the Library Editor, and electrical connections (nets) made to the modified pins in your schematic will need to be changed. To avoid these problems, use the following guidelines:
  - Pin numbers*
    - ▶ Either delete all the pin numbers specified in the symbol property sheet or delete the symbol before you make

changes in the Library Editor that will affect the pin numbers.

#### *Electrical connections*

- ▶ Either delete the nets that connect to the pins you will modify or delete the symbol before you make changes in the Library Editor that will affect the pin numbers.

If you cannot locate all the nets that will be affected by the changes you make to the pins, do the following:

- ▶ Close your schematic before making changes to the pin numbers in the Library Editor. When you reopen your schematic the system checks that the correct net(s) connect to the correct pins. Refer to the message window for feedback and prompting from the system. In some cases you will need to confirm with the mouse if you want the system to change the pin information in your schematic.



- **Installing a dictionary into a library.** The process may be lengthy, depending on the size of the dictionary and the size of the library (up to 3-4 hours). In addition, before beginning the installation process you should ensure that there is sufficient working space on your local disk. If there is not enough free space for the installation, the system will eventually crash when it runs out of space. For a large library of approximately 800,000 bytes in length, you should have about 7,000 free disk pages. Check on the number of free pages available (displayed in the Expert message window) after booting Expert. If you decide to install a dictionary after first performing a series of tasks in Expert, and space is limited on your disk, you should probably reboot to obtain a new page count. If you do not have a sufficient number of free pages, you can store some files to a file server or floppy disk or delete no longer needed files.
- **Location of part 1 point.** When creating a physical part, its pin-one point must reside at coordinate 0,0. If this point is not at 0,0 an error message is received, "**Pin one is not at origin.**" If you adjust the point and subsequently obtain a description for it which seems to indicate that it is correctly positioned and yet still receive an error message when you attempt to write the part, verify that the system has been set to report the maximum number of decimal places. Do so with the **System** command.

---

## Introduction

---

This section provides instructions for installing Expert 4.0.2 software on 6085, 6085-2, 8010, and 6080 (color) workstations.

It is assumed you have a basic understanding of the workstation(s) on which software is to be installed. Refer to Chapters 1 and 2 of the *Using Expert User's Guide* for information on the workstation components and procedures for booting the workstation. We strongly recommend you read the following software installation procedures and become familiar with them prior to installing software on the workstation. Failure to do so could cause improper system operation and/or performance.

The software installation procedures for loading Expert 4.0.2 on a workstation are nearly identical to the procedures used in Expert release 4.0. If your organization is set up for software installation from the network, you can copy the Expert application and data files to your VP Applications file drawer. Then, instead of retrieving files from floppy disk, as described in the software installation instructions, you retrieve the files from your VP Applications file drawer.

---

## Installing Expert 4.0.2 on 6085 and 6085-2 Workstations

---

### Overview

---

If you are upgrading your workstation to Expert 4.0.2, Expert 4.0 and ViewPoint 2.0 software must first be loaded on the workstation. Refer to the *Expert 4.0 Release Document* for information on installing Expert 4.0 and ViewPoint 2.0 software. If you are installing Expert software for the first time, you will first load ViewPoint 2.0 on your workstation. The instructions for a new Expert installation are provided in this section.

If your organization is set up for software installation from the network, copy the Expert application and data files to your VP Applications file drawer. You will need to replace the Msgs folder and, optionally, the User.cm currently in your Expert Essential Data folder with the 4.0.2 versions located on the floppy disk labeled *6085 Xerox Expert 4.0.2: Expert Utilities*. You should also copy all of the Expert fonts to a single ViewPoint folder named *Fonts*. When installing software from the network, be sure to retrieve files from the VP Applications file drawer; do not retrieve files from floppy disks, as instructed in the software installation procedure.

If you are installing software from floppy disk, you must copy the contents of the disks to the appropriate application (i.e., Expert or ViewPoint). Therefore, any file on a floppy disk that includes the words *Xerox ViewPoint* beneath its title must be retrieved from the floppy disk to your ViewPoint desktop. Unless specified otherwise, any file on a floppy disk that includes the words *Xerox Expert* beneath its title must be retrieved from the floppy disk to Expert.

Refer to the appendixes for a list of the floppy disks required to install Expert 4.0.2 on 6085 and 6085-2 workstations.

**Please Read Before Continuing**

The following procedures are potentially data destructive. Back up all of your Expert design files including drawings (.dwg), schematics (.df), place and route (.pcb), libraries (.lib), User.cm, schematic/drawing formats, and other files you wish to save to floppy disks or a file service. If applicable, save all your ViewPoint files and desktops. **Once data is erased from the workstation rigid disk, it can only be recovered from backups stored on floppy disk or a file service.**

**Failure to follow the instructions as outlined on the following pages could cause improper system operation and/or performance.**

**Installation Procedure**

- ▶ If you are upgrading your workstation from Expert version 4.0, begin with step 1.
- ▶ If you are reinstalling Expert 4.0.2 software, begin with step 1.
- ▶ If you are installing Expert software for the first time, begin with step 2.

| Step  | Instructions  |
|---|---|
| 1. Set the <b>Auto Run at System Startup</b> option to <b>No</b> for the Expert application(s).       | If you are either upgrading to or reinstalling Expert 4.0.2 software on the workstation, boot the workstation and log in to ViewPoint. Open the Application Loader icon, select the Expert application file, and bring up the Application Properties sheet. Set the <b>Auto Run at System Startup</b> option to <b>No</b> . Repeat this step if you have additional Expert application files. Close the Application Loader window and log out of ViewPoint. Continue with step 6 on the next page.  |
| 2. Install ViewPoint 2.0 software.  | If ViewPoint 2.0 software is already installed on the workstation, continue with step 3 below.<br><br>Install ViewPoint 2.0 software on the workstation. Refer to the <i>ViewPoint 2.0 Software Installation Guide</i> for instruction.   |
| 3. Boot the Expert special installation floppy disk.<br><br>Set the time on a standalone workstation. | If you enabled the Xerox Pro Illustrator Performance Enhancement option when you installed ViewPoint 2.0 software, continue with step 5 below. <b>Note:</b> The Xerox Pro Illustrator Performance Enhancement and Xerox Expert Performance Enhancement options are identical.<br><br>Insert the floppy disk labeled <i>6085 Xerox Expert 4.0: Special Installation #1</i> in the floppy disk drive. Press the <b>B Reset</b> button on the processor's front panel and, when the system displays the boot keys, press the <b>F2</b> key. After a few minutes, the system prompts you to insert the floppy disk labeled <i>6085 Xerox Expert 4.0: Special Installation #2</i> . Insert the floppy disk when requested and press <b>RETURN</b> .<br><br>If you are installing software on a standalone workstation, the system prompts you to set the workstation time. If you need help setting the time, type <b>?</b> and press <b>RETURN</b> after each prompt. |
| 4. Enable the Expert performance enhancement option.  | From the main menu, type the number corresponding to <b>Expert: 6085 VP Expert 4.0 Special Performance and Diagnostic Commands</b> and press <b>RETURN</b> . The system displays a new menu.<br><br>Type the number corresponding to <b>Enable/Disable Xerox Expert Performance Enhancement</b> and press <b>RETURN</b> . Type <b>Y</b> when prompted and press <b>RETURN</b> . The system displays the menu when finished.   |
| 5. Configure the workstation for 24-bit virtual memory operation.                                     | If your workstation is already configured for 24-bit virtual memory, continue with step 6 on the next page.<br><br>Boot the 6085 Offline Diagnostics and configure the workstation for 24-bit virtual memory using the System Configuration Utility. See the <i>Workstation Diagnostics for 6085/8010</i> reference for specific instructions.  |

| Step   | Instructions   |
|--|--|
| <p>6. Boot ViewPoint.</p> <p>Set the time on a standalone workstation.</p> <p>Log in to ViewPoint.</p> | <p>Press the <b>B Reset</b> button on the processor's front panel and, when the system displays the boot keys, press the <b>F1</b> key.</p> <p>If you have a standalone workstation, the system will prompt you to set the time.</p> <p>Log in to ViewPoint after the system finishes booting.</p>   |
| <p>7. Copy ViewPoint Floppy Drive and Application Loader icons to your desktop.</p>                    | <p>If you do not have ViewPoint Floppy Drive and Application Loader icons on your desktop, copy them from the Directory folder to the desktop.</p> <p><b>Note:</b> If you are a first-time ViewPoint user, refer to the <i>ViewPoint 2.0 Software Installation Guide</i> for specific instructions.</p> <p>If you are installing Expert 4.0.2 software for the first time, go to step 9 below; otherwise continue with step 8 below.</p>   |
| <p>8. Delete the Expert application from the Application Loader window.</p>                            | <p>Open the Application Loader icon and select the Expert application file(s). Delete the Expert application file(s) by pressing the <b>DEL</b> key. Select <b>Yes</b> to continue when prompted. Close the Application Loader window and continue with step 9 below.</p>  |
| <p>9. Determine the workstation type.</p>  | <p>Bring up the Desktop Auxiliary Menu. If the <b>Hardware Type:</b> option is listed, select it. If the <b>Hardware Type:</b> option does not appear in the menu, proceed to step 11. After selecting <b>Hardware Type:</b>, look to the message area. The system displays Hardware Type: 6085-2 if the workstation is a 6085 Model 2.</p> <p>Continue with step 10 if your workstation is a 6085-2. If your workstation is a 6085, go to step 11.</p>  |
| <p>10. Copy the VP Expert Foundation (6085-2 only) application to your desktop.</p>                    | <p>Insert the floppy disk labeled <i>6085 Xerox Expert 4.0.2: VP Expert Foundation (6085-2 only) (1 of 2)</i> in the floppy disk drive. Open the floppy disk by selecting the Floppy Drive icon and pressing the <b>OPEN</b> key. Select the VP Expert Foundation (6085-2 only) application file in the Floppy Drive window. Copy the application file to the desktop by pressing the <b>COPY</b> key. Use the mouse-shaped cursor to point to a location on the desktop and press the left mouse button. When the VP Expert Foundation application file has been copied from the disk, the system displays the following message: "Insert the next floppy of this multi-volume set. Select Yes to continue, No to cancel."</p> <p>Multivolume floppies must be copied in correct ascending order. Do not select <b>Yes</b> to continue until you've inserted the <i>6085 Xerox Expert 4.0.2: VP Expert Foundation (6085-2 only) (2 of 2)</i> floppy disk into the floppy disk drive. Then continue with step 12 on the next page.</p> |

| Step  | Instructions   |
|---|--|
| 11. Copy the VP Expert Foundation application to your desktop.                                    | <p>Insert the floppy disk labeled <i>6085 Xerox Expert 4.0.2: VP Expert Foundation (1 of 2)</i> in the floppy disk drive. Open the floppy disk by selecting the Floppy Drive icon and pressing the <b>OPEN</b> key. Select the VP Expert Foundation application file in the Floppy Drive window. Copy the application file to the desktop by pressing the <b>COPY</b> key. Use the mouse-shaped cursor to point to a location on the desktop and press the left mouse button. When the VP Expert Foundation application file has been copied from the disk, the system displays the following message: "Insert the next floppy of this multi-volume set. Select Yes to continue, No to cancel."</p> <p>Multivolume floppies must be copied in correct ascending order. Do not select <b>Yes</b> to continue until you've inserted the <i>6085 Xerox Expert 4.0.2: VP Expert Foundation (2 of 2)</i> floppy disk into the floppy disk drive. Then continue with step 12.</p>                              |
| 12. Copy the Expert Drafting, Schematics, and Placement and Routing applications to your desktop. | <p>Depending on the software licenses your company purchased for the workstation, you will copy some or all of the Expert applications to your desktop. Your software set includes the following Expert application floppies:</p> <p style="padding-left: 40px;"><i>6085 Xerox Expert 4.0.2: VP Expert Drafting (1 of 2)</i><br/> <i>6085 Xerox Expert 4.0.2: VP Expert Drafting (2 of 2)</i><br/> <i>6085 Xerox Expert 4.0.2: VP Expert Schematics (1 of 2)</i><br/> <i>6085 Xerox Expert 4.0.2: VP Expert Schematics (2 of 2)</i><br/> <i>6085 Xerox Expert 4.0.2: VP Expert Placement and Routing</i></p> <p>Insert the floppy disk containing the application you wish to copy in the floppy disk drive. Select <b>Redisplay</b> in the Floppy Drive window header. Select the Expert application and copy it to the desktop. Insert additional floppy disks when requested and select <b>Yes</b> to continue. If necessary, repeat this step to copy other Expert applications to your desktop.</p> |
| 13. Copy the VP Expert Common Software application to your desktop.                               | <p>Insert the floppy disk labeled <i>6085 Xerox Expert 4.0.2: VP Expert Common Software (1 of 3)</i> in the floppy disk drive. Select <b>Redisplay</b> in the Floppy Drive window header. Select the VP Expert Common Software application file and copy it to the desktop. Insert the additional floppy disks when requested [<i>6085 Xerox Expert 4.0.2: VP Expert Common Software (2 of 3)</i>, <i>6085 Xerox Expert 4.0.2: VP Expert Common Software (3 of 3)</i>] and select <b>Yes</b> to continue.</p> <p><b>Note:</b> VP Expert Common Software includes both the Pen Plotter Interface and the Versatec Plot Server Interface applications.</p>   |

| Step  | Instructions   |
|---|--|
| 14. Copy the Expert Essential Data folder to your desktop.                        | <p>If you are reinstalling Expert 4.0.2 software and the Expert essential data has already been copied to the Expert file system, continue with step 15 below.</p> <p>Insert the floppy disk labeled <i>6085 Xerox Expert 4.0: Expert Essential Data (1 of 2)</i> in the floppy disk drive. Open the Floppy Drive icon or, if the icon is open, select <b>Redisplay</b> in the Floppy Drive window header. Select the Expert Essential Data folder and copy it to the desktop. When requested, insert the floppy disk labeled <i>6085 Xerox Expert 4.0: Expert Essential Data (2 of 2)</i> and select <b>Yes</b> to continue.</p>  |
| 15. Replace the Msgs folder and the User.cm.                                      | <p>Open the Expert Essential Data folder and delete the Msgs folder. If you wish to use the 4.0.2 User.cm, then delete the User.cm contained in the Expert Essential Data folder.</p> <p>Insert the floppy disk labeled <i>6085 Xerox Expert 4.0.2: Expert Utilities</i> in the floppy drive. Open the Floppy Drive icon or, if the icon is open, select <b>Redisplay</b> in the Floppy Drive window header. Select the Msgs folder and, if desired, the User.cm and copy it to the Expert Essential Data folder. Then close the Expert Essential Data folder.</p>   |
| 16. Copy the Expert Expansion Utility application to the Application Loader icon. | <p>If you are reinstalling Expert 4.0.2 software and the Expert Expansion Utility is already installed on the workstation, continue with step 17 below.</p> <p>Before continuing, it is best to close the Application Loader window.</p> <p>Insert the floppy disk labeled <i>6085 Xerox Expert 4.0: Expert Essential Data (2 of 2)</i> in the floppy drive. Open the Floppy Drive icon or, if the icon is open, select <b>Redisplay</b> in the Floppy Drive window header. Select the Expert Expansion Utility application file and copy it to the Application Loader icon. The Expert Expansion Utility is an invisible ViewPoint application and will not display in the Application Loader window.</p> |
| 17. Copy the Expert Illustrator application to the Application Loader icon.       | <p>If you did not purchase the software license for Expert Illustrator, or if the VP File Conversion of Expert/PROCAD Illustrations application is already installed on the workstation, continue with step 18 on the next page.</p> <p>Insert the floppy disk labeled <i>VP File Conversion of Expert/PROCAD Illustrations 4.0</i> in the floppy disk drive. Open the Floppy Drive icon or, if the icon is open, select <b>Redisplay</b> in the Floppy Drive window header. Select the VP File Conversion of Expert/PROCAD Illustrations application file and copy it to the Application Loader icon.</p>   |

| Step  | Instructions  |
|---|---|
| 18. Insert the correct Expert password floppy disk in the floppy disk drive.  | <p>If you are reinstalling 4.0.2 and you also have a password disk created in Expert version 4.0.x or 4.0, then insert your password disk in the floppy disk drive and continue with step 19 below.</p> <p>If you do not meet all of the above conditions, continue with step 19 below.</p> <p><b>Note:</b> Password disks created in Expert versions other than 4.0.x or 4.0 will not work in the workstation. You need to call the Xerox Software Control Center for a new software password to enable your Expert software options. For more information on creating Expert password disks, refer to <i>Using Expert</i>, Appendix 8.4.</p>                            |
| 19. Move the VP Expert Foundation application to the Application Loader icon.   | <p>Before continuing, it is best to close the Application Loader window.</p> <p>Select the VP Expert Foundation application and move it to the Application Loader icon. After a few moments, the Expert window appears on your display. When the Expert Foundation is finished running, close the Expert window and return to your ViewPoint desktop.</p>   |
| 20. Move the VP Expert Drafting, VP Expert Schematics, and VP Expert Placement and Routing applications to the Application Loader icon.           | <p>Select and move the Expert applications you copied to your desktop in step 12 to the Application Loader icon <i>in the following order:</i></p> <ul style="list-style-type: none"> <li>VP Expert Drafting</li> <li>VP Expert Schematics</li> <li>VP Expert Placement and Routing</li> </ul>  |
| 21. Move the VP Expert Common Software application to the Application Loader icon.<br><br>Select <b>Apply!</b> if your system is already enabled. | <p>Select and move the VP Expert Common Software application to the Application Loader icon. After the VP Expert Common Software is loaded and running, bring up the Desktop Auxiliary Menu and select <b>Expert</b>. The system displays the Expert enabler window.</p> <p>If you started Expert with a password floppy disk or you reinstalled Expert 4.0.2 software, the system displays the software options currently enabled. If you wish to enable the workstation with the listed options, select the <b>Apply!</b> command in the enabler window and continue with step 22 on the next page.</p> <p style="text-align: right;"><i>Continued on next page</i></p> |

| Step   | Instructions   |
|--|--|
| <p>Call Xerox for a new software password.</p>   | <p>If the system does not display a list of enabled software options or you wish to change Expert software options, you need to call the Xerox Software Control Center to get a new software password. Have the software authorization number, workstation host address, and workstation serial number ready and <u>be sure to tell the Software Control Center Coordinator that you are installing Expert 4.0.2 software.</u></p> <p style="text-align: center;"><b>Xerox Software Control Center</b><br/>(800) 835-9013</p> <p>Type your software password in the password field of the enabler window and select the <b>Apply!</b> command. Continue with step 22 below.</p>  |
| <p>22. Modify the User.cm if necessary.</p> <p>Install the Expert drawing formats and templates, system library files, and Expert utilities?</p> <p>Reinstallation of Expert 4.0.2 software is complete.</p> | <p>After the software has been enabled, Expert finishes booting. Ignore any messages pertaining to a Clearinghouse problem. Modify the User.cm file to meet your requirements, if necessary (4.0.2 changes to the User.cm are described in Section 3 of this release document). Refer to the <i>Using Expert User's Guide</i>, Chapter 6, Section 6.9 if you need help modifying the User.cm file.</p> <p>If you wish to use the drawing formats and templates, system library files, and Expert utilities included with this release, read the contents of the floppy disks labeled 6085 Xerox Expert 4.0: Drawing Formats and Templates, 6085 Xerox Expert 4.0: System Library Files, and 6085 Xerox Expert 4.0.2: Expert Utilities using Expert's Executive window and the floppy command. Do not re-read the Msgs folder and the optional User.cm from the Expert Utilities floppy. For help on reading files from a floppy disk, refer to the <i>Using Expert User's Guide</i>, Chapter 6, Section 6.3.</p> <p>If you are installing Expert software for the first time, continue the software installation by loading the Expert fonts as described in step 23 below.</p> <p>Expert 4.0.2 software installation is complete if you are reinstalling Expert 4.0.2 software on the workstation. You may delete the Expert Essential Data folder from your desktop. If you made modifications to the User.cm, you must reboot the workstation for the new User.cm changes to take effect.</p> |
| <p>23. Put Expert in a window.</p>   | <p>If Expert is covering the ViewPoint desktop, put it into a window by selecting the <b>In window</b> command from the Expert Window Menu. If Expert is not active, bring up the Desktop Auxiliary Menu and select <b>Expert</b>.</p> <p style="text-align: center;"><i>Continued on next page</i></p>  |

| Step   | Instructions   |
|--|--|
| Copy the Fonts folder to the desktop.<br><br>Copy the Expert fonts from ViewPoint to Expert. | Insert the floppy disk labeled <i>6085 Xerox Expert 4.0: Expert SansSerif Fonts (1 of 2)</i> in the floppy disk drive. Open the Floppy Drive icon and copy the Fonts folder to the desktop. Insert the floppy disk labeled <i>6085 Xerox Expert 4.0: Expert SansSerif Fonts (2 of 2)</i> when requested and select <b>Yes</b> to continue.<br><br>Select the Fonts folder on the desktop. Select the <b>VP to Expert</b> command in the Expert window header to copy the Expert font files to Expert.<br><br>Repeat this step and copy the Expert TypeWriter fonts from the floppy disks to Expert. Continue with step 24 below when you are finished. |
| 24. Expert 4.0.2 software installation is complete.  | Expert 4.0.2 software installation is now complete. You may delete the Expert Essential Data and Fonts folders from your desktop. You must boot the workstation to activate the Expert fonts.  |

---

## Installing Expert 4.0.2 on an 8010 Workstation

---

### Overview

---

If you are upgrading your workstation to Expert 4.0.2, Expert 4.0 and ViewPoint 2.0 software must first be loaded on the workstation. Refer to the *Expert 4.0 Release Document* for information on installing Expert 4.0 and ViewPoint 2.0 software. If you are installing Expert software for the first time, you will first load ViewPoint 2.0 on your workstation. The instructions for a new Expert installation are provided in this section.

If your workstation includes a Versatec 290 Personal Plotter Interface Unit, you will need a special ViewPoint software application, V290, to communicate with the 290. Make sure you set this application's **Auto Run at System Startup** option to **Yes**, as instructed in the installation procedure.

If your organization is set up for software installation from the network, copy the Expert application and data files to your VP Applications file drawer. You will need to replace the Msgs folder and, optionally, the User.cm currently in your Expert Essential Data folder with the 4.0.2 versions located on the floppy disk labeled *8010 Xerox Expert 4.0.2: Expert Utilities*. You should also copy all of the Expert fonts to a single ViewPoint folder named *Fonts*. When installing software from the network, be sure to retrieve files from the VP Applications file drawer; do not retrieve files from floppy disks, as instructed in the software installation procedure.

If you are installing software from floppy disk, you must copy the contents of the disks to the appropriate application (i.e., Expert or ViewPoint). Therefore, any file on a floppy disk that includes the words *Xerox ViewPoint* beneath its title must be retrieved from the floppy disk to your ViewPoint desktop. Unless specified otherwise, any file on a floppy disk that includes the words *Xerox Expert* beneath its title must be retrieved from the floppy disk to Expert.

Refer to the appendixes for a list of the floppy disks required to install Expert 4.0.2 software on an 8010 workstation.

**Please Read Before Continuing**

The following procedures are potentially data destructive. Back up all of your Expert design files including drawings (.dwg), schematics (.df), place and route (.pcb), libraries (.lib), User.cm, schematic/drawing formats, and other files you wish to save to floppy disks or a file service. If applicable, save all your ViewPoint files and desktops. **Once data is erased from the workstation rigid disk, it can only be recovered from backups stored on floppy disk or a file service.**

**Failure to follow the instructions as outlined on the following pages could cause improper system operation and/or performance.**

---

## Installation Procedure

- ▶ If you are upgrading your workstation from Expert version 4.0, begin with step 1.
- ▶ If you are reinstalling Expert 4.0.2 software, begin with step 1.
- ▶ If you are installing Expert software for the first time, begin with step 2.

| Step  | Instructions   |
|---|--|
| 1. Set the <b>Auto Run at System Startup</b> option to <b>No</b> for the Expert application(s).       | If you are either upgrading to or reinstalling Expert 4.0.2 software on the workstation, boot the workstation and log in to ViewPoint. Open the Application Loader icon, select the Expert application file, and bring up the Application Properties sheet. Set the <b>Auto Run at System Startup</b> option to <b>No</b> . Repeat this step if you have additional Expert application files. Close the Application Loader window and log out of ViewPoint. Continue with step 7 on the next page.   |
| 2. Install ViewPoint 2.0 software.  | If ViewPoint 2.0 software is already installed on the workstation, continue with step 3 below.<br><br>Install ViewPoint 2.0 software on the workstation. Refer to the <i>ViewPoint 2.0 Software Installation Guide</i> for instruction.  |
| 3. Boot the Expert special installation floppy disk.<br><br>Set the time on a standalone workstation. | Insert the floppy disk labeled <i>8010 Xerox Expert 4.0: Special Installation</i> in the floppy disk drive and do a 2-boot.<br><br>If you are installing software on a standalone workstation, the system prompts you to set the workstation time. If you need help setting the time, type ? and press <b>RETURN</b> after each prompt.<br><br>If you enabled the Xerox Pro Illustrator Performance Enhancement option when you installed ViewPoint 2.0 software, continue with step 5 below. <b>Note:</b> The Xerox Pro Illustrator Performance Enhancement and Xerox Expert Performance Enhancement options are identical. |
| 4. Enable the Expert performance enhancement option.<br><br>Return to the main menu.                  | From the main menu, type the number corresponding to <b>Expert: 8010 VP Expert 4.0 Special Performance and Diagnostic Commands</b> and press <b>RETURN</b> . The system displays a new menu.<br><br>Type the number corresponding to <b>Enable/Disable Xerox Expert Performance Enhancement</b> and press <b>RETURN</b> . Type <b>Y</b> when prompted and press <b>RETURN</b> . The system displays the menu when finished.<br><br>Type the number corresponding to <b>Return to main menu</b> and press <b>RETURN</b> . The system displays the main menu.  |
| 5. Install the standard Expert microcode.<br><br>Set the virtual memory configuration.                | If your workstation has a Turbo (floating point) CPU board continue with step 6 on the next page.<br><br>From the main menu, type the number corresponding to <b>Expert: 8010 VP Expert 4.0 Special Microcode Installation Commands</b> and press <b>RETURN</b> . The system displays a new menu. Type the number corresponding to <b>Install Standard Expert Microcode and Change Virtual Memory Configuration</b> and press <b>RETURN</b> . Type <b>Y</b> when requested and press <b>RETURN</b> .<br><br><i>Continued on next page</i>  |

| Step  | Instructions  |
|---|---|
|   | After the basic microcode files have been installed, the system prompts you to change the workstation's virtual memory configuration. If your workstation has 1.5 MBytes of memory, type <b>Y</b> and press <b>RETURN</b> . If your workstation does not have 1.5 MBytes of memory, type <b>N</b> and press <b>RETURN</b> . Continue with step 7 below.   |
| <p>6. Install the Expert Turbo microcode.</p> <p>Set the virtual memory configuration.</p>                        | <p>From the main menu, type the number corresponding to <b>Expert: 8010 VP Expert 4.0 Special Microcode Installation Commands</b> and press <b>RETURN</b>. The system displays a new menu. Type the number corresponding to <b>Install Turbo Expert Microcode and Change Virtual Memory Configuration</b> and press <b>RETURN</b>. Type <b>Y</b> when requested and press <b>RETURN</b>.</p> <p>After the basic microcode files have been installed, the system prompts you to change the workstation's virtual memory configuration. If your workstation has 1.5 MBytes of memory, type <b>Y</b> and press <b>RETURN</b>. If your workstation does not have 1.5 MBytes of memory, type <b>N</b> and press <b>RETURN</b>. Continue with step 7 below.</p> |
| <p>7. Boot ViewPoint.</p> <p>Acknowledge standalone workstation and set the time.</p> <p>Log in to ViewPoint.</p> | <p>Press the <b>B Reset</b> button on the processor's front panel.</p> <p>If you have a standalone workstation, the system will flash codes 0322 and 0002. Press and hold the <b>SKIP/NEXT</b> key on the keyboard until the system displays a code greater than 0322. Set the time when prompted.</p> <p>Log in to ViewPoint after the system finishes booting.</p>  |
| <p>8. Copy ViewPoint Floppy Drive and Application Loader icons to your desktop.</p>                               | <p>If you do not have ViewPoint Floppy Drive and Application Loader icons on your desktop, copy them from the Directory folder to the desktop.</p> <p><b>Note:</b> If you are a first-time ViewPoint user, refer to the <i>ViewPoint 2.0 Software Installation Guide</i> for specific instructions.</p> <p>If you are installing Expert 4.0.2 software for the first time, continue with step 10 on the next page; otherwise proceed with step 9 below.</p>   |
| <p>9. Delete the Expert application(s) from the Application Loader window.</p>                                    | <p>Open the Application Loader icon and select the Expert application file(s). Delete the Expert application file(s) by pressing the <b>DELETE</b> key. Select <b>Yes</b> to continue when prompted. Close the Application Loader window and continue with step 10 on the next page.</p>  |

| Step  | Instructions   |
|---|--|
| 10. Copy the Expert applications to your desktop.                                 | <p>Depending on the software licenses your company purchased for the workstation, you will copy some or all of the optional Expert applications included on the <i>8010 Xerox Expert 4.0.2</i> floppy disks to the workstation.</p> <p>Insert the floppy disk labeled <i>8010 Xerox Expert 4.0.2 (1 of 3)</i> in the floppy disk drive. Open the floppy disk by selecting the Floppy Drive icon and pressing the <b>OPEN</b> key. Select the application files in the Floppy Drive window. Copy the application files to the desktop by pressing the <b>COPY</b> key. Use the mouse-shaped cursor to point to a location on the desktop and press the left mouse button. Repeat this step to copy the application files from the floppy disks labeled <i>8010 Xerox Expert 4.0.2 (2 of 3)</i> and <i>8010 Xerox Expert 4.0.2 (3 of 3)</i>.</p> <p><b>Note:</b> The <i>8010 Xerox Expert 4.0.2</i> floppy disks include both the Pen Plotter Interface and the Versatec Plot Server Interface applications.</p> |
| 11. Copy the Expert Essential Data folder to your desktop.                        | <p>If you are reinstalling Expert 4.0.2 software and the Expert essential data has already been copied to the Expert file system, continue with step 12 below.</p> <p>Insert the floppy disk labeled <i>8010 Xerox Expert 4.0: Expert Essential Data</i> in the floppy disk drive. Open the Floppy Drive icon or, if the icon is open, select <b>Redisplay</b> in the Floppy Drive window header. Select the Expert Essential Data folder and copy it to the desktop.</p>  |
| 12. Replace the Msgs folder and the User.cm.                                      | <p>Open the Expert Essential Data folder and delete the Msgs folder. If you wish to use the 4.0.2 User.cm, then delete the User.cm contained in the Expert Essential Data folder.</p> <p>Insert the floppy disk labeled <i>8010 Xerox Expert 4.0.2: Expert Utilities</i> in the floppy drive. Open the Floppy Drive icon or, if the icon is open, select <b>Redisplay</b> in the Floppy Drive window header. Select the Msgs folder and, if desired, the User.cm and copy it to the Expert Essential Data folder. Then close the Expert Essential Data folder.</p>   |
| 13. Copy the Expert Expansion Utility application to the Application Loader icon. | <p>If you are reinstalling Expert 4.0.2 software and the Expert Expansion Utility is already installed on the workstation, continue with step 14 on the next page.</p> <p>Before continuing, it is best to close the Application Loader window.</p> <p>Insert the floppy disk labeled <i>8010 Xerox Expert 4.0: Expert Essential Data</i> in the floppy drive. Open the Floppy Drive icon or, if the icon is open, select <b>Redisplay</b> in the Floppy Drive window header. Select the Expert Expansion Utility application file and copy it to the Application Loader icon. The Expert Expansion Utility is an invisible ViewPoint application and will not display in the Application Loader window.</p>   |

| Step  | Instructions   |
|---|--|
| 14. Copy the V290 application to the Application Loader icon.                 | <p>If your workstation does not include a Versatec 290 Personal Plotter Interface Unit, or if you are reinstalling Expert 4.0.2 software and the V290 application is already installed on the workstation, continue with step 15 below.</p> <p>Before continuing, it is best to close the Application Loader window.</p> <p>Insert the floppy disk labeled <i>8010 Xerox Expert 4.0: Expert Essential Data</i> in the floppy drive. Open the Floppy Drive icon or, if the icon is open, select <b>Redisplay</b> in the Floppy Drive window header. Select the V290 application file and copy it to the Application Loader icon.</p> <p><b>Note:</b> Make sure the <b>Auto Run at System Startup</b> option for the V290 application file is set to <b>Yes</b>.</p> |
| 15. Copy the Expert Illustrator application to the Application Loader icon.   | <p>If you did not purchase the software license for Expert Illustrator, or if the VP File Conversion of Expert/PROCAD Illustrations application is already installed on the workstation, continue with step 16 below.</p> <p>Insert the floppy disk labeled <i>VP File Conversion of Expert/PROCAD Illustrations 4.0</i> in the floppy disk drive. Open the Floppy Drive icon or, if the icon is open, select <b>Redisplay</b> in the Floppy Drive window header. Select the VP File Conversion of Expert/PROCAD Illustrations application file and copy it to the Application Loader icon.</p>  |
| 16. Insert the correct Expert password floppy disk in the floppy disk drive.  | <p>If you are reinstalling 4.0.2 and you also have a password disk created in Expert version 4.0.x or 4.0, then insert your password disk in the floppy disk drive and continue with step 17 below. If you do not meet all of these conditions, continue with step 17 below.</p> <p><b>Note:</b> Password disks created in Expert versions other than 4.0.x or 4.0 will not work in the workstation. You need to call the Xerox Software Control Center for a new software password to enable your Expert software options. For more information on creating Expert password disks, refer to <i>Using Expert</i>, Appendix 8.4.</p>  |
| 17. Move the VP Expert Foundation application to the Application Loader icon. | <p>Before continuing, it is best to close the Application Loader window.</p> <p>Select the VP Expert Foundation application and move it to the Application Loader icon. After a few moments, the Expert window appears on your display. When the Expert Foundation is finished running, close the Expert window and return to your ViewPoint desktop.</p>  |

| Step  | Instructions   |
|---|--|
| <p>18. Move the VP Expert Drafting, VP Expert Schematics, and VP Expert Placement and Routing applications to the Application Loader icon.</p>  | <p>Select and move the Expert applications you copied to your desktop in step 10 to the Application Loader icon <i>in the following order</i>:</p> <p style="padding-left: 40px;">VP Expert Drafting<br/>VP Expert Schematics<br/>VP Expert Placement and Routing</p>  |
| <p>19. Move the VP Expert Common Software application to the Application Loader icon.</p> <p>Select <b>Apply!</b> if your system is already enabled.</p> <p>Call Xerox for a new software password.</p> | <p>Select and move the VP Expert Common Software application to the Application Loader icon. After the VP Expert Common Software is loaded and running, bring up the Desktop Auxiliary Menu and select <b>Expert</b>. The system displays the Expert enabler window.</p> <p>If you started Expert with a password floppy disk or you reinstalled Expert 4.0.2 software, the system displays the software options currently enabled. If you wish to enable the workstation with the listed options, select the <b>Apply!</b> command in the enabler window and continue with step 20 below.</p> <p>If the system does not display a list of enabled software options or you wish to change Expert software options, you need to call the Xerox Software Control Center to get a new software password. Have the software authorization number, workstation host address, and workstation serial number ready and <u>be sure to tell the Software Control Center Coordinator that you are installing Expert 4.0.2 software.</u></p> <p style="text-align: center;"><b>Xerox Software Control Center</b><br/>(800) 835-9013</p> <p>Type your software password in the password field of the enabler window and select the <b>Apply!</b> command. Continue with step 20 below.</p> |
| <p>20. Modify the User.cm if necessary.</p> <p>Install the Expert drawing formats and templates, system library files, and Expert utilities?</p>  | <p>After the software has been enabled, Expert finishes booting. Ignore any messages pertaining to a Clearinghouse problem. Modify the User.cm file to meet your requirements, if necessary (4.0.2 changes to the User.cm are described in Section 3 of this release document). Refer to the <i>Using Expert User's Guide</i>, Chapter 6, Section 6.9 if you need help modifying the User.cm file.</p> <p>If you wish to use the drawing formats and templates, system library files, and Expert utilities included with this release, read the contents of the floppy disks labeled 8010 Xerox Expert 4.0: Drawing Formats and Templates, 8010 Xerox Expert 4.0: System Library Files, and 8010 Xerox Expert 4.0.2: Expert Utilities using Expert's Executive window and the floppy command. Do not re-read the Msgs folder and the optional User.cm from the Expert Utilities floppy. For help on reading files from a floppy disk, refer to the <i>Using Expert User's Guide</i>, Chapter 6, Section 6.3.</p> <p style="text-align: right;"><i>Continued on next page</i></p>   |

| Step   | Instructions  |
|--|---|
| <p>Reinstallation of Expert 4.0.2 software is complete.</p>  | <p>If you are installing Expert software for the first time, continue the software installation by loading the Expert fonts as described in step 21 below.</p> <p>Expert 4.0.2 software installation is complete if you are reinstalling Expert 4.0.2 software on the workstation. You may delete the Expert Essential Data folder from your desktop. If you made modifications to the User.cm, you must reboot the workstation for the new User.cm changes to take effect.</p>   |
| <p>21. Put Expert in a window.</p> <p>Copy the Fonts folder to the desktop.</p> <p>Copy the Expert fonts from ViewPoint to Expert.</p> | <p>If Expert is covering the ViewPoint desktop, put it into a window by selecting the <b>In window</b> command from the Expert Window Menu. If Expert is not active, bring up the Desktop Auxiliary Menu and select <b>Expert</b>.</p> <p>Insert the floppy disk labeled <i>8010 Xerox Expert 4.0: Expert SansSerif Fonts</i> in the floppy disk drive. Open the Floppy Drive icon and copy the Fonts folder to the desktop.</p> <p>Select the Fonts folder on the desktop. Select the <b>VP to Expert</b> command in the Expert window header to copy the Expert font files to Expert.</p> <p>Repeat this step and copy the Expert TypeWriter fonts from the floppy disk to Expert. Continue with step 22 below when you are finished.</p> |
| <p>22. Expert 4.0.2 software installation is complete.</p>   | <p>Expert 4.0.2 software installation is now complete. You may delete the Expert Essential Data and Fonts folders from your desktop. You must boot the workstation to activate the Expert fonts.</p>  |

---

## Installing Expert 4.0.2 on a 6080 Color Workstation

---

### Overview

---

The procedure for installing Expert 4.0.2 is essentially the same as those used for previous versions of Expert. Whenever possible, the installation procedure has been streamlined to make the procedure less time-consuming.

**Note:** Due to a problem with the Expert Time Setter Utility, you will need to perform some additional steps during the software installation process on a standalone 6080 workstation.

#### **Please Read Before Continuing**

The following procedures are potentially data destructive. Back up all of your Expert design files including drawings (.dwg), schematics (.df), place and route (.pcb), libraries (.lib), User.cm, schematic/drawing formats, and other files you wish to save to floppy disks or a file service. **Once data is erased from the workstation rigid disk, it can only be recovered from backups stored on floppy disk or a file service.**

**Failure to follow the instructions as outlined on the following pages could cause improper system operation and/or performance.**

## Installation Procedure

| Step  | Instructions  |
|---|---|
| 1. Delete the Expert TIP table files.   | <p>If you have Expert software version 2.6 or greater already installed on the workstation and you are installing Expert 4.0.2 software for the first time, you should not need to partition the workstation rigid disk. For the Expert 4.0.2 software to function properly, you need to delete the Expert TIP table files before installing software. To delete the Expert TIP table files, boot Expert and execute the following command in the Expert Executive window:</p> <p style="text-align: center;"><i>Delete TIP &gt; *</i></p> <p>Once you have deleted the TIP table files, continue with step 2 below.</p>  |
| 2. Run rigid disk diagnostics.<br><br>Record bad pages.                                 | <p>We recommend that you run rigid disk diagnostics to check for any new bad pages on your workstation rigid disk. Insert the floppy disk labeled <i>6080 Offline Diagnostics 7.0</i> in the floppy disk drive and do a 2-boot. If the diagnostics program finds any bad pages on your disk, note the page numbers and enter them in the bad page table. Continue with step 3.</p>  |
| 3. Boot the Expert software installer.<br><br>Set the time on a standalone workstation. | <p>Insert the floppy disk labeled <i>6080 Xerox Expert 4.0.2: Installer</i> in the floppy disk drive and do a 2-boot.</p> <p>If you are installing software on a standalone workstation, the system prompts you to set the time. If you need help setting the time, type <b>?</b> and press <b>RETURN</b> after each prompt.</p>  |
| 4. Partition the workstation disk.  | <p>Partition the workstation rigid disk if you meet any of the following criteria:</p> <ul style="list-style-type: none"> <li>▶ Software has never been loaded on the workstation before, i.e., a new disk.</li> <li>▶ You are upgrading software from Expert version 2.51 or less to Expert version 4.0.2.</li> <li>▶ You are reinstalling software because of an unrecoverable disk error.</li> </ul> <p>If you are not partitioning the rigid disk, continue with step 6 on the next page.</p> <p>From the main menu, type the number corresponding to <b>Expert: 6080 Partition Workstation Disk</b> and press <b>RETURN</b>. The system displays a new menu.</p> |

| Step   | Instructions   |
|--|--|
| <p>5. Partition the workstation disk.</p> <p>Return to the main menu.</p>      | <p style="text-align: center;"><b>WARNING</b></p> <p><b>Partitioning the workstation rigid disk is data destructive. You must save all your .dwg, .df, .pcb, .lib, and any other files you wish to save to floppy disk or a file service before you partition the workstation rigid disk.</b></p> <p>Type the number corresponding to <b>Partition Rigid Disk</b> and press <b>RETURN</b>. Type <b>Y</b> and press <b>RETURN</b> to confirm disk partitioning.</p> <p>The system displays the menu after the workstation rigid disk is partitioned. Type the number corresponding to <b>Return to main menu</b> and press <b>RETURN</b>. The system displays the main menu.</p>  |
| <p>6. Install the basic Expert system.</p> <p>Install the default User.cm?</p> | <p>From the main menu, type the number corresponding to <b>Expert: 6080 Install Expert 4.0.2 Software (from floppies)</b> and press <b>RETURN</b>. A new menu is displayed.</p> <p>Type the number corresponding to <b>Install Basic Expert System</b> and press <b>RETURN</b>. This operation installs the Expert bootfile and essential system data files onto the workstation rigid disk. This step takes several minutes and requires you to exchange floppy disks during the process. Change the floppy disks when requested.</p> <p>When the system is finished installing the basic Expert software, the system asks if you want to install the default User.cm.</p> <p>If you did not partition the workstation rigid disk or you have your own User.cm installed on the workstation, type <b>N</b> and press <b>RETURN</b>. The system displays the menu when finished.</p> <p>If you partitioned the workstation disk you should type <b>Y</b> and press <b>RETURN</b>. The system displays the menu after the User.cm is installed.</p> |
| <p>7. Install the Expert fonts.</p>  | <p>If you are reinstalling Expert 4.0.2 software and already have the Expert fonts installed on your workstation, continue with step 8.</p> <p>If you partitioned the workstation disk, you should install the Expert SansSerif and Typewriter fonts. It is easier to delete unwanted font files once the workstation is up and running.</p> <p>Type the number corresponding to <b>Install Expert Fonts</b> and press <b>RETURN</b>. This step takes several minutes. The system displays the menu after the Expert fonts are installed.</p>  |

| Step   | Instructions   |
|--|--|
| <p>8. Start the system with a password disk.</p> <p>Insert the enabler floppy disk when requested.</p> | <p>Continue with step 9 below if:</p> <ul style="list-style-type: none"> <li>▶ You are installing Expert 4.0.2 software for the first time.</li> <li>▶ You partitioned the workstation rigid disk before reinstalling Expert 4.0.2 software and you do not have an Expert 4.0 or 4.0.x password disk.</li> <li>▶ You are reinstalling Expert 4.0.2 software on the workstation and you did not partition the workstation rigid disk.</li> </ul> <p>Installation of the basic Expert workstation software is now complete. You must now start the workstation and enable your Expert software options. Boot Expert with a password disk by typing the number corresponding to <b>Start System With Enabling Password Floppy</b> and press <b>RETURN</b>. Insert the Expert enabler floppy disk in the floppy disk drive when requested and press <b>RETURN</b>. Continue with step 10 below.</p> <p><b>Note:</b> Password disks created in Expert versions other than 4.0 or 4.0.x do not work in the workstation. You need to call the Xerox Software Control Center for a new software password in order to enable your Expert software options. For more information on creating Expert password disks, refer to the <i>Using Expert User's Guide</i>, Appendix 8.4.</p> |
| <p>9. Start the system.</p>  | <p>Installation of the basic Expert workstation software is now complete. You must now start the workstation and enable your Expert software options. Boot Expert by typing the number corresponding to <b>Start System</b> and press <b>RETURN</b>.</p>   |
| <p>10. Reset workstation.</p> <p>Acknowledge standalone workstation.</p>                               | <p>If the workstation stops at codes 0138, 0139, or 0149 for any period of time, press the <b>B Reset</b> button on the processor.</p> <p>If you have a standalone workstation, the system will flash codes 0322 and 0002. Press and hold the <b>SKIP/NEXT</b> key on the keyboard until the system displays a code greater than 0322.</p> <p>During start-up time, code 0990 may appear for an extended period of time. After approximately 10 to 15 minutes, the system displays code 4000 and the Expert enabler window appears on the screen, indicating that Expert software has been installed and successfully started.</p> <p style="text-align: right;"><i>Continued on next page</i></p>   |

| Step   | Instructions   |
|--|--|
| <p>Select <b>Apply!</b> if your system is already enabled.</p> <p>Call Xerox for a new software password.</p>  | <p>If you started the workstation with a password floppy disk or you reinstalled Expert 4.0.2 software, the system displays the software options currently enabled. If you wish to enable the workstation with the listed options, select the <b>Apply!</b> command in the enabler window and continue with step 11 below.</p> <p>If the system does not display a list of enabled software options or you wish to change Expert software options, you need to call the Xerox Software Control Center to get a new software password. Have the software authorization number, workstation host address, and workstation serial number ready and <u>be sure to tell the Software Control Center Coordinator that you are installing Expert 4.0.2 software.</u></p> <p style="text-align: center;"><b>Xerox Software Control Center</b><br/>(800) 835-9013</p> <p>Type your software password in the password field of the enabler window and select the <b>Apply!</b> command. Continue with step 11 below.</p>   |
| <p>11. Log in to Expert and modify the User.cm if necessary.</p> <p>Install the Expert drawing formats and templates, system library files, and Expert utilities?</p> <p>Expert software installation for a networked workstation is complete.</p> | <p>After the software has been enabled, Expert finishes booting. Ignore any messages pertaining to a Clearinghouse problem. Press the <b>STOP</b> key on the keyboard and log in to Expert <u>using your fully qualified user name if your workstation is on a network.</u> Modify the User.cm file to meet your requirements if necessary (4.0.2 changes to the User.cm are described in Section 3 of this release document). Refer to the <i>Using Expert User's Guide</i>, Chapter 6, Section 6.9 if you need help modifying the User.cm file.</p> <p>If you wish to use the drawing formats and templates, system library files, and Expert utilities included with this release, read the contents of the floppy disks labeled <i>8010 Xerox Expert 4.0: Drawing Formats and Templates</i>, <i>8010 Xerox Expert 4.0: System Library Files</i>, and <i>8010 Xerox Expert 4.0.2: Expert Utilities</i> using Expert's Executive window and the floppy command. For help on reading files from a floppy disk, refer to the <i>Using Expert User's Guide</i>, Chapter 6, Section 6.3.</p> <p>If your workstation is part of a network, you are finished with Expert 4.0.2 software installation. If you made modifications to the User.cm, you must boot the workstation for the new User.cm changes to take effect.</p> <p>If you are installing Expert 4.0.2 on a standalone workstation continue with step 12.</p> |

| Step   | Instructions   |
|--|--|
| <p>12. Boot the 6080 software installer disk.</p> <p>Install the Time Setter Utility on a standalone workstation.</p> <p>Boot the workstation.</p> <p>Acknowledge standalone workstation.</p> <p>Expert software installation on a standalone workstation is complete.</p> | <p>It is necessary to install the Expert Time Setter Utility on standalone workstations. Insert the floppy disk labeled <i>6080 Xerox Expert 4.0.2: Installer</i> in the floppy disk drive and do a 2-boot. Set the workstation time when requested. In a few minutes, the system displays the main menu.</p> <p>From the main menu, type the number corresponding to <b>Expert: 6080 Special Installation and Error Recovery Commands (from floppies)</b> and press <b>RETURN</b>. The system displays a new menu.</p> <p>Type the number corresponding to <b>Install Time Setter Utility On Standalone Workstation</b> and press <b>RETURN</b>. Insert the floppy disk labeled <i>6080 Xerox Expert 4.0: Time Setter</i> in the floppy disk drive when requested and press <b>RETURN</b>. The system displays the menu when finished.</p> <p>Type the number corresponding to <b>Start System</b> and press <b>RETURN</b>. Type <b>Y</b> when requested and press <b>RETURN</b>. If the workstation stops at codes 0138, 0139, or 0149 for any period of time, press the <b>B Reset</b> button on the processor.</p> <p>When the system flashes codes 0322 and 0002, press and hold the <b>SKIP/NEXT</b> key on the keyboard until the system displays a code greater than 0322. Set the system time when requested.</p> <p>You are finished installing Expert 4.0.2 software on a standalone workstation.</p> |

---

**Overview**

---

Three appendixes are included in this section of the release document:

- A workstation checklist
- A list of the floppy disks used in installing Expert software
- Keyboard layouts of the special function keys used in Expert Schematics



---

## Workstation Checklist

---

A copy of this form should be completed for every workstation. Keep this checklist close to the workstation in case it is needed.

- Processor Type:**     8010  
                           6080 (Expert Color Workstation)  
                           6085  
                           6085-2

- Workstation Type:**     Standalone  
                               Network

**Workstation Serial Number:** \_\_\_\_\_

**Workstation Host Address:** \_\_\_\_\_

### Software Options:

- |  |  |
|--|--|
| <input type="checkbox"/> 2D Drafting                     | <input type="checkbox"/> HP 7475                         |
| <input type="checkbox"/> Schematics                      | <input type="checkbox"/> HP 7580 (included with HP 7475) |
| <input type="checkbox"/> PCB                             | <input type="checkbox"/> HP 7585 (included with HP 7475) |
| <input type="checkbox"/> Expert Illustrator              | <input type="checkbox"/> Houston Instruments             |
| <input type="checkbox"/> Board Blank (included with PCB) | <input type="checkbox"/> CalComp 925                     |
| <input type="checkbox"/> Gerber (included with PCB)      | <input type="checkbox"/> CalComp 945                     |
| <input type="checkbox"/> 290 (8010 workstations only)    | <input type="checkbox"/> Comp80                          |
| <input checked="" type="checkbox"/> dpi 200              | <input type="checkbox"/> No Clearinghouse                |
| <input checked="" type="checkbox"/> VRF                  | <input checked="" type="checkbox"/> Mail                 |
| <input checked="" type="checkbox"/> Interpress           | <input checked="" type="checkbox"/> Calendar             |
| <input checked="" type="checkbox"/> Print                | <input checked="" type="checkbox"/> Spread Sheet         |



---

## Expert 4.0.2 Floppy Disk Software List

---

### 6085 and 6085-2 Floppy Disk Set

---

- 6085 Xerox Expert 4.0: Special Installation # 1
  - 6085 Xerox Expert 4.0: Special Installation # 2
    - 6085 Xerox Expert 4.0.2: VP Expert Foundation (1 of 2)
    - 6085 Xerox Expert 4.0.2: VP Expert Foundation (2 of 2)
    - 6085 Xerox Expert 4.0.2: VP Expert Foundation (6085-2 only) (1 of 2)
    - 6085 Xerox Expert 4.0.2: VP Expert Foundation (6085-2 only) (2 of 2)
    - 6085 Xerox Expert 4.0.2: VP Expert Drafting (1 of 2)
    - 6085 Xerox Expert 4.0.2: VP Expert Drafting (2 of 2)
    - 6085 Xerox Expert 4.0.2: VP Expert Schematics (1 of 2)
    - 6085 Xerox Expert 4.0.2: VP Expert Schematics (2 of 2)
    - 6085 Xerox Expert 4.0.2: VP Expert Placement and Routing
    - 6085 Xerox Expert 4.0.2: VP Expert Common Software (1 of 3)
    - 6085 Xerox Expert 4.0.2: VP Expert Common Software (2 of 3)
    - 6085 Xerox Expert 4.0.2: VP Expert Common Software (3 of 3)
  - 6085 Xerox Expert 4.0: Expert Essential Data (1 of 2)
  - 6085 Xerox Expert 4.0: Expert Essential Data (2 of 2)
  - 6085 Xerox Expert 4.0: Expert SansSerif Fonts (1 of 2)
  - 6085 Xerox Expert 4.0: Expert SansSerif Fonts (2 of 2)
  - 6085 Xerox Expert 4.0: Expert TypeWriter Fonts (1 of 2)
  - 6085 Xerox Expert 4.0: Expert TypeWriter Fonts (2 of 2)
  - 6085 Xerox Expert 4.0: Drawing Formats and Templates
  - 6085 Xerox Expert 4.0: System Library Files (1 of 2)
  - 6085 Xerox Expert 4.0: System Library Files (2 of 2)
    - 6085 Xerox Expert 4.0.2: Expert Utilities
  - VP File Conversion of Expert/PROCAD Illustrations 4.0
- 
- Retain from 4.0 software set.

**8010 and 6080 Floppy Disk Sets**

---

**8010 Software**

---

- 8010 Xerox Expert 4.0: Special Installation
  - 8010 Xerox Expert 4.0.2 (1 of 3)
  - 8010 Xerox Expert 4.0.2 (2 of 3)
  - 8010 Xerox Expert 4.0.2 (3 of 3)
- 8010 Xerox Expert 4.0: Expert Essential Data
- 8010 Xerox Expert 4.0: Expert SansSerif Fonts
- 8010 Xerox Expert 4.0: Expert TypeWriter Fonts
- 8010 Xerox Expert 4.0: Drawing Formats and Templates\*
- 8010 Xerox Expert 4.0: System Library Files\*
  - 8010 Xerox Expert 4.0.2: Expert Utilities\*
- VP File Conversion of Expert/PROCAD Illustrations 4.0

**6080 Software**

---

- 6080 Xerox Expert 4.0.2: Installer
- 6080 Xerox Expert 4.0.2: Basic Workstation # 1
- 6080 Xerox Expert 4.0.2: Basic Workstation # 2
- 6080 Xerox Expert 4.0.2: Basic Workstation # 3
- 6080 Xerox Expert 4.0: Expert Essential Data
- 6080 Xerox Expert 4.0: Expert Fonts
- 6080 Xerox Expert 4.0: Time Setter
- 6080 Offline Diagnostics 7.0

- 
- Retain from 4.0 software set.

\* Also required for 6080 (color) workstation.

---

## Expert Schematics Function Keys

---

This appendix illustrates the layout of the schematic special function keys on the Xerox 6085, 6085-2, and 8010 keyboards.

Special function keys allow you to execute schematic commands directly, without bringing up pop-up menus. Depending on the workstation type, the keys for various schematic functions appear in different locations, as illustrated on the following pages.

Function Keys on the 6085 and 6085-2 Workstations

Upper Function Keys

|               |        |        |         |
|---------------|--------|--------|---------|
| CENTER SOURCE | ROTATE | MIRROR | CLOSEST |
|---------------|--------|--------|---------|

|      |        |     |     |
|------|--------|-----|-----|
| TEXT | SYMBOL | NET | BUS |
|------|--------|-----|-----|

|         |               |
|---------|---------------|
| CLUSTER | BUS CONNECTOR |
|---------|---------------|

Left Function Keys

|                                       |                                 |
|---------------------------------------|---------------------------------|
| STOP                                  | <u>REPLACE</u><br>DELETE        |
|                                       | <u>CREATE LINE</u><br>AGAIN     |
| APPLY BUS PROPERTIES SHEET            | <u>SELECTION BY BOX</u><br>COPY |
| NAME CONNECTION                       | <u>ADD TO SELECTION</u><br>DRAG |
| <u>EDIT PATH</u><br>CREATE CONNECTION | PROP'S                          |

Center Function Keys

|                 |
|-----------------|
| (SHIFT)         |
| OBJECT PROPERTY |

|                    |
|--------------------|
| (SHIFT)            |
| MAKE INTO A SYMBOL |

# Function Keys on the 8010 Workstation

## Upper Function Keys

|               |        |        |        |      |     |     |         |
|---------------|--------|--------|--------|------|-----|-----|---------|
| CENTER SOURCE | ROTATE | MIRROR | SYMBOL | TEXT | NET | BUS | CLOSEST |
|---------------|--------|--------|--------|------|-----|-----|---------|

## Left Function Keys

|  |                                 |
|--|---------------------------------|
| <u>CREATE LINE</u><br>AGAIN            | <u>REPLACE</u><br>DELETE        |
| APPLY                                  | <u>SELECTION BY BOX</u><br>COPY |
| NAME<br>CONNECT.                       | <u>ADD TO SELECTION</u><br>DRAG |
| <u>EDIT PATH</u><br>CREATE<br>CONNECT. | PROP'S                          |

## Right Function Keys

|                    |                 |      |
|--------------------|-----------------|------|
|                    |                 |      |
|                    | CLUSTER         |      |
| MAKE INTO A SYMBOL | BUS CONNECTOR   | STOP |
|                    | OBJECT PROPERTY |      |

