



# **SERENA<sup>®</sup>** **COMPAREX<sup>®</sup> 8.7 for z/VSE**

**Installation and Setup Guide**

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# Welcome to Serena Comparex

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**About Comparex** COMPAREX® is Serena Software's intelligent, anything-to-anything file comparison utility for the z/OS, z/VM, and z/VSE operating systems on IBM® Series z® mainframes. Comparex is backward-compatible with a wide variety of predecessor systems as well.

**About this Document** This document describes the installation and configuration of Serena® COMPAREX® 8.7 for z/VSE. It also covers installation in predecessor environments such as VSE/ESA, VSE/SP, VSE, and DOS/VSE.

For installation in a z/OS or z/VM environment, see the *Comparex Installation and Setup Guide* for the relevant operating system family.

If you need additional assistance installing Comparex or configuring it for your requirements, please contact Serena Customer Support. Contact information can be found in the README file or at [www.serena.com](http://www.serena.com).

**Audience** This document is intended for use by IBM mainframe systems engineers and systems programmers who are knowledgeable about IBM mainframes and the z/VM operating system or its direct predecessors. It assumes you have a working knowledge of your operating environment.

## Before You Begin

Refer to the README for late-breaking information that became available after publication of this manual. This information is updated frequently. The most recent README information is available to customers online at the Serena Customer Support site at [www.serena.com/support](http://www.serena.com/support).

## Available Documentation

The Comparex documentation suite includes the following manuals.

Manual	Description
<i>Serena® COMPAREX® for z/OS Installation and Setup Guide</i>	Installation and configuration guide for z/OS and related environments.

Manual	Description
<i>Serena® COMPAREX® for z/OS Getting Started Guide</i>	Basic Comparex concepts and usage in a z/OS-related environment.
<i>Serena® COMPAREX® for z/OS User's Guide</i>	User's guide to Comparex for z/OS and related environments, with command syntax and use cases.
<i>Serena® COMPAREX® for z/VM Installation and Setup Guide</i>	Installation and configuration instructions for z/VM and related environments.
<i>Serena® COMPAREX® for z/VM Getting Started Guide</i>	Basic Comparex concepts and usage in a z/VM-related environment.
<i>Serena® COMPAREX® for z/VM User's Guide</i>	User's guide to Comparex for z/VM and related environments, with command syntax and use cases.
<i>Serena® COMPAREX® for z/VSE Installation and Setup Guide</i>	Installation and configuration instructions for z/VSE and related environments.
<i>Serena® COMPAREX® for z/VSE Getting Started Guide</i>	Basic Comparex concepts and usage in a z/VSE-related environment.
<i>Serena® COMPAREX® for z/VSE User's Guide</i>	User's guide to Comparex for z/VSE and related environments, with command syntax and use cases.
<i>Serena® Comparex® Quick Reference</i>	Comparex command and keyword reference for all OS environments.

## Tips for Using the PDF Manuals

All Comparex documentation is provided electronically in Adobe Portable Document Format (PDF). To view PDF files, use Adobe® Reader®, which can be downloaded at no charge from [www.adobe.com/reader/](http://www.adobe.com/reader/).

This section highlights some of the main Reader features. For more detailed information, see the Adobe Reader online help system.

**PDF Features** The Comparex documentation uses the following PDF features:

- **Bookmarks.** All of the manuals contain a panel of nested bookmarks that make it easy to jump directly to specific topics. By default, the bookmarks appear to the left of the document content.

- **Links.** Cross-reference hyperlinks enable you to jump from topic to topic within a manual with a single mouse click. These links are highlighted in blue. Similar active hyperlinks to sites on the World Wide Web are highlighted in blue monospace.
- **Printing.** While viewing a manual, you can print the current page, a range of pages, or the entire manual. Printer output preserves the layout of the online document with higher resolution for graphics.
- **Advanced search.** Adobe Reader includes an advanced search feature that enables you to perform a full-text search across multiple PDF files concurrently in a specified directory.

### Multi-Document Search

To search for a text string in multiple PDF documents at once, perform the following steps (requires Adobe Reader 6 or higher):

- 1 In Adobe Reader, select **Edit > Search** (or press CTRL+F).
- 2 In the text box, enter the word or phrase for which you want to search.
- 3 Select the **All PDF Documents in** option, and browse to select the folder in which you want to search.
- 4 Optionally, select one or more of the additional search options, such as **Whole words only** or **Case-Sensitive**.
- 5 Click the **Search** button.



**NOTE** Optionally, you can click the **Use Advanced Search Options** link near the lower right corner of the application window to enable additional, more powerful search options. (If this link says **Use Basic Search Options** instead, the advanced options are already enabled.) For details, see Adobe Reader's online help.

## Typographical Conventions

Substantive changes to content made since the previous publication of this manual are highlighted by a vertical bar in the left margin parallel to the changed text, as shown at left.

In addition, the following typographical conventions are used in the main body text to highlight special information. (These conventions do not apply to titles or headings.)

Convention	Explanation
<b>bold</b>	Marks field names or literals shown on a screen.
<i>italics</i>	Introduces new terms that you may not be familiar with. Also indicates emphasis.
UPPERCASE	Identifies keys or key combinations that invoke a function. For example, "Press the ENTER key."
greater-than symbol >	Separates menu names from their subordinate options or commands. For example, "select <b>File &gt; Copy</b> " means you should select the <b>Copy</b> option from the <b>File</b> menu.
monospace	Highlights sample code, syntax definitions, inline commands in body text, prompt text displayed on a screen, or values you enter at the keyboard.
<b>monospace bold</b>	In a monospaced syntax definition, highlights the default value in a list of mutually exclusive parameter options.
<i>monospaced italics</i>	Indicates placeholders for values you must specify in a command or file name; for example, <i>filename</i> .
MONOSPACED UPPERCASE	Indicates a literal value that must appear as shown in a command or file name.
vertical line 	In a monospaced syntax definition, separates mutually exclusive choices for a parameter value. For example, "Y N" indicates a choice between allowed parameter values Y (Yes) or N (No), with no other values accepted.
square brackets [ ]	In a monospaced syntax definition, delimits an optional parameter or a choice of possible values for an optional parameter.
curly braces { }	In a monospaced syntax definition, delimits a list of possible values that may be taken by a mandatory parameter.
<a href="#">blue</a>	Active hyperlink to a topic in this manual.
<a href="#">blue monospace</a>	Active hyperlink to an external Web site.

# Chapter 1

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## Requirements and Planning

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### Hardware and Software Environment

#### Operating Systems

Comparex runs, without modification, on all IBM and plug-compatible mainframes under the following operating systems:

- z/VSE and predecessor systems (VSE/ESA, VSE/SP, VSE, DOS/VSE)
- Software Pursuit's MVT/VSE
- Nixdorf NIDOS

#### Memory

Comparex requires a minimum of 176K of virtual memory. Implementing the optional Comparex interfaces (CPXIFACE or DOSIFACE) for Panvalet, Librarian, and "OTHer" file managers adds up to 60K to this requirement, depending on how you configure the interface.

At execution time, both the data set organization and the block sizes of the files being compared can further increase memory requirements.

Comparex is written in reentrant assembler and as such is eligible for inclusion in the Shared Virtual Area (SVA). Whenever it is executed, we recommend that SIZE=300K be used, thus allowing all the remaining storage in the partition to be dynamically acquired through GETVIS invocations.

## Auxiliary Storage

The base Comparex product consists of a single load module. The load module size is about 160K. This can be held on about four tracks of a 3390 disk pack. The size of the optional CPXIFACE or DOSIFACE interface modules are dependent on how they are generated, but they are seldom larger than 60K.

No special data sets are required by Comparex for its execution.

## Licensing Requirements

**License Compatibility** License keys for Comparex 8.6.2 or earlier are not compatible with Comparex 8.7. Customers upgrading from a prior version of Comparex should contact Serena Customer Support to obtain a new license key prior to installing Comparex 8.7.

**Key Request Procedure**

To request a new license key, perform the following steps.

- 1** At a system console on the machine where you plan to install Comparex, display or list the machine specifications for the CPU. Copy the output of this command into a text file.
- 2** Log on to the Serena Customer Support Web site. (The URL for the site is provided in the README.)
- 3** Open a new Support case requesting the creation of a license key for Comparex 8.7.0. Attach the text file with your system information to the case.
- 4** Support will provide a new license key within 24 hours.



**IMPORTANT!** The new license key will be valid only for the machine whose specifications you provide. Migration to a new machine requires the generation of a new license key.

# Product Files

The software and documentation are distributed on the same CD. The CD contains the following data sets for the software components:

- **COMPAREX.OBJ** — Object code to be link-edited into your load library
- **CPXIFACE.ASM** — Source code for CPXIFACE interface to Panvalet, Librarian, and "OTHer" file managers, which must be compiled after configuration



**NOTE** If used, the compiled CPXIFACE module should be placed in the same load library as COMPAREX.OBJ in most environments. It should be a CIL or private sublibrary on VSE/SP.

- **DOSIFACE.ASM** — Source code for DOSIFACE interface to Panvalet, Librarian, and "OTHer" file managers, which must be compiled after configuration



**NOTE** If used, the compiled DOSIFACE module should be placed in the same load library as COMPAREX.OBJ in most environments. It should be a CIL or private sublibrary on VSE/SP.

- **COMPAREX.COB** — Source code for IDMS exit module JOSEFINE

The COMPAREX.OBJ object code module should be allocated with 80-byte fixed-length records (F/80). All other data sets should be allocated with fixed-length records, in block format, with an 80-byte record length and a block size of 6000 records (FB/80/6000).



## Chapter 2

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# Installation Procedures

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## Unloading the Distribution CD

### Accessing the Documentation

All cpx documentation is included on the software distribution CD in Adobe Acrobat format.

To access the documentation on the CD, open the Documentation folder and choose the z/VSE folder. The PDFs are non-compressed files. You may copy them to your workstation.

The manuals are also available through the Download Center on the Serena Support self-service Web site.

### Unload the CD-ROM



**NOTE** If you have previously installed Comparex using your client PC, you must first remove it using the “**Add/Remove Programs**” function on Windows Control Panel before installing Comparex 8.7.



**NOTE** For most maintenance releases, only the object code needs to be unloaded. After you unload the files from the CD-ROM, copy the files in the maintenance libraries to a test environment before applying them to your existing cpx maintenance mini-disks.

To move the files from the cpx CD-ROM to your host you need to perform the following steps. The files on the cpx CD-ROM are in a compressed format, and you must use the CD autorun to copy the files to your PC and decompress the files. The autorun lets you create an FTP Input file that contains the FTP commands to upload the cpx files from your PC to the host.

This process requires the following information:

- TCP/IP FTP connectivity from your PC to the host computer.
- The dotted decimal IP address of the host.
- A host userid and password.
- Security authorization to allocate files on the host.

### ***Copy the files to your computer***

**1** Insert the Comparex CD-ROM in your CD drive. The program will start automatically. (If autorun is not enabled, run CPXVSE870.exe from the CDInstall folder on the CD).

Click **Next** to continue.

**2** When the Master License Agreement displays, select “**I accept the terms of the Master License Agreement**” and click **Next**.

**3** When the Master License Agreement Confirmation displays, select “**I confirm my acceptance of the terms of the Master License Agreement**” and click **Next**.

**4** Select the folder to which you want to copy the files and click **Next**. (Copying the files to your local PC decreases the transfer time to the host and decompresses the files from their compressed format.)

**5** In the dialog box, you choose how you will transfer the files to the Host.

- Choose **Yes** to use the automated FTP process. Then click **Next** and continue to the next step.

- Choose **No** if you want to use a manual FTP process or 3270 emulator software. Click **Next** and the files will be copied to your PC. Then go to [Step 7 on page 15](#) to complete the installation.
- 6** Enter the dotted decimal IP address of the host and your host user ID, then click **Next**.
  - 7** You are now ready to transfer the files to the host. If you want to view the README file at this time, select "**I would like to view the README file**".  
Click **Finish**.
    - If you selected **Yes** in the *Customize FTP Template* dialog box ([Step 5 on page 14](#)), continue to the following section, "[Edit the FTP Input File](#)" on page 15" to transfer the files to the host and submit the receive job.
    - If you selected **No** in the *Customize FTP Template* dialog box ([Step 5 on page 14](#)), go to [Appendix C, ", "](#) on page 47.

### **Edit the FTP Input File**

- 1** Go to **Start | Programs | Serena | Comparex 8.7.0 | Edit FTP Input**, which displays the FTP bat file, used by FTP to transfer the cpx z/VSE files to the host.
- 2** Edit the third line in the FTP control file, replacing the text <PASSWORD> with your own password on the host.



**IMPORTANT!** An incorrect password value in the FTP control file will trigger a "login error" message.

- 3** Save the file under the same name.



**NOTE** After you finish uploading the files to the host, delete this password from the FTP control file on your PC.

### **Transfer Files to Your z/VSE System**

After you edit the FTP input files by adding your password, you are ready to transfer files to your z/VSE system. Your local system must be connected to the network for this transfer to work.

The following instructions apply to systems using z/VSE under z/VM.



**NOTE** Make sure that the z/VSE userid is not currently logged on, otherwise the FTP transfer will not be able to gain “write” access to the userid’s A drive.

**To transfer the files:**

- 1** Select **Start | Programs | Serena | Comparex 8.7.0 | FTP Files to Host**. A window displays with the message “FTP process has begun”.  
This process will take several minutes to complete.
- 2** After the transfer completes, view the FTP log file to verify that the files were transferred to the host. To do this, select **Start | Programs | Serena | Comparex 8.7.0 | View FTP log**.

If any of the following errors appear, you must make corrections in the FTP Input File and repeat [Step 1](#) above.

Message	Corrective Action
Invalid Command	Verify that you entered the correct user name and password in the FTP input file.
Login Error	Verify that you entered the correct user name and password in the FTP input file.
Not Connected	The FTP connection was lost so these files did not get uploaded. Resubmit the program by choosing FTP Files to Host.
Unknown Host	Check the IP address of your host and edit the FTP input file.

**Delete your Password**

After unloading the CD and uploading the files to the host, delete your password from the FTP control file.

- 1** Go to **Start | Programs | Serena | Comparex 8.7.0 | Edit FTP Input**.
- 2** Delete your password (for security reasons).
- 3** Re-save the file.

### **Finish the Installation**

If you are installing a maintenance release, the installation is now complete.

If you are installing a full release, continue with the remaining steps in this chapter.

## **Checking the Relocatable Library**

Ensure that your Relocatable Library (RLB) includes these two members:

**IJDFAZZW - PRMOD for SYS005 (SYSLST)**

**IJJFCIZD - DIMOD for SYSIPT**

If you want Comparex to compare ISAM files in your installation, ensure that your RLB also includes this member:

**IJHZRSZZ - ISMOD for ISAM support**

## **Preparing the Installation Jobstream**

The supplied sample jobs may be modified to match the working environment. LIBDEF statements may be necessary to point to the appropriate Relocatable (*RL*) and Core Image (*CIL*) Libraries.

### **Before You Begin**

In earlier releases, the object module, COMPAREX OBJECT, which was shipped on the distribution tape, contained the licensing information applicable to your installation. With release 8.5.0 and above, the object module on the CD is a placeholder and will not linkage edit successfully.

A customized object module will be shipped separately, either as an email attachment or using FTP, from our Order Processing department. The customized object module identifies your company and contains licensing details.

When you receive the customized module, transfer it to your host using a BINARY file transfer. (Contact Serena Customer Support if you need instructions on how to perform a BINARY file transfer.)

## Create a New Sublibrary

- 1 Create a new sublibrary for this release of cpx using the following JCL.

```
* $$ JOB JNM=jobname,CLASS=0
// JOB CPXDEF
// EXEC LIBR
DEFINE SUBLIB=CPX870.CPX
/*
/&
* $$ EOJ
```

- 2 Add the following JCL cards to the top of COMPAREX.OBJ.

```
* $$ JOB JNM=jobname,CLASS=0
// JOB CPXADD
// EXEC LIBR
ACCESS SUBLIB=CPX870.CPX
CATALOG COMPAREX.OBJ REP=YES EOD=/+
```

- 3 Add the following JCL cards to the end of COMPAREX.OBJ.

```
/+
/*
/&
* $$ EOJ
```

- 4 Submit the job to your z/VSE system.

## Link-Edit cpx

Run the following job to link-edit cpx.

```
* $$ JOB JNM=CPXLKVSE,CLASS=0
// JOB CPXLKVSE
// LIBDEF OBJ,SEARCH=(CPX870.CPX)
// LIBDEF PHASE,CATALOG=CPX870.CPX
// OPTION CATAL
ACTION MAP
PHASE COMPAREX,*
```

```
INCLUDE COMPAREX
// EXEC LNKEDT
/*
/&
* $$ EOJ
```

Examine the linkage editor printout. The listing should show that Comparex was placed in the library. There will be at least one unresolved external reference.

Comparex can be assembled under lower release levels than VSE/SP release 2.1. The DTFs (Define The Files) for the printer (SYS005), SYSIPT, and all disk and tapes have changed. One of the manifestations of this growth is that MTMODs (Magnetic Tape Modules) are no longer required and the V-type address constant (VCON-VL3) within the DTFMT (Define The File Magnetic Tape) asks for module:

### **IJJTCTL**

which is only needed for the CNTRL Macro (to forward space, etc.). Comparex does not need it.

If your level of VSE/SP is lower than 2.1, you need modules:

- IJFFZZWN MTMOD for fixed length records
- IJFVZZWN MTMOD for variable length records
- IJFSZZWN MTMOD for spanned records
- IJFUZZWN MTMOD for undefined length records

No matter what release of z/VSE you link-edit Comparex under you will still have some unresolved external references.

Under VSE/SP release 2.1, the four modules IJF?ZZWN will be unresolved. With the lower level releases (1.3.4, for example) the module IJJTCTL will be unresolved.

## Tailoring Your Installation - Optional

The Comparex load module is composed of eight control sections (CSECTs). Two of these CSECTs may be tailored to modify Comparex defaults.



**NOTE** This customization is entirely optional and usually unnecessary.

Refer to [Appendix A, "CSECT Source Code" on page 43](#) for sample source code which can be separately assembled and link-edited with the supplied Comparex object code.

## Chapter 3

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# Generating the Comparex Interface

This chapter explains how to generate the Comparex interface.

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## Introduction

If your shop does not use Panvalet or Librarian and does not expect to generate an interface to any other library/data management system (such as POWER or DOS/VSE), skip to [Chapter 4, "Setting Site-Level Options" on page 35](#).

The source code for CPXIFACE has been split into two parts.

- **CPXIFACE** contains interfaces that span several operating environments such as CA-Panvalet and CA-Librarian.
- **DOSIFACE** contains interfaces that are unique to DOS/VSE.

You can use either CPXIFACE or DOSIFACE source code to generate the Comparex interface.

Although you can configure the CPXIFACE (or DOSIFACE) module to generate only one of the OTHER Interfaces, you can allow the use of multiple interfaces in your shop by creating additional modules that are versions of CPXIFACE or DOSIFACE. See ["Allowing Multiple Interfaces" on page 30](#).



**NOTE** DOSIFACE.ASM has been tailored specifically for the "OTHER" interface specific to DOS/VSE. There are fewer decisions to make, but in general, the instructions apply to both.

## Unloading CPXIFACE

**Perform the following steps to unload the source code to generate the CPXIFACE interface.**

- 1 Add the following JCL cards to the top of CPXIFACE.OBJ.

```
* $$ JOB JNM=jobname,CLASS=0
// JOB CPXADD
// EXEC LIBR
ACCESS SUBLIB=CPX860.CPX
CATALOG CPXIFACE.OBJ REP=YES EOD=/+
```

- 2 Add the following JCL cards to the end of CPXIFACE.OBJ.

```
/+
/*
/&
* $$ E0J
```

- 3 Submit the job to your z/VSE system.

## Unloading DOSIFACE

**Perform the following steps to unload the source code to generate the DOSIFACE interface.**

- 1 Add the following JCL cards to the top of DOSIFACE.OBJ.

```
* $$ JOB JNM=jobname,CLASS=0
// JOB CPXADD
// EXEC LIBR
ACCESS SUBLIB=CPX860.CPX
CATALOG DOSIFACE.OBJ REP=YES EOD=/+
```

- 2 Add the following JCL cards to the end of DOSIFACE.OBJ.

```
/+
/*
/&
* $$ E0J
```

- 3 Submit the job to your z/VSE system.

## Editing CPXIFACE or DOSIFACE

Using a text editor, edit CPXIFACE.ASM or DOSIFACE.ASM.

You must perform the following edits:

- Set the global variables
- Set the variables specific to your shop
- Add any include statements for your interfaces

After completing the edits, save the file then continue to ["Assembling and Link Editing CPXIFACE/DOSIFACE" on page 33.](#)

## Setting the Global Variables for CPXIFACE

Between the 60th and 110th statements are some global variables in CPXIFACE. Set them as follows:

```
*=====
* BELOW IS WHERE THE USER CAN TAILOR THE SOURCE FOR THE SHOP.
*=====
*OPSYS   SETB   1                               '&OPSYS' at MVS and VM/CMS
&OPSYS   SETB   0                               '&OPSYS' at VSE
*CMS     SETB   1                               '&CMS'   at VM/CMS
&DYNAMIC SETB   0                               (NO)   interfaces to be loaded dynamically
&CPXVER  SETC   '8'                             version 8
&CPXREL  SETC   '6'                             release 6
&CPXMOD  SETC   '0'                             modification 0
&CPXVRM  SETC   '&CPXVER..&CPXREL..&CPXMOD' version/release/mod
&RELDATE SETC   '2006/105' comment             release date Apr, 15, 2006
```



**NOTE** To avoid receiving assembler errors, comment out the lines as shown above.

## Setting the Global Variables for DOSIFACE

Change the lines in DOSIFACE as follows:

```
*=====
* BELOW IS WHERE THE USER CAN TAILOR THE SOURCE FOR THE SHOP.
*=====
&CPXVER  SETC   '8'                             version 8
&CPXREL  SETC   '6'                             release 6
&CPXMOD  SETC   '0'                             modification 0
&CPXVRM  SETC   '&CPXVER..&CPXREL..&CPXMOD' version/release/mod
&RELDATE SETC   '2006/105' comment             release date Apr, 15, 2006
&BIMED   SETB   0                               (NO)   .BIM-Edit libraries
```

### Settings for CA-Panvalet

If your shop uses CA-Panvalet, set:

```
&PAN      SETB  1          (YES)
```

otherwise,

```
&PAN      SETB  0          (NO)
```

CA-Panvalet users who do not use **3340** disk drives must also do some extra editing. Find 'PAN\$1021' and edit the following statement:

```
PAN$1021 MVC   PAN$OPND+7(12) ,=CL12'=SYS006=3340' CHANGE?
```

Change the 3340 designation to your disk type according to this schedule:

```
For 3330 Mod I      =CL12'=SYS006=3330'
For 3330 Mod II     =CL12'=SYS006=3331'
For 3350            =CL12'=SYS006=3350'
For 3375            =CL12'=SYS006=CKD  '
For 3380            =CL12'=SYS006=CKD  '
For FBA Devices    =CL12'=SYS006=FBA  '
```

## Settings for CA-Librarian

If your shop uses CA-Librarian, set:

```
&LIB      SETB  1          (YES)
&LIB$CMC  SETC  'xxxx'    Your NUMERIC Current Management Code
&GEM      SETB  0          (NO)
```

otherwise,

```
&LIB      SETB  0          (NO)
```



**NOTE** Current Management Code (LIB\$CMC) is optional. It is only needed by LIB to access 'PROD2' modules. If you do not have PROD2 members or do not want users to access them, set the 'xxxx' above to '0000'. If you have multiple LIB Masters, each of which has its own 'Current Management Code,' then again set the 'xxxx' to zero. Dynamically, pass in the four-digit code using the PARM at execution time, as follows:

```
SYSUT1=(LIB,M=abc,PARM=1234)
```



**NOTE** LIB and GEM are mutually exclusive.

For **CA-Librarian**, you must also include an card image FAIRLE05. See ["Including External Modules for OTher Interfaces" on page 31](#) for additional information.

## Settings for FUJITSU/FACOM's GEM

If your shop uses FUJITSU/FACOM's **GEM**, which is similar to LIB, set:

```
&LIB      SETB  1          (YES/GEM)
&GEM      SETB  1          (YES)
```

otherwise,

```
&LIB      SETB  0          (NO)
```

## Settings for OTher Interfaces

If you want CPX to process any of the file structures in ["OTher Interfaces" on page 45](#), within CPXIFACE.ASM, set:

```
&OTH      SETB  1          (YES)
```

otherwise,

```
&OTH      SETB  0          (NO)
```



**NOTE** If you SETB &OTH to 1, then you can SETB to **one and only one** of the global variables listed in ["OTher Interfaces" on page 45](#) at the same time.

Be aware that you can only select those with comments (the area beyond column 16) marked **(NO)** or **(BETA)**.

The one marked **BETA** works in the environment where it was developed but has never been tested in a stressed environment. Generally, the BETA designation only lasts for a single modification and then is changed to NO. (BETA designation only affects the individual interface and is insulated from all other interfaces.) Those marked:

You should not select those marked **(FUTURE)**, as they are in varying stages of development.

For those file structures specific to DOS/VSE, as listed on "[DOSIFACE Interface File Structures](#)" on page 46, DOSIFACE.ASM is where &OTH SETB 1 is set.

## Settings for DATACOM

DATACOM users need to do some more work before that interface can function. A User Requirements Table (URT) must be linkage edited with each CPXIFACE module. The method recommended is to break the table into two parts. The first part is the object code with entry point **DBNTRY** that is statically linkage edited with the appropriately named CPXIFACE module:

```
CPXUR    TITLE 'COMPAREX/DATACOM STATIC DBNTRY'
         DBURINF  BACKSPT=NO, COBOL=NO, LOADNAM=CPXURTLD,      X
         OPEN=USER, USRNTY=CPXIFACE, URTABLE=LOAD
         DBUREND  USRINFO=CPXDEMO
         END
```

The second part is the actual URT that is dynamically loaded at open time on the first entry into DBNTRY:

```
URTBL    TITLE 'COMPAREX/DATACOM DYNAMIC TABLE'
         DBURSTR  ABEND=NO, MULTUSE=YES, PRTY=7, TXNUNDO=YES
         DBURTLB  ACCESS=SEQ, DBID=155, SYNONYM=YES, X
         TBLNAM=X06, UPDATE=NO, SEQBUFS=2
         DBUREND  SYSTEM=CMS, USRINFO=CPXDEMO
         END
```

## Settings for IDMS

IDMS users have a special COBOL exit module called JOSEFINE which may be used as a model for navigating through databases. If it is used, the compile step (*for JOSEFINE*) *must* incorporate the following attributes:

**ENDJOB**

**NODYNAM**

**NORES**

## Settings for z/VSE Libraries

The library structure under VSE/SP (System Package) 2.1.0 changed dramatically. Comparex supports both the older library structure and the newer one in VSE/SP 2.1 and higher.

### **Libraries Before VSE/SP 2.1**

Turn on the DOS-LIBRARY (&DOSLB1) interface within DOSIFACE:

```
&DOSLB1  SETB  1          (YES)
```

This interface does an open--some earlier releases did not--such that if DASD File Protect is turned on in your operating system, it will still work.

### **Libraries Under VSE/SP 2.1 and Later**

Under VSE/SP 2.1.0 or higher, the library structure is not broken up into separate libraries. All types fit into any one library. Each library may be broken up into one or more SUBLIBRARYs. Each sublibrary may be broken up into multiple TYPEs. You may compare the directory or contents of one sublibrary/type against the same or another sublibrary/type. The directories are sorted in ascending sequence.

Turn on the DOS-LIBRARY (&DOSLB2) interface within DOSIFACE:

```
&DOSLB2  SETB  1          (YES)
```

### **Special Note for VSE/SP 2.1**

A library may reside in either BAM (VTOC-controlled) space or in a VSAM-managed space. There is a distinction between systems and non-systems libraries. System libraries are used for IPL and start at a fixed disk address. They are contained in one extent. A system library cannot reside in VSAM-managed space. A non-system library data set consists of one or more (*up to 16*) extents on one or more CKD or FBA DASDs supported by the VSE/SP Librarian.

The system residence library (usually named 'VSE.SYSRES.LIBRARY') must have some special handling in order for Comparex to read it. The normal extent for this library must be overridden in the // EXTENT card. For example, if the normal DLBL cards say:

```
// ASSGN  SYS001,3380,VOL=DOSRES,SHR
// DLBL   SYSUT1,'VSE.SYSRES.LIBRARY'
// EXTENT SYS001,DOSRES,1,0,1,899
```

then the extent card must be overridden to say:

```
// EXTENT SYS001,DOSRES,1,0,2,898 <=== Note
```

or

```
// EXTENT SYS001,DOSRES,1,0,8,892 <=== If 3390 device
```

The reason for this is that the first track is set aside for IPL information. For FBA devices, this translates to:

```
// EXTENT SYS001,DOSRES,1,0,020,59126 <=== Note
```

or

```
// EXTENT SYS001,DOSRES,1,0,130,59016 <=== If VSE/ESA
```

## Settings for ICCF

ICCF users with **FBA DASD** need to be concerned with the size of their control (blocking factor) intervals. As delivered, the default CI size is 2048. If it is necessary to raise the value higher, variable &ICCFBCI may be reset. The only legal values for &ICCFBCI are 2048, 4096, 8192, 16384, or 32768:

```
&ICCF   SETB  1          (YES)   .ICCF FROM IBM
&ICCFBCI SETA 2048      (2K)     ..ICCF FBA CI SIZE 2K/4K...
```

## Settings for Power Interfaces

There are two Power interfaces to choose from. The older one is dubbed "Power Queue" and is generally in the version 2 series. The more modern one is dubbed "VSE/Power" and is called version 4. There was no known version 3. VSE/Power can only be generated and used if the shop indeed has version 4.1 or better.

The older Power Queue can be generated and used in both environments but only if

```
SPOOL=YES
```

has been specified in the system level generation of VSE/Power. There are reported problems with using the older interface with new VSE/Power. We recommend that you generate the commensurate interface for your environment.

## **Allowing Multiple Interfaces**

Some shops will want to have multiple interfaces available for processing at all times. While it is true that only one of the "OTHER" interfaces can be generated at any one time, it does not mean that you cannot have separate modules (versions of CPXIFACE) for each function.

To accomplish this, you must compile and link a unique module name for each interface. We recommend that you start each module name with the letters CPX so that it can be easily identified as being associated with Comparex.

### ***Generating Another Interface***

Approximately 100 lines into the CPXIFACE (or DOSIFACE) source code (behind the "DOS" banner) is the following statement:

```
PUNCH ' PHASE CPXIFACE, * '
```

Change the "CPXIFACE" to whatever you want, such as "CPXPOWER" for the Power interface:

```
PUNCH ' PHASE CPXPOWER, * '
```

### ***Invoking Another Interface***

When you want that interface, you must instruct Comparex to load and use "CPXabcde" as opposed to the default "CPXIFACE" by specifying:

```
CPXIFACE=CPXabcde
```

or

```
CPXIFACE1=CPXabcde
```

or

```
CPXIFACE2=CPXabcde
```

If you also want DL/1, generate "CPXDLI" and so on.

The *Comparex User's Guide* refers to other interface modules. Users may take the suggested (for example, CPXIFACE=CPXRAMIS) name as real

and then ABEND when the module does not exist. The following table provides recommended interface module names for some of the more commonly used data management products.

### **List of OTher Interfaces and Associated Module Names**

<b>Interface</b>	<b>Module Name</b>
ADABAS	CPXADABS
BIM-EDIT library	CPXBIMED
CAMLIB	CPXCAMLB
DATACOM	CPXDATCM
DL/1	CPXDLI
DOS Library	CPXDOSLB
IAM	CPXIAM
ICCF	CPXICCF
IDMS	CPXIDMS
OWL	CPXOWL
NIXDORF	CPXNIXDF
POWER	CPXPOWER
RAMIS	CPXRAMIS
SPRI	CPXSPRI
UFAM	CPXUFAM
VOLLIE	CPXVOLIE
WYLBUR	CPXWYLBUR
Roll Your Own	CPXROLON

## **Including External Modules for OTher Interfaces**

Some of the "OTher" interfaces require you to include external modules. At least one of the interfaces, RAMIS, needs a module (RPIINT) that is considered an extra cost item from the vendor. Following is a partial list of interfaces and their required module names.

- **ADABAS** needs module ADAUSER (statically link-edited).
- **BIM-EDIT** needs modules BIUAPOP, BIULUOP, BIUAPCL, BIULUCL, BIUAPSD, BIULUSD, BIUAPRC, BIULURC. For example:  

```
INCLUDE BIUAPOP          BIM-EDIT user appl open
INCLUDE BIULUOP          BIM-EDIT user LU62 open
INCLUDE BIUAPCL          BIM-EDIT user appl close
INCLUDE BIULUCL          BIM-EDIT user LU62 close
INCLUDE BIUAPSD          BIM-EDIT user appl send data
INCLUDE BIULUSD          BIM-EDIT user LU62 send data
INCLUDE BIUAPRC          BIM-EDIT user appl receive
INCLUDE BIULURC          BIM-EDIT user LU62 receive
```
- **CAMLIB** needs modules USERIOCS, CAMPIOCS, CAMLIOCS. For example:  

```
INCLUDE CAMLOGIC, (USERIOCS)
INCLUDE CAMLOGIC, (CAMPIOCS)
INCLUDE CAMLOGIC, (CAMLIOCS)
```
- **DATAKOM** (see ["Settings for DATAKOM" on page 27](#)).
- **DL/1** needs module CBLTDLI.
- **IDMS** needs module IDMS or one of the following choices:
  - The single module IDMSIDVS if running Local Mode.
  - IDMSIDVS and IDMSOPTI if running Central Version.
- **OWL** needs module OWLIEAV5.
- **RAMIS** needs module RPIINT (RAMIS Procedural Interface).
- **SPRI** needs module SPRISUB.
- **VOLLIE** needs modules VIPCTRL, VIPDOS, OLL6002, and OLL6003.
- **CA-LIBRARIAN** needs the following image card beginning in column two after the CPXIFACE.ASM source code and /\* card, before the ENTRY CPXIFACE statement:

```
INCLUDE FAIRLE05
```

**To add the include statements:**

- 1 Append a variation of the following linkage editing JCL at the end of the data set:

```

/*
// LIBDEF RL,T0=(lib)                DOS/VSE pre 2.1

or
// LIBDEF PHASE,CATALOG=lib.sublib   VSE/SP 2.1 or later

```



**NOTE** The user may have separate RLBs for various packages that require the use of the LIBDEF command.

**2** Perform one of the following:

**a** For "OTHer" interfaces except CA-Librarian:

- Add your include statements.
- Append the following, beginning in column one:

```

/*
    ENTRY CPXIFACE
// EXEC LNKEDT
/*
/&

```

**b** For the CA-Librarian interface, append the following, beginning in column one:

```

/*
    INCLUDE FAIRLE05
    ENTRY CPXIFACE
// EXEC LNKEDT
/*
/&

```

**3** Save the data set.

## Assembling and Link Editing CPXIFACE/ DOSIFACE

To compile and link the CPXIFACE interface, prefix the CPXIFACE.ASM data set with the following JCL:

```
//JOB CPXIFACE ASSEMBLE/LINK
//OPTION CATAL
//EXEC ASMA90,SIZE=300K
```

To compile and link the DOSIFACE interface, prefix the DOSIFACE.ASM data set with the following JCL:

```
//JOB DOSIFACE ASSEMBLE/LINK
//OPTION CATAL
//EXEC ASMA90,SIZE=300K
```



**NOTE** The macros COMRG, GETVIS, and FREEVIS are needed for the CPXIFACE assembly. You may have to explicitly reference the correct MACLIB library to find these system macros.

Code a LIBDEF SEARCH= statement in your assembly execution JCL specifying your system MACLIB library to locate these macros and resolve assembler errors.

Run the job stream created above. Examine the assembly and linkage editor printout. There should not be any assembly errors, CPXIFACE should be in the library, and there should not be any unresolved external references (*Weak EXTRNs excepted*).

## Chapter 4

---

# Setting Site-Level Options

This chapter presents various site-level options you can set.

[Options](#)

---

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## Options

Comparex has options that can be set on a site level for all users at that site. The options that can be selected are:

- Decimal Point is Comma - causes Comparex to ignore commas when comparing COBOL text
- MONO case - make CASE=MONO the default for Japanese Katakana users
- OPT24BIT - use 24-bit SPIE. This option is used with FACOM and MSP.
- OLD/NEW labeling - causes SYSUT1 printouts to be labeled OLD and SYSUT2 printouts to be labeled NEW instead of ONE and TWO respectively.
- OPTCVMON - always convert alphabetic months to numeric when comparing dates with alphabetic months
- OPTDMY - date in day, month, year order
- OPTTRUNC - truncate units, that is, do not round units
- OPTEXTRA - add an extra zero in front of units less than one
- DBCS case - make CASE=DBC (Double Byte Character Set)

To activate any or all of these options, code and assemble the COMPAREO CSECT as follows and link it in with Comparex:

- Set any or all of the following options in the first byte:
  - X'80' - for Decimal Point is Comma
  - X'40' - for MONO case
  - X'20' - use 24-bit SPIE (for FACOM and MSP)
  - X'10' - for OLD/NEW labeling
  - X'08' - always convert alphabetic months to numeric when comparing dates with alphabetic months
  - X'04' - date in day, month, year order
  - X'02' - truncate units
  - X'01' - add an extra 0 in front of units less than 1
- Set the DBCS case option in the second byte:

- X'80' - for CASE=DBCS.

Comparex as shipped does not include a COMPAREO CSECT. If a COMPAREO CSECT is not found, the default is all options off.

## COMPAREO CSECT Example

DC	AL1(02)	number of bytes that follow/honored
DC	X'C6'	first byte, DPIC+MONO+DMY+TRUNC
OPTDPIC	EQU X'80'	.Decimal Point Is Comma (squeezing)
OPTMONO	EQU X'40'	.start off with CASE=MONO
OPT24BIT	EQU X'20'	.use 24-bit SPIE (for FACOM & MSP)
OPTOLNEW	EQU X'10'	.O L D/N E W instead of O N E/T W O
OPTCVMON	EQU X'08'	.always convert alphabetic months
OPTDMY	EQU X'04'	.dates in day/month/year order
OPTTRUNC	EQU X'02'	.truncate (don't round) units
OPTEXTRA	EQU X'01'	.extra 0 in front for units < 1
DC	X'80'	second byte, DBCS
OPTDBCS	EQU X'80'	.CASE=DBCS Double Byte Char SetEND



## Chapter 5

---

# Post-Installation Procedures

This chapter discusses post-installation procedures.

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Review the Printout	41



**NOTE** For cpx messages and user ABEND codes, refer to the *cpx z/VSE User's Guide*.

## Prepare a Jobstream

Assuming that you performed the installation of CPXIFACE or at least unloaded it to disk, run the following sample execution.

Prepare a jobstream that will compare the CPXIFACE source code on the distribution tape against the updated version on your disk according to this example:

### Model JCL for Post-Installation Verification

```
// JOB COMPAREX POST-INSTALLATION
// ASSGN  SYS005,syslst
// ASSGN  SYS001,TAPE
// MTC    REW,SYS001
// MTC    FSF,SYS001,4
// ASSGN  SYS002,DISK,VOLUME=volume <=== Change
//        Accordingly
// DLBL   SYSUT2,'CPXIFACE.ASM' <=== Change
//        Accordingly
// EXTENT SYS002,volume <=== Change
//        Accordingly
// LIBDEF CL,SEARCH=(testcl,...) <=== DOS/VSE pre 2.1
// LIBDEF PHASE,SEARCH=(lib.sublib) <=== VSE/SP 2.1 or
//        later
// EXEC   COMPAREX,SIZE=300K
*****
* Compare CPXIFACE source code from the tape versus
* the updated version on our disk.
*****
SYSUT1=(NLTAPE,RECFM=FB,LRECL=80,BLKSIZE=6000)
DSNUT1=CPXIFACE.ASM.ON.TAPE
SYSUT2=(DISK,RECFM=FB,LRECL=80,BLKSIZE=6000) /* <===
        blksize */
DSNUT2=CPXIFACE.ASM.ON.DISK
TEXT=BAL /* Assembler source code */
PRINT=MLC /* Fade-in, Fade-out */
/*
/&
```

- Change the // ASSGN SYS005 statement to show the physical assignment of the printer.

- Change the // ASSGN SYS001 statement to show the physical tape drive number.
- Change the // ASSGN, DLBL, and EXTENT for SYSUT2 to point to the updated 'CPXIFACE.ASM'. Verify that the blksize figure accurately reflects the actual BLKSIZE of the unloaded data set from the installation tape.

## Run the Sample Execution

Submit the job for execution.

## Review the Printout

Near the end of the printout, find Comparex messages CPX75I and CPX80I.

The content of CPX75I will depend on how many changes were made in 'CPXIFACE.ASM'. They should look something like this:

```
CPX75I - RECORDS PROCESSED: SYSUT1(n1)/SYSUT2(n2),DIFFERENCES(4,0,11)
        EXPLANATION - 4 RECORDS DIFFER THAT SYNCHRONIZED TOGETHER
                   0 RECORDS WERE CONSIDERED INSERTED ON SYSUT1
                   11 RECORDS WERE CONSIDERED INSERTED ON SYSUT2
```

```
CPX80I - TIME OF DAY AT END OF JOB: 12.15.44 - CONDITION CODE ON EXIT: 4
```

If these messages appear, you have successfully installed Comparex and you have run the sample execution correctly. Comparex can now be used as documented in the *Comparex z/VSE User's Guide*.

If these messages do not appear as expected, contact Serena Customer Support.



# Appendix A

---

## CSECT Source Code

This appendix contains CSECT Source Code examples that you can use to tailor your installation of Comparex.

### Installation Defaults - COMPAREB

#### Source Code for CSECT COMPAREB

```
// EXEC ASSEMBLY
PUNCH ' PHASE COMPAREB,*'
COMPAREB CSECT *
=====
* Every DC (define constant) must be for 80 bytes, COMPAREX assumes
* that the Csect is composed of 80-byte lines delimited by X'FFFF'
=====
DC CL80'*****'
DC CL80'* * * I N S T A L L A T I O N D E F A U L T S * * * '
DC CL80'* * * by DDT, FEB 01, 2006 * * * '
DC CL80'*****'
DC CL80' MAXDIFF=50,CONTINUE,HALT=COND '
DC CL80' KILLRC=YES /* Only pre 2.1 DOS/VSE '
DC CL80'*****'
DC CL80'* END-OF-INSTALLATION DEFAULTS *'
DC CL80'*****'
DC X'FFFF' <=====VERY IMPORTANT!!!
END
/*
```

```
// EXEC LNKEDT  
/*  
/&
```

## EBCDIC Translate Table - COMPAREE

### Source Code for CSECT COMPAREE

```
COMPAREE CSECT *SEPARATE *C*S*E*C*T*  
EBCDICTB DC 256C'. 'DEFAULT CHARACTER IS A PERIOD  
ORG EBCDICTB+C' ' UP TO BLANK  
DC C' ' THE BLANK  
ORG EBCDICTB+C'A' UP TO A  
DC 09AL1(*-EBCDICTB) A THRU I  
ORG EBCDICTB+C'J' UP TO J  
DC 09AL1(*-EBCDICTB) J THRU R  
ORG EBCDICTB+C'S' UP TO S  
DC 08AL1(*-EBCDICTB) S THRU Z  
ORG EBCDICTB+C'0' UP TO 0  
DC 10AL1(*-EBCDICTB) 0 THRU 9  
ORG EBCDICTB+X'4A' UP TO CENT SIGN  
DC 07AL1(*-EBCDICTB)  
ORG EBCDICTB+C'!' UP TO EXCLAMATION POINT  
DC 08AL1(*-EBCDICTB)  
ORG EBCDICTB+C',' UP TO COMMA  
DC 05AL1(*-EBCDICTB)  
ORG EBCDICTB+C':' UP TO COLON  
DC 06AL1(*-EBCDICTB)  
END
```

# Appendix B

## CPXIFACE Interface Structures

### OTHer Interfaces

#### List of OTHer Interfaces

```
=====
* Below is where the user can tailor the source for the shop
*=====
. . .
&OTH SETB 0 (NO) generate the 'OTHer' interface.
&ADABAS SETB 0 (NO) .ADABAS DBMS including Natural
&CAMLIB SETB 0 (NO) .CONDOR CAMLIB
&CINCOM SETB 0 (NO) .CINCOM - TOTAL/SUPRA/MANTIS
&DATACOM SETB 0 (NO) .DATACOM - CA-ADR
&DB2 SETB 0 (NO) .DB2 from IBM - MVS only
* for TSO-DSN: "&DB2CAF SETB 0"; for CAF: "&DB2CAF SETB 1"
&DB2CAF SETB 0 (NO) ..DB2 Call Attach Facility
&DL1 SETB 0 (NO) .DL/1 of IMS or CICS
&DL1FP SETB 0 (NO) ..IMS'S Fastpath
&DMS SETB 0 (NO) .DASD Management System
&FILEDEF SETB 0 (NO) .Filedef for CMS - MVS parallel
&FOCUS SETB 0 (NO) .Focus - Information Builders
&IAM SETB 0 (NO) .Innovation Access Method
&IDMS SETB 0 (NO) .IDMS
Oracle SETB 0 (FUTURE) .For future use
&OWL SETB 0 (NO) .Online Without Limits - CA-PAN
&RAMIS SETB 0 (NO) .RAMIS-II from Mathematica
&ROSCOE SETB 0 (NO) .Roscoe - CA-ADR
&SQL SETB 0 (FUTURE) .Structured Query Language (VM/VSE)
&UFAM SETB 0 (NO) .UFAM - Citizens Software
&WYLBUR SETB 0 (NO) .Wylbur format files (MVS only)
&ZROLOWN SETB 0 (NO) .roll your own - proprietary
&ZASCII SETB 0 (NO) ..ASCII to EBCDIC translation
*=====
* Above is where the user can tailor the source for the shop
*=====
```

# DOSIFACE Interface File Structures

## List of DOSIFACE Interfaces

```
*****
* Below is where the user can tailor the source for the shop
*****
. . .
&BIMED   SETB  0          (NO)    .BIM-EDIT libraries
&DOSLB1  SETB  0          (NO)    .DOS/VSE library - DASDFP 1.x
&DOSLB2  SETB  0          (NO)    .DOS/VSE library - 2.1 and up
&ICCF    SETB  0          (NO)    .ICCF from IBM
&ICCFBCI SETA 2048        (2K)    ..ICCF FBA CI size 2K/4K/8K/16K/32K
&NIXDORF SETB  0          (NO)    .Nixdorf NIDOS PDS
&POWER   SETB  0          (NO)    .Power queues
&POWER4  SETB  0          (NO)    .VSE/Power V4R1/V5
&SPRI    SETB  0          (NO)    .Vollie - CA-ADR
*****
* Above is where the user can tailor the source for the shop
*****
```

## Appendix C

# Transferring Files to the Host

The product files that were unloaded from the cpx CD-ROM must be transferred from your PC to the host. If you did not use the automated upload process found on the cpx CD, then use the additional methods described in this appendix to transfer the files from your PC to the host.



**NOTE** The files shipped on the CD-ROM are in a compressed format. Unload the cpx files from the CD to your PC using the autorun program on the CD to decompress the files. See ["Unload the CD-ROM" on page 13](#) for more details.

The transfer process must not convert the file character format; the transfer must be binary. The receiving host files must have these characteristics:

Record Format	Fixed block
Record Length (LRECL)	80
Block Size	3120

Choose the procedure for the upload software that you prefer:

- To use FTP, see ["File Transfer Using FTP" on page 47](#).
- To use 3270 emulator software, see ["File Transfer Using 3270 Emulator" on page 49](#).

## File Transfer Using FTP

This section describes how to use FTP to upload the cpx files from a PC to a host. These instructions assume that you have:

- TCP/IP FTP connectivity from your PC to the host.
- The dotted decimal IP address of the host.

- A host userid and password.
- Security authorization to allocate files on the host.

**Execute these steps on your PC:**

- 1 Open an MS-DOS/Command Prompt window:

Windows<sup>®</sup> 9x: **Start | Programs | MS-DOS Prompt**

Windows NT<sup>®</sup>, **Start | Programs | Command Prompt**

Windows 2000,

Windows XP:

- 2 At the DOS/Command prompt, type this command to start FTP and connect to the host. Specify the dotted decimal IP address of the target host:

```
ftp nnn.nnn.nnn.nnn
```

Press **Enter**.

- 3 When you are prompted for your userid, type your host userid and press **Enter**.
- 4 When you are prompted for your password, type your host password and press **Enter**.
- 5 At the FTP prompt, type these commands to set the transfer type to binary:

```
quote site fix 80  
binary
```

Press **Enter**.

- 6 At the FTP prompt, type this command to transfer a file from the PC to the host:

```
put "d:\CPX.loadlib" 'host.target.dataset.name'
```

The first file name is the PC file to be transmitted. You must enclose the PC file name in double quotes if there are spaces in a directory name or in the file name.

The second file name is the receiving file on the host. Enclose the host file in single quotes to suppress the addition of the working directory (userid) as a high level qualifier.



**NOTE** The host file you specify in the PUT command is a standard z/VSE file name.

Press **Enter**.

- 7 Type a PUT command at the FTP prompt and press **Enter** for each file to be transferred to the host.
- 8 After you transfer all of the cpx files from the PC to the host, type the following command at the FTP prompt to disconnect from the host and end the FTP session.

**quit**

Press **Enter**.

- 9 Close the MS-DOS/Command Prompt window.
- 10 Log on to the host and verify that the new host files have the proper record format, logical record length, and block size.

## File Transfer Using 3270 Emulator

Popular 3270 emulator programs include Extra!® from Attachmate Corporation, and Personal Communications from IBM. These programs commonly use IND\$FILE to transfer files between a PC and a host.

**Execute these steps if you use 3270 emulator software on your PC to transfer cpx files to the host.**

- 1 Log on to z/VSE and make sure the session is in line mode at the **READY** prompt.

- 2 In the File Transfer facility of your PC host emulator software, change the z/VSE binary transfer type to use these settings, or define a new binary transfer type:

Setting	Value
VM / TSO / CICS	VM/VSE
Transfer Type	Binary
ASCII	NO
CRLF	NO
APPEND	NO
Record Format	Fixed (block)
Record Length	80
Block Size	3120
Default VM Disk	A:

- 3 With the preceding settings, the file transfer software should allocate a sequential target file on the host for each file transfer.
- 4 Run the file transfer function to transfer each cpx file on the PC to a target sequential disk data set on the host.



**NOTE** The host file you specify in the transfer facility is a standard z/VSE file name.

- 5 Log on to the host and verify that the new host files have the proper record format, logical record length, and block size.

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