



**Program Directory for  
IBM SAA REXX/370 Alternate Library**

Release 03, Modification Level 00

Program Number 5695-014

FMIDs HWJ9133

for Use with  
OS/390 and z/OS

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## 1.0 Introduction

This program directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of IBM SAA REXX/370 Alternate Library. This publication refers to IBM SAA REXX/370 Alternate Library as REXX/370 Alternate Library. You should read all of this program directory before installing the program and then keep it for future reference.

The program directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic and optional program materials and documentation for REXX/370 Alternate Library.
- 3.0, “Program Support” on page 6 describes the Tivoli support available for REXX/370 Alternate Library.
- 4.0, “Program and Service Level Information” on page 7 lists the APARs (program level) and PTFs (service level) incorporated into REXX/370 Alternate Library.
- 5.0, “Installation Requirements and Considerations” on page 8 identifies the resources and considerations for installing and using REXX/370 Alternate Library.
- 6.0, “Installation Instructions” on page 14 provides detailed installation instructions for REXX/370 Alternate Library. It also describes the procedures for activating the functions of REXX/370 Alternate Library, or refers to appropriate publications.

Before installing REXX/370 Alternate Library, read 3.2, “Preventive Service Planning” on page 6. This section tells you how to find any updates to the information and procedures in this program directory.

Do not use this program directory if you are installing REXX/370 Alternate Library with a SystemPac or ServerPac. When using these offerings, use the jobs and documentation supplied with the offering. This documentation may point you to specific sections of the program directory as required.

If you are installing REXX/370 Alternate Library using the MVS Custom-Built Product Delivery Offering (CBPDO, 5751-CS3), a softcopy program directory is provided on the CBPDO tape which is identical to the printed copy shipped with your order. Your CBPDO contains a softcopy preventive service planning (PSP) upgrade for this product. All service and HOLDDATA for REXX/370 Alternate Library are included on the CBPDO tape.

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## 1.1 REXX/370 Alternate Library Description

The Alternate Library enables users who do not have the IBM Library for SAA REXX/370 (the full REXX product) installed to run compiled REXX programs. It contains a language processor that transforms the compiled programs and runs them with the interpreter, which is part of TSO/E.

Software developers can distribute the Alternate Library, free of charge, with their compiled REXX programs. In this way, if a customer:

- Has the IBM Library for SAA REXX/370 installed, then programs run as compiled REXX programs
- Installs the Alternate Library, then REXX programs are interpreted.

Distributing a compiled REXX program, without the source, has these advantages:

- Maintenance of the program is simplified, because the code cannot be modified inadvertently.
- Compiled programs can be shipped in load module format and used to create function packages, even for users who do not have the IBM Library for SAA REXX/370.

### Notes:

1. When a customer has the IBM Library for SAA REXX/370 installed, it is unnecessary to install the Alternate Library.
2. With the Alternate Library, the performance of compiled REXX programs is similar to that of interpreted programs. The performance advantages of compiled REXX are available only when the IBM Library for SAA REXX/370 is installed.

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## 1.2 REXX/370 Alternate Library FMIDs

REXX/370 Alternate Library consists of the following FMIDs:

HWJ9133



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## 2.0 Program Materials

A Tivoli or IBM program is identified by a program number and a feature number. The program number for REXX/370 Alternate Library is 5695-014.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature code, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature codes, and are not required for the product to function.

The program announcement material describes the features supported by REXX/370 Alternate Library. Ask your Tivoli or IBM representative for this information if you have not already received a copy.

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### 2.1 Basic Machine-Readable Material

The IBM SAA REXX/370 Alternate Library is distributed on one of the CD-ROMs shipped with IBM WebSphere Studio Enterprise Developer V5.0. The label on the CD-ROM containing the materials is "IBM WebSphere Studio Enterprise Developer Options for z/OS & FFS". The IBM SAA REXX/370 Alternate Library is provided on the CD-ROM in a format that can be uploaded to the host, expanded into SMP/E RELFILE format, then installed using SMP/E. See the 6.0, "Installation Instructions" on page 14 for more information about how to install the program.

Figure 1 describes the file content of the CD-ROM.

Figure 2 on page 4 describes the file characteristics of the program files after they have been uploaded and received into files.

**Note:**

1. The data set attributes in these tables should be used in the JCL of jobs reading the data sets, but since the data sets are in IEBCOPY unloaded format, their actual attributes may be different.

Directory	Name	Description
HWJ9133	IBM.HWJ9133.SAMPLE.JCL.BIN	PDS containing sample jobs to allocate sequential data sets on the host that will be used on the upload of the compressed RELFILEs and SMPMCS and for the SMP/E install.
HWJ9133	IBM.HWJ9133.F1.BIN	RELFILE in compressed form
HWJ9133	IBM.HWJ9133.F2.BIN	RELFILE in compressed form
HWJ9133	IBM.HWJ9133.F3.BIN	RELFILE in compressed form
HWJ9133	IBM.HWJ9133.SMPMCS	SMPMCS file

Figure 2. Program File Content after Uploading and TSO receive

Name	O R G	R E C F M	L R E C L	BLK SIZE
SMPMCS	SEQ	FB	80	8800
IBM.HWJ9133.F1	PDS	FB	80	8800
IBM.HWJ9133.F2	PDS	U	0	6144
IBM.HWJ9133.F3	PDS	VB	255	8800

## 2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for REXX/370 Alternate Library.

## 2.3 Program Publications

The following sections identify the basic and optional publications for REXX/370 Alternate Library.

### 2.3.1 Basic Program Publications

No basic publications are provided for REXX/370 Alternate Library.

### 2.3.2 Optional Program Publications

Figure 3 identifies the optional unlicensed program publications for REXX/370 Alternate Library. For copies of these, contact your Tivoli or IBM representative.

Figure 3. Optional Material: Unlicensed Publications

Publication Title	Form Number
Licensed Program Specifications	GH19-8161
IBM Compiler and Library for SAA REXX/370: Introducing the Next Step in REXX Programming	G511-1430
IBM Compiler and Library for SAA REXX/370: User's Guide and Reference	SH19-8160
IBM Compiler and Library for SAA REXX/370: User's Guide and Reference Japanese	SH88-7187
IBM Compiler and Library for SAA REXX/370: Diagnosis Guide	SH19-8179

*IBM Compiler and Library for SAA REXX/370: Diagnosis Guide* and *IBM Compiler and Library for SAA REXX/370: User's Guide and Reference* are also available in softcopy form on:

*IBM Online Library MVS Collection CD-ROM, SK2T-0710*

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## 2.4 Program Source Materials

No program source materials or viewable program listings are provided for REXX/370 Alternate Library.

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## 2.5 Publications Useful During Installation

The publications listed in Figure 4 may be useful during the installation of REXX/370 Alternate Library. To order copies, contact your Tivoli or IBM representative.

<b>Publication Title</b>	<b>Form Number</b>
<i>z/OS SMP/E User's Guide</i>	SA22-7773
<i>z/OS SMP/E Commands</i>	SA22-7771
<i>z/OS SMP/E Reference</i>	SA22-7772
<i>z/OS SMP/E Messages, Codes, and Diagnosis</i>	GA22-7770

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## 3.0 Program Support

This section describes the IBM support available for REXX/370 Alternate Library.

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### 3.1 Program Services

Contact your Tivoli or IBM representative for specific information about available program services.

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### 3.2 Preventive Service Planning

Before installing REXX/370 Alternate Library, you should review the current Preventive Service Planning (PSP) information. If you obtained REXX/370 Alternate Library as part of a CBPDO, there is HOLDDATA and PSP information included on the CBPDO tape.

If you obtained REXX/370 Alternate Library on a product tape, or if the CBPDO is more than two weeks old when you install it, you should contact the Tivoli or IBM Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

PSP Buckets are identified by UPGRADEs, which specify product levels, and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for REXX/370 Alternate Library are:

*Figure 5. PSP Upgrade and Subset ID*

UPGRADE	SUBSET	Description
REXXC370R130	HWJ9133	REXX Alternate Library MVS

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### 3.3 Statement of Support Procedures

Report any difficulties you have using this program to your Tivoli or IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 6 identifies the component IDs (COMPID) for REXX/370 Alternate Library.

*Figure 6. Component IDs*

FMID	COMPID	Component Name	RETAIN Release
HWJ9133	569501401	REXX Alternate Library MVS	133

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## **4.0 Program and Service Level Information**

This section identifies the program and any relevant service levels of REXX/370 Alternate Library. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated.

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### **4.1 Program Level Information**

The following APARs have been incorporated into REXX/370 Alternate Library. PN71194, PQ00096, PN84932, PN83159, PQ00114

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### **4.2 Service Level Information**

PTFs containing APAR fixes against this release of REXX/370 Alternate Library have been incorporated into this product tape. For a list of included PTFs, examine the ++VER statement in the product's SMPMCS. See -- Heading 'INSTLOG' unknown -- for more information on how to do this. PTFs included are, UN90776, UQ18015, UN78518

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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating REXX/370 Alternate Library. The following terminology is used:

- *Driving system*: the system used to install the program.
- *Target system*: the system on which the program is installed.

In many cases, the same system can be used as both a driving system and a target system. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running system. The clone should include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Some cases where two systems should be used include the following:

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.
- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to assess these impacts without disrupting your production system.

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### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install REXX/370 Alternate Library.

#### 5.1.1 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

#### 5.1.2 Programming Requirements

*Figure 7 (Page 1 of 2). Driving System Software Requirements*

<b>Program Number</b>	<b>Product Name and Minimum VRM/Service Level</b>
Any <b>one</b> of the following:	
5668-949	System Modification Program/Extended (SMP/E) Release 1.8.1 with PTF UR51070
5645-001	OS/390 SMP/E Version 1 Release 1 with PTF UR51070
5645-001	OS/390 SMP/E Version 1 Release 2 with PTF UR51071

Figure 7 (Page 2 of 2). Driving System Software Requirements

Program Number	Product Name and Minimum VRM/Service Level
5645-001	OS/390 SMP/E Version 1 Release 3 with PTF UR51067
5647-A01	OS/390 SMP/E Version 2 Release 4 with PTF UR51067
5647-A01	OS/390 SMP/E Version 2 Release 5 or 6 with PTF UR51068
5647-A01	OS/390 SMP/E Version 2 Release 7 or higher

## 5.2 Target System Requirements

This section describes the environment of the target system required to install and use REXX/370 Alternate Library.

REXX/370 Alternate Library installs in the MVS (Z038) SREL.

### 5.2.1 Machine Requirements

The target system can run in any hardware environment that supports the required software.

### 5.2.2 Programming Requirements

#### 5.2.2.1 Mandatory Requisites

A mandatory requisite is defined as a product that is required without exception; this product either **will not install** or **will not function** unless this requisite is met. This includes products that are specified as REQs or PREs.

Figure 8. Mandatory Requisites

Program Number	Product Name and Minimum VRM/Service Level
Any <b>one</b> of the following:	
5685-025	TSO/E 2.3.1 or higher
5685-025	TSO/E 2.4 with APAR OY63699 (to fully exploit DBCS support)

#### 5.2.2.2 Functional Requisites

A functional requisite is defined as a product that is **not** required for the successful installation of this product or for the basic function of the product, but **is** needed at run time for a specific function of this product to work. This includes products that are specified as IF REQs.

<i>Figure 9. Functional Requisites</i>		
<b>Program Number</b>	<b>Product Name and Minimum VRM/Service Level</b>	<b>Function</b>
5655-042	ISPF 4.1	Accessing dialog variables from load modules
Any <b>one</b> of the following:		
5685-025	TSO/E 2.3 PTF UW05801	Tracing for programs compiled with the TRACE option
5685-025	TSO/E 2.4 PTF UW05800	Tracing for programs compiled with the TRACE option

### 5.2.2.3 Toleration/Coexistence Requisites

A toleration/coexistence requisite is defined as a product which must be present on a sharing system. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD at different time intervals.

REXX/370 Alternate Library has no toleration/coexistence requisites.

### 5.2.2.4 Incompatibility (Negative) Requisites

A negative requisite identifies products which must *not* be installed on the same system as this product.

REXX/370 Alternate Library has no negative requisites.

## 5.2.3 DASD Storage Requirements

REXX/370 Alternate Library libraries can reside on 3390 DASD.

Figure 10 lists the total space required for each type of library.

<i>Figure 10. Total DASD Space Required by REXX/370 Alternate Library</i>	
<b>Library Type</b>	<b>Total Space Required</b>
Target	5 Tracks of 3390
Distribution	6 Tracks of 3390

#### Notes:

1. Tivoli and IBM recommend the use of system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, Tivoli and IBM recommend a block size of 32760, which is the most efficient from performance and DASD utilization perspective.



2. Abbreviations used for the data set type are:

- U** Unique data set, allocated by this product and used only by this product. In order to determine the correct storage needed for this data set, this table provides all required information; no other tables (or program directories) need to be referenced for the data set size.
- S** Shared data set, allocated by this product and used by this product and others. In order to determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.
- E** Existing shared data set, used by this product and others. This data set is NOT allocated by this product. In order to determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This existing data set must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information on the names and sizes of the required data sets, please refer to 6.1.9, "Allocate SMP/E Target and Distribution Libraries and Paths" on page 19.

3. Abbreviations used for the HFS Path type are:

- N** New path, created by this product.
- P** Previously existing path, created by another product.

4. All target and distribution libraries listed have the following attributes:

- The default name of the data set may be changed
- The default block size of the data set may be changed
- The data set may be merged with another data set that has equivalent characteristics
- The data set may be either a PDS or a PDSE

5. All target libraries listed have the following attributes:

- The data set may be SMS managed
- It is not required for the data set to be SMS managed
- The data set may be in the LPA
- It is not required for the data set to be in the LPA
- The data set may be in the LNKLST
- It is not required for the data set to be APF authorized
- It is not required for the data set to reside on the IPL volume
- The values in the "Member Type" column are not necessarily the actual SMP/E element types identified in the SMPMCS.

The following figures describe the target and distribution libraries and HFS paths required to install REXX/370 Alternate Library. The storage requirements of REXX/370 Alternate Library must be added to the storage required by other programs having data in the same library or path.

**Note:** The data in these tables should be used when determining which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 11. Storage Requirements for REXX/370 Alternate Library Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SEAGALT	LMOD	ANY	U	PO	U	0	1	2
SEAGJENU	Sample (ENG)	ANY	U	PO	FB	80	1	1
SEAGMENU	Message (ENG)	ANY	U	PO	VB	255	1	1
SEAGMJPN	Message (JPN)	ANY	U	PO	VB	255	1	1
SEAGSAM	Sample	ANY	U	PO	FB	80	1	1

Figure 12. Storage Requirements for REXX/370 Alternate Library Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
AEAGJENU	U	PDS	FB	80	1	1
AEAGMENU	U	PDS	VB	255	1	1
AEAGMJPN	U	PDS	VB	255	1	1
AEAGSAM	U	PDS	FB	80	1	1
AEAGMOD1	U	PDS	U	0	2	2

**Note:** It is required that the load module library hlq.SEAGALT be APF authorized. Otherwise, you will get an abend code 306 condition when the Alternate Library routines are requested by an APF authorized routine.

---

## 5.3 FMIDs Deleted

Installing REXX/370 Alternate Library may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

If you do not wish to delete these FMIDs at this time, you must install REXX/370 Alternate Library into separate SMP/E target and distribution zones.

**Note:** These FMIDs will not automatically be deleted from the Global Zone. Consult the SMP/E manuals for instructions on how to do this.

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## 5.4 Special Considerations

The preventive maintenance below must be applied following the REXX/370 Alternate Library installation:

- PTF UN93568
- PTF UQ46700

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## 6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of REXX/370 Alternate Library.

Please note the following:

- If you want to install REXX/370 Alternate Library into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.
- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.

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### 6.1 Installing REXX/370 Alternate Library

#### 6.1.1 SMP/E Considerations for Installing REXX/370 Alternate Library

This release of REXX/370 Alternate Library is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs may be used to accomplish the SMP/E installation steps.

#### 6.1.2 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 13. Use of values lower than these may result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone.

*Figure 13. SMP/E Options Subentry Values*

<b>SUB-ENTRY</b>	<b>Value</b>	<b>Comment</b>
DSSPACE	(4,2,4)	Use 4 directory blocks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

### 6.1.3 Overview of the installation steps

Here are the steps required to install IBM SAA REXX/370 Alternate Library.

1. Upload **hlq**.IBM.HWJ9133.SAMPLE.JCL.BIN from CD-ROM
2. Upload the compressed RELFILEs and SMPMCS from CD-ROM
3. Expand the RELFILEs
4. Allocate and initialize the SMP/E data sets (optional)
5. Perform SMP/E RECEIVE
6. Allocate target libraries and distribution libraries
7. Create DDDEF entries
8. Perform SMP/E APPLY CHECK
9. Perform SMP/E APPLY
10. Perform SMP/E ACCEPT CHECK
11. Perform SMP/E ACCEPT.
12. Perform SMP/E RECEIVE, APPLY, ACCEPT OF UN93568 & UQ46700.

### 6.1.4 Upload Sample JCL from CD-ROM

On the CD-ROM, there is a file containing the sample JCL. This sample JCL file contains a member that will allocate the sequential data sets for the three compressed RELFILEs and SMPMCS and other members to perform the SMP/E processing. Perform the following steps to upload the sample JCL from the CD-ROM to the host:

1. Allocate a data set on the host to use as the target of the upload. You can do this by submitting the job below or by creating a dataset with these characteristics. Add a job card and modify the parameters to meet your site's requirements before submitting. **hlq** will be the high level qualifier you choose to use for this dataset.

```
//ALLOC1 EXEC PGM=IEFBR14
//FTPALLO DD DSN=hlq.IBM.HWJ9133.SAMPLE.JCL.BIN,
//          DISP=(NEW,CATLG,DELETE),
//          DSORG=PS,
//          RECFM=FB,
//          LRECL=80,
//          BLKSIZE=6160,
//          SPACE=(TRK,(2,1)),
//          UNIT=SYSALLDA
/*
```

2. Upload the sample JCL file in binary format from the CD-ROM to the host data set. If the CD-ROM is attached to a Windows NT system, you can use FTP from a command prompt to upload the file. In the

sample dialog shown below, commands or other information entered by the user are in bold, and the following values are assumed:

<i>Figure 14. User Entered Values</i>	
<b>User enters:</b>	<b>Values</b>
mvsaddr	TCP/IP address or hostname of the system
tsouid	Your TSO user ID
tsopw	Your TSO password
d:	Your CD-ROM drive
hlq	High-level qualifier you used for the data set you allocated in the job above

```
C:\>ftp mvsaddr
Connected to mvsaddr.
220-FTPD1 IBM FTP CS V2R8 at mvsaddr, 07:18:16 on 2003-02-11.
220 Connection will close if idle for more than 60 minutes.
```

```
User (mvsaddr:(none)): tsouid
```

```
331 Send password please.
Password: tsopw
230 tsouid is logged on. Working directory is "tsouid".
```

```
ftp> cd ..
250 " "is the working directory name prefix.
```

```
ftp> cd hlq
250 "hlq." is the working directory name prefix.
```

```
ftp> binary
200 Representation type is Image
```

```
ftp> put d:\hwj9133\ibm.hwj9133.sample.jcl.bin
ibm.hwj9133.sample.jcl.bin (should be on one line)
200 Port request OK.
125 Storing data set hlq.ibm.hwj9133.sample.jcl.bin
250 Transfer completed successfully.
42720 bytes sent
```

```
ftp> quit
221 Quit command received. Goodbye.
```

- Expand the sample jcl file by using the TSO command:

```
receive inda('hlq.ibm.hwj9133.sample.jcl.bin')
```

This will create a dataset named **hlq.HWJ9133.SAMPLE.JCL** with the following members:

- EAGKACC
- EAGKALLO
- EAGKAPP
- EAGKDDD
- EAGKRECV
- EAGK5JCL

## 6.1.5 Upload the compressed RELFILEs, SMPMCS and PTFs from the CD-ROM

1. Edit and submit sample job EAGK5JCL in the **hlq**.IBM.HWJ9133.SAMPLE.JCL dataset to allocate data sets for these files on the host. Consult the instructions in the sample job for more information.
2. Upload the files in binary format from the CD-ROM to the host data set. If the CD-ROM is attached to a Windows NT system, you can use FTP from a command prompt to upload the files:

```
C:\>ftp mvsaddr
Connected to mvsaddr.
220-FTPD1 IBM FTP CS V2R8 at mvsaddr, 07:18:16 on 2003-02-11.
220 Connection will close if idle for more than 60 minutes.
```

```
User (mvsaddr:(none)): tsouid
```

```
331 Send password please.
Password: tsopw
230 tsouid is logged on. Working directory is "tsouid".
```

```
ftp> cd ..
250 " " is the working directory name prefix.
```

```
ftp> cd hlq
250 "hlq." is the working directory name prefix.
```

```
ftp> binary
200 Representation type is Image
```

```
ftp> prompt
Interactive mode Off.
```

```
ftp> mput d:\hwj9133\ibm.hwj9133.f*
200 Port request OK.
125 Storing data set hlq.IBM.HWJ9133.F1.BIN
250 Transfer completed successfully.
49600 bytes sent
200 Port request OK.
```

```
125 Storing data set hlq.IBM.HWJ9133.F2.BIN
250 Transfer completed successfully.
30320 bytes sent
200 Port request OK.
125 Storing data set hlq.IBM.HWJ9133.F3.BIN
250 Transfer completed successfully.
30160 bytes sent
```

```
ftp> put d:\hwj9133\ibm.hwj9133.smpmcs
200 Port request OK.
125 Storing data set hlq.IBM.HWJ9133.SMPMCS
250 Transfer completed successfully.
2320 bytes sent
ftp> put d:\hwj9133\ibm.hwj9133.un93568
200 Port request OK.
125 Storing data set hlq.IBM.HWJ9133.UN93568
250 Transfer completed successfully.
56320 bytes sent
ftp> put d:\hwj9133\ibm.hwj9133.uq46700
200 Port request OK.
125 Storing data set hlq.IBM.HWJ9133.UQ46700
250 Transfer completed successfully.
14400 bytes sent
```

```
ftp> quit
221 Quit command received. Goodbye.
```

## 6.1.6 Expand the RELFILES

You can expand the RELFILES by using the TSO receive command:

```
receive inda('hlq.ibm.hwj9133.f1.bin')
receive inda('hlq.ibm.hwj9133.f2.bin')
receive inda('hlq.ibm.hwj9133.f3.bin')
```

When prompted on the TSO receive commands, use the appropriate DSNAME from the list below:

```
DS('hlq.IBM.HWJ9133.F1')
DS('hlq.IBM.HWJ9133.F2')
DS('hlq.IBM.HWJ9133.F3')
```

## 6.1.7 Sample Installation JCL

The following sample installation jobs are provided as part of the product to help you install REXX/370 Alternate Library. The RELFILES will be prefixed with the high level qualifier ("hlq" in table below) used when the files were "received" in the previous step. The jobs are contained in the sample JCL dataset **hlq.IBM.HWJ9133.SAMPLE.JCL** that was uploaded.



Figure 15. Sample Installation Jobs for REXX/370 Alternate Library

Job Name	Job Type	Description	RELFILE
EAGKRECV	RECEIVE	Sample RECEIVE job	IBM.HWJ9133.F1
EAGKALLO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HWJ9133.F1
EAGKDDD	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HWJ9133.F1
EAGKAPP	APPLY	Sample APPLY job	IBM.HWJ9133.F1
EAGKACC	ACCEPT	Sample ACCEPT job	IBM.HWJ9133.F1

### 6.1.8 Perform SMP/E RECEIVE

Edit and submit sample job EAGKRECV to perform the SMP/E RECEIVE for REXX/370 Alternate Library. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages:** RC=0

### 6.1.9 Allocate SMP/E Target and Distribution Libraries and Paths

To allocate the SMP/E target and distribution libraries for REXX/370 Alternate Library edit and submit sample job EAGKALLO. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages:** RC=0.\*

### 6.1.10 Create DDDEF Entries

To create DDDEF entries for the SMP/E target and distribution libraries for REXX/370 Alternate Library edit and submit sample job EAGKDDD. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages:** RC=0

### 6.1.11 Perform SMP/E APPLY

To perform an SMP/E APPLY for REXX/370 Alternate Library edit and submit sample job EAGKAPP. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the APPLY CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Once you have taken any actions indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

**Note:** The GROUPEXTEND operand indicates that SMP/E apply all requisite SYSMODs. The requisite SYSMODs might be applicable to other functions.

#### **Expected Return Codes and Messages from APPLY CHECK: RC=0**

The EAGKAPP job will end with return code 4 and several SMP/E messages will be issued. These messages will include:

- GIM23903W or GIM23913W (9 Occurrences)
- IEW2646W (4 Occurrences)

The messages above are expected and do not indicate an error.

#### **Expected Return Codes and Messages from APPLY: RC=4**

### **6.1.12 Installation Verification**

**Note:** The load module library hlq.SEAGALT must be APF authorized before you can verify the Alternate Library installation.

If the Program Product for which you installed the Alternate Library runs successfully, then you have correctly installed and activated the Alternate Library. Or, you may verify the Alternate Library installation by successfully executing either of the following:

- Any REXX exec which is not compiled (runs interpreted)
- Any REXX exec which has been compiled with the ALTERNATE option

### **6.1.13 Perform SMP/E ACCEPT**

Edit and submit sample job EAGKACC to perform an SMP/E ACCEPT CHECK for REXX/370 Alternate Library. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. This will cause entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD containing inline JCLIN is ACCEPTed. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

Once you have taken any actions indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

**Note:** The GROUPEXTEND operand indicates that SMP/E accept all requisite SYSMODs. The requisite SYSMODs might be applicable to other functions.

**Expected Return Codes and Messages from ACCEPT CHECK:** RC=0

**Expected Return Codes and Messages from ACCEPT:** RC=0

### **6.1.14 Perform SMP/E RECEIVE, APPLY, ACCEPT OF UN93568 & UQ46700**

Using SMP/E install these PTFs on REXX/370 Alternate Library. These 2 PTFs are needed for REXX/370 Alternate Library to support WebSphere Studio Enterprise Developer.

If PTFs containing replacement modules are being ACCEPTed, SMP/E ACCEPT processing will linkedit/bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder may issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored, because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

---

## **6.2 Activating the REXX/370 Alternate Library**

The Alternate Library is activated in one of three different ways:

- From STEPLIB
- From LINKLIST
- From LPA

Running the Alternate Library from the LPA will provide the best performance.

---

## **6.3 Installing the Compiler Programming Table for the Alternate Library**

The Compiler Programming Table (CPT) IRXCMPTM is the TSO/E module that identifies a library to TSO/E. This table must be updated to include the Alternate Library. Your installation uses either the default table shipped with TSO/E, or an installation-defined CPT.

The current CPT (either default or user-defined) should be replaced by an updated CPT:

- If there is a user-defined CPT at the customer installation, then the assembler statements in this CPT should be copied into the usermod example EAGKUMOD in the library hlq.SEAGSAM. Also, the number of entries in the table must be increased by 1. This ensures that the Alternate Library can be concurrently used with another run time library if one is defined in the user-CPT. After all modifications have been done, the usermod can be executed to build an updated CPT.

- If there is no user-defined CPT then the example EAGKUMOD can also be used without update of the assembler source code.

For additional information, refer to *IBM Compiler and Library for SAA REXX/370: User's Guide and Reference*.

## 7.0 Reader's Comments

### Program Directory for IBM SAA REXX/370 Alternate Library February, 2003

You may use this form to comment about this document, its organization, or subject matter with the understanding that IBM may use or distribute whatever information you supply in any way it believes appropriate without incurring any obligation to you.

For each of the topics below please indicate your satisfaction level by circling your choice from the rating scale. If a statement does not apply, please circle N.

RATING SCALE						
very satisfied	<=====>				very dissatisfied	not applicable
1	2	3	4	5	N	

	Satisfaction					
Ease of product installation	1	2	3	4	5	N
Contents of program directory	1	2	3	4	5	N
Installation Verification Programs	1	2	3	4	5	N
Time to install the product	1	2	3	4	5	N
Readability and organization of program directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Ease of getting the system into production after installation	1	2	3	4	5	N

How did you order this product?

- CBPDO
- CustomPac
- ServerPac
- Independent
- Other

Is this the first time your organization has installed this product?

- Yes

\_\_\_ No

Were the people who did the installation experienced with the installation of z/OS products?

\_\_\_ Yes

\_\_\_ No

If yes, how many years? \_\_\_

If you have any comments to make about your ratings above, or any other aspect of the product installation, please list them below:

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Please provide the following contact information:

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Thank you for your participation.

Please send the completed form to (or give to your IBM representative who will forward it to the IBM SAA REXX/370 Alternate Library Development group):

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