



**SERENA<sup>®</sup>**  
**COMPAREX<sup>®</sup> 8.7 for z/VM**

Installation and Setup Guide

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# Welcome to Serena Comparex

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**About Comparex** COMPAREX<sup>®</sup> is Serena Software's intelligent, anything-to-anything file comparison utility for the z/OS, z/VM, and z/VSE operating systems on IBM<sup>®</sup> Series z<sup>®</sup> 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<sup>®</sup> COMPAREX<sup>®</sup> 8.7 for z/VM. It also covers installation in predecessor environments such as VM/ESA, VM/SP, VM/XA, and VM/CMS.

For installation in a z/OS or z/VSE 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<sup>®</sup> COMPAREX<sup>®</sup> for z/OS Installation and Setup Guide</i>	Installation and configuration guide for z/OS and related environments.

Manual	Description
<i>Serena<sup>®</sup> COMPAREX<sup>®</sup> for z/OS Getting Started Guide</i>	Basic Comparex concepts and usage in a z/OS-related environment.
<i>Serena<sup>®</sup> COMPAREX<sup>®</sup> 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<sup>®</sup> COMPAREX<sup>®</sup> for z/VM Installation and Setup Guide</i>	Installation and configuration instructions for z/VM and related environments.
<i>Serena<sup>®</sup> COMPAREX<sup>®</sup> for z/VM Getting Started Guide</i>	Basic Comparex concepts and usage in a z/VM-related environment.
<i>Serena<sup>®</sup> COMPAREX<sup>®</sup> 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<sup>®</sup> COMPAREX<sup>®</sup> for z/VSE Installation and Setup Guide</i>	Installation and configuration instructions for z/VSE and related environments.
<i>Serena<sup>®</sup> COMPAREX<sup>®</sup> for z/VSE Getting Started Guide</i>	Basic Comparex concepts and usage in a z/VSE-related environment.
<i>Serena<sup>®</sup> COMPAREX<sup>®</sup> 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<sup>®</sup> Comparex<sup>®</sup> 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<sup>®</sup> Reader<sup>®</sup>, 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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## Introduction

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## Hardware and Software Environment

### Operating System

Comparex runs without modification on all IBM and plug-compatible mainframes running z/VM and CMS. It is also compatible with predecessor systems such as VM/ESA, VM/SP, and VM/XA.

### Memory

Comparex requires a minimum of 176K of virtual memory. Implementing the optional Comparex interface (CPXIFACE) for Panvalet, Librarian, and "OTHer" file managers adds up to 128K to this requirement, depending on how you configure this interface.

At execution time, both the data set organization (DSORG) and the block sizes of the files being compared can further increase memory requirements and influence how large the virtual machine should be.

### 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 interface is dependent on how it is generated, but it seldom is larger than 128K.

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 product media contains the following software components:

- **COMPAREX.OBJECT** — Object code to be link-edited (LOAD, GENMOD)
- **CPXIFACE.ASM** — Source code for the CPXIFACE interface for Panvalet, Librarian, and "OTHer" file managers, which must be compiled after configuration



**NOTE** The optional Comparex interface module (CPXIFACE) is not a load module but must be left as compiled object code.

- **COMPAREX.HELP** — Online help written in CMS Release 4 format
- **COMPAREX.CPXFS** — Startup dialog and tutorial
- **COMPAREX.CPXX** — Startup dialog and tutorial

All files should be allocated with fixed-length records, in block format, with 80-byte records and a block size of 6000 records (FB/80/6000).



## Chapter 2

# Installation Procedures

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## Unload the Distribution CD



**NOTE** If you have previously installed Comparex for z/VM 8.7.0 on your client PC, you must first remove it using the "Add/Remove Programs" function on Windows Control Panel.

**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 Comparex maintenance mini-disks.

To move the files from the Comparex CD-ROM to your host you need to perform the following steps. The files on the Comparex 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 Comparex 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 CPXCMS860.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 presented dialog box, 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 14](#) to complete the installation.
- 6** In the presented dialog box, 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, [<Xref>"Edit the FTP Input File"](#) 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, "Transferring Files to the Host" on page 33](#).

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

- 1 Go to **Start | Programs | Serena | Comparex 8.7.0 | Edit FTP Input**, which displays the FTP control file, used by FTP to transfer the Comparex 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 batch FTP file under the same name.



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

### **Transfer Files to the Host**

After you edit the FTP control file by adding your password, you are ready to transfer files to the host. Your local system must be connected to the network for this transfer to work.



**NOTE** Make sure that the CMS 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**.



**NOTE** 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 Input 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.

## **Corporate Identification and Licensing**

This step and all future steps will be accomplished at your terminal.

### **Generate Comparex Module**

In earlier releases, the object module, COMPAREX OBJECT, which was shipped on the distribution media, 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 link-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 this module, complete the following steps to generate the Comparex module:

- 1 Transfer the customized module to your host using a BINARY file transfer.
- 2 Copy COMPAREX OBJECT A1 to COMPAREX TEXT A1.
- 3 Link-edit the Comparex object code into an executable MODULE:

```
LOAD COMPAREX
GENMOD COMPAREX
```



**NOTE** If you did not replace the COMPAREX OBJECT with the customized module, the following errors will occur after issuing the LOAD COMPAREX command:

```
DMSLI0202W Duplicate identifier COMPAREL
DMSLI0202W Duplicate identifier COMPARED
DMSLI0169S ESD data referenced by TXT card is missing
```

- 4 Upon successful completion of the GENMOD, key in:

```
FLIST COMPAREX *
```

- 5 The following data sets should be listed:

```
COMPAREX HELP      A1
COMPAREX MODULE    A1
COMPAREX TEXT      A1
```

## Installation Tailoring - Optional

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



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

Refer to [Appendix B, "CPXIFACE Interface Structures"](#) on page 31 for sample source code which can be separately assembled and linkage edited (*GENMOD*) with the supplied Comparex object code.

Here is a sample method of replacing a single CSECT (COMPAREB) within Comparex and creating a new module:

```
LOAD COMPAREB COMPAREX (CLEAR RESET COMPAREX  
GENMOD COMPAREX (FROM COMPAREB
```

## Comparex Interface (CPXIFACE)

If you do not expect to generate an interface to any library/data management system, skip to the next section.

### Copy CPXIFACE and Pack It

Make a copy of 'CPXIFACE ASSEMBLE A1' by entering:

```
COPY CPXIFACE ASSEMBLE A1 OLDIFACE ASSEMBLE A1
```

Using the text editor (for example, XEDIT), edit **OLDIFACE ASSEMBLE A1**. Without changing anything, issue:

```
PACK ON
```

and then

```
FILE
```

This step can also be done with one command by entering:

```
COPY CPXIFACE ASSEMBLE A1 OLDIFACE ASSEMBLE A1 (PACK
```

### Edit CPXIFACE

Using a text editor (for example, XEDIT), edit '**CPXIFACE ASSEMBLE A1**'.

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

```

*=====
* BELOW IS WHERE THE USER CAN TAILOR THE SOURCE FOR THE
  SHOP.
*=====
&OPSYS   SETB  1          '&OPSYS' at MVS and CMS
*OPSYS   SETB  0          '&OPSYS' at VSE
&CMS     SETB  1          '&CMS'   at CMS <=== Note!
&DYNAMIC SETB  0          (NO)
&CPXVER  SETC  '8'
&CPXREL  SETC  '6'
&CPXMOD  SETC  '0'
&CPXVRM  SETC  '&CPXVER..&CPXREL..&CPXMOD'
&RELDATE SETC  '2006/105'
&MAXCOL  SETA  300

```

To avoid assembly errors, change the line marked (<===Note!).

If your shop has at least one of the file structures listed in ["List of OTHer Interfaces" on page 31](#) and you want Comparex to process it directly, set:

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

otherwise,

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

Importantly, if you SETB &OTH to 1, then you can SETB to **one and only one** of the global variables listed in ["List of OTHer Interfaces" on page 31](#) 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 **(FUTURE)** are in varying stages of development and should not be used.

## 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

Whatever name is given to the source code:

```
xxxxxxxxx ASSEMBLE A1
```

the Assembler generates the object code as:

```
xxxxxxxxx TEXT A1
```

If you want CPXRAMIS, copy

```
CPXIFACE ASSEMBLE A1
```

to

```
CPXRAMIS ASSEMBLE A1
```

and Assemble it. You do *not* have to link-edit (*GENMOD*).

## Invoking Another Interface

Now, 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 *Compaex 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.

Interface	Module Name
CAMLIB	CPXCAMLB
DATAKOM	CPXDATCM
DL/1	CPXDLI
Filedef	CPXFILDF
FOCUS	CPXFOCUS
IAM	CPXIAM
IDMS	CPXIDMS
OWL	CPXOWL
RAMIS	CPXRAMIS
UFAM	CPXUFAM
WYLBUR	CPXWYLBUR
Roll Your Own	CPXROLON

## External Modules

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.

- **CAMLIB** needs modules USERIOCS, CAMPIOCS, CAMLIOCS. For example:

```
INCLUDE CAMLOGIC , (USERIOCS)
INCLUDE CAMLOGIC , (CAMPIOCS)
INCLUDE CAMLOGIC , (CAMLIOCS)
```

- **DATACOM** see the following section: "[Datacom Consideration](#)" on [page 22](#).
- **DL/1** needs module CBLTDLI
- **IDMS** needs module IDMS
- **OWL** needs module OWLIEAV5
- **RAMIS** needs module RPIINT (RAMIS Procedural Interface)

Save the data set (for example, *FILE*).

## Datacom Consideration

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  
        DBURTBL  ACCESS=SEQ, DBID=155, SYNONYM=YES, X  
        TBLNAM=X06, UPDATE=NO, SEQBUFS=2  
        DBUREND  SYSTEM=CMS, USRINFO=CPXDEMO  
        END
```

## Assemble CPXIFACE

Assemble 'CPXIFACE ASSEMBLE A1' as follows:

```
ASSEMBLE CPXIFACE
```

Or, if you want the listing sent to the virtual printer:

```
ASSEMBLE CPXIFACE (PRINT)
```

There should be no assembly errors. However, if there are errors, it may be because the MACLIB OSMACRO was not globally allocated before the Assembly was invoked. A sure sign of this is if the OS Macros were flagged as errors. To correct this, issue this command:

```
GLOBAL MACLIB OSMACRO
```

and then reassemble.

Determine which text library (TXTLIB) contains the object code for the particular interface's access routines.



**NOTE** At this writing, Panvalet and Librarian do not have interfaces.

Issue a variation on the following commands:

```
GLOBAL TXTLIB libname
XEDIT CPXIFACE TEXT
BOT
GET intrface text
FILE
```

## Allowing Common Usage

If you leave 'COMPAREX MODULE' and 'CPXIFACE TEXT' on your A-disk, you will be the only one that is able to invoke it. These modules need to be placed on disks to allow all users to invoke the libraries.





## Chapter 3

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# Post-Installation Procedures

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## Post-Installation

Assuming that you performed the installation of CPXIFACE or at least made a copy of it to 'OLDIFACE ASSEMBLE A1', here are three ways to compare 'OLDIFACE' to 'CPXIFACE':

- "Using the Tutorial" on page 26
- "Specification Through SYSIN" on page 27
- "Invocation From FLIST" on page 28

In general, the following illustrated sessions show your entries in **bold** and the Comparex responses in *italics*.

## Using the Tutorial

To compare the interface using the tutorial, follow this example; your entries are shown in **bold** and the Comparex responses are in *italics*:

comparex

*DO YOU WANT TO BE LEAD THROUGH THIS TUTORIAL FOR EACH STEP: (Y/N)*

**yes**

*SYSUT1 DATASET NAME: fn ft fm*

**oldiface assemble a1**

*SYSUT2 DATASET NAME: fn ft fm*

**cpxiface assemble**

*MAXIMUM DIFFERENCES TO ISOLATE: (N/####)*

**no**

*DATA OR TEXT FILE COMPARE: (DATA/TEXT)*

**text**

*TYPE OF TEXT: (COBOL/\$COBOL/PL1/BAL/JCL/REPORT)*

**\$bal**

*DIFFERENCES PRINTED IN CONTEXT - PRINT=FULL:(Y/N)*

**no**

*DIFFERENCES REPORT DISPOSITION: (1/2/3)*

*1=DISPLAY AT YOUR TERMINAL*

*2=WRITE TO DATASET "COMPAREX LISTING A1"*

*3=WRITE TO VIRTUAL PRINTER*

**2**

Now Comparex will be invoked, comparing 'OLDIFACE ASSEMBLE A1' against 'CPXIFACE ASSEMBLE A1'. Any and all changes that you put into it will show up in the DIFFERENCE REPORT which can be examined by browsing 'COMPAREX LISTING A1' and then optionally PRINTed at the virtual printer.



**NOTE** Just in case you made any typing errors in response to the individual questions, you can type **HX** (**H**alt **eX**ecution) at any point and Comparex terminates immediately.

## Specification Through SYSIN

**To compare the interfaces using the specification through SYSIN:**

**1** Edit comparex sysin a1 as follows:

```
xedit comparex sysin a1

*/ This is data set "COMPAREX.SYSIN.A1"
   CMSPRINT /* Direct Differences Report to
   "COMPAREX.LISTING.A1"
*/
SYSUT1='OLDIFACE.ASSEMBLE.A1',SYSUT2='CPXIFACE.ASSEMBLE.A1'
TEXT=BAL /*Assembler source code */
PRINT=MLC /*Fade-in, Fade-out */

file
```

**a** Run the tutorial as follows; your entries are shown in **bold** and the Comparex responses are in *italics*:

comparex

*DO YOU WANT TO BE LEAD THROUGH THIS TUTORIAL FOR EACH STEP: (Y/N)*

**no**

*YOU MUST NOW PROVIDE SPECIFIC KEYWORDS TO COMPAREX: (1/2)*

*1=ENTER THROUGH TERMINAL - TERMINATE VIA "CMSEND"*

*2=READ DATASET "COMPAREX SYSIN A1" UNTIL EXHAUSTION*

**2**

An abbreviated method of invoking Comparex to just read the SYSIN data set without asking any questions - *DO YOU WANT ...*-is to type:

```
comparex (sysin)
```

Comparex is invoked, comparing 'OLDIFACE ASSEMBLE' A1 against 'CPXIFACE ASSEMBLE A1'. The same report 'COMPAREX LISTING A1' can be PRINTed at the virtual printer.

## Invocation From FLIST

To compare the interface from FLIST, follow this example; your entries are shown in **bold** and the Comparex responses are in *italics*:

**flist \* assemble a1**

*CPXIFACE ASSEMBLE A1\_\_\_\_\_ (Data Set Information)*

*OLDIFACE ASSEMBLE A1\_\_\_\_\_ (Data Set Information)*

Position your cursor behind OLFIFACE ASSEMBLE A1 and hit **PF11**.

*CPXIFACE ASSEMBLE A1\_\_\_\_\_ (Data Set Information)*

*OLDIFACE ASSEMBLE A1-\_\_\_\_\_*

At the cursor position, type:

*OLDIFACE ASSEMBLE A1 **comparex/cpxiface = = (\$bal)***

Comparex is invoked, comparing 'OLDIFACE ASSEMBLE A1' against 'CPXIFACE ASSEMBLE A1'. The same report 'COMPAREX LISTING A1' is sent to the virtual printer.

# Appendix A

---

## CSECT Source Code

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

### Installation Defaults - COMPAREB

#### Source Code for CSECT 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'*****'
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
```

## 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

### 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
&ZASCI    SETB  0      (NO)      ..ASCII to EBCDIC translation
*=====
* 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 Comparex CD-ROM must be transferred from your PC to the host. If you did not use the automated upload process found on the Comparex 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 Comparex files from the CD to your PC using the autorun program on the CD to decompress the files. See ["Unload the Distribution CD" 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 33](#).
- To use 3270 emulator software, see ["File Transfer Using 3270 Emulator" on page 35](#).

## File Transfer Using FTP

This section describes how to use FTP to upload the Comparex 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/VM CMS 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 Comparex 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 Comparex files to the host:**

- 1 Log on to CMS 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/VM CMS binary transfer type to use these settings, or define a new binary transfer type:

Setting	Value
VM / TSO / CICS	VM/CMS
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 Comparex 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/VM CMS 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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