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Technical Data  
BSC MRJE/V  
Multileaving Remote Job Entry

For HP 3000 MPE/V Computer Systems  
Product Number  
30249A

MRJE/Multileaving Remote Job Entry and BSC Link allow multiple users to submit batch jobs to or receive output from a host. With the MRJE facility, the HP 3000 emulates workstations that work with one of the following job entry systems on the host: JES2, JES3, RSCS, or RES.

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MRJE requires the installation and use of BSC Link. BSC Link manages the data communications protocol and link between the HP 3000 and the IBM System/370-compatible mainframe. It contains software, a hardware interface card, and a cable.

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## Features

- † Allows multiple HP 3000 users simultaneous batch access to the host.
- † Provides for automatic management of job output.
- † Allows for concurrent use of all the processing facilities of the HP 3000 such as Program Development, Database Management, and Transaction Processing.
- † Allows any supported I/O device on the HP 3000 to be used for I/O including the HP 2680 Laser Printer.
- † Allows MRJE or IBM host users to specify output spool file characteristics.
- † Allows routing of unsolicited output to any destination device or file.
- † Allows host console commands to be issued from any session.
- † Has easy-to-use commands for job control.
- † Allows users to schedule jobs even while the communications lines are down.
- † Allows specification of Native Language Support for data transmission.
- † NLS 16-bit character mapping; interactive and programmatic access; and data integrity are not supported for languages such as Japanese, Korean, Simple Chinese, and Traditional Chinese.

## Functional Description

MRJE and BSC Link allow an HP 3000 system to emulate a workstation operating with JES2 or JES3 Job Entry Systems on the host. With this facility, multiple HP 3000 users can submit batch jobs to or receive output from a host system simultaneously.

Use of the MRJE facility does not require the dedication of the entire system; all other processing facilities of the HP 3000 such as Database Management and Transaction Processing can be used concurrently with MRJE and BSC Link.

An HP 3000 and an HP 2680 or 2688 Laser Printer can use MRJE and BSC Link to act as a print station for a host computer. Remote sites with an HP 3000 Series 40 through 70 can get the maximum printer output by using a 56 Kbps Dataphone Digital Service (DDS) line with an external 56 Kbps clock signal.

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Both MRJE and IBM host users can direct their output to HP 2680 and 2688 laser printers and specify spool file output characteristics including: output priority, number of copies, output device class, and environment file. Environment files define special predefined forms, character fonts, and formats.

MRJE allows for automatic job management under a standard IBM Job Entry System; users can, at the time of job submittal, specify the particular device to which their job outputs are to be directed. No further user intervention is required.

Output can be received on any standard output device on the HP 3000 such as tape units, disks, and printers. Similarly, jobs can be input through any standard input device such as terminals, card readers, or disk.

Unsolicited output can be routed via host Special Forms names to any destination device or file (such as a disk file or a deferred spool file).

With MRJE, users can issue host console commands for controlling job activity. Host console commands can be entered interactively or may be issued as part of an IBM Job Control Language (JCL) deck; the commands must conform to the formats specified by the host system. Through the configuration file the MRJE manager can control the set of commands that a particular user can issue.

As an example of the host console command, the JES2 \$DA command can be issued to display active jobs, or a \$DQ command may be issued to display job queues.

In addition to the host console commands, MRJE has easy-to-use commands for job control. These commands may be used for canceling jobs, displaying job status, and submitting jobs. All such commands may be issued either interactively through a terminal or through a batch job. A list of such commands is provided in table 1.

With MRJE, jobs can be submitted whether the communication line between the host and the HP 3000 is open or closed. Jobs submitted when the line is closed are spooled on the HP 3000 and automatically transmitted when the connection is made. Output from the host is also automatically sent to the HP 3000 and directed to the user-specified output device.

### Summary of MRJE User Commands

**Table 1**

Command	Function
C[ANCEL][JOB] job jobname joblist	Cancels one or more jobs
D[ISPLAY] H[OST] job# J[OBLOG] jobname S[TATUS] joblist C[ONFIG] ,item# ,itemlist	Displays job status, host machine configuration information, and line status (connected or disconnected).
E[XIT]	Terminates MRJE and returns control to MPE.
H[OST][hostid]	Specifies the host machine that will be referenced by subsequent commands.
S[UBMIT] infile 1 (N)[,infile2[(N)]...[infile 5[(N)}}	Enters a job for transmission to the

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[;R[HEADER] = pseudo reader] current host. (N)
[;PR[INT] = printfile[(N)]] specifies no
[;PU[NCH] = punchfile[(N)]] translation.
[;F[ORMS] = formfile [(N)]]
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## Functional Specifications

† MRJE and BSC Link operate with the following IBM Job Entry Systems:

- JES2
- JES3

† For the following IBM Job Entry Systems automatic output routing via the SUBMIT command is not supported:

- RES
- VM/RSCS\*

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The MRJE product is compatible with only the standard (default) generation of IBM Job Entry Systems. When in doubt, confirm MRJE support of your Job Entry System through your local Hewlett-Packard representative. There can be 22 devices configured on the HP 3000. (However, the host will only support a total of 8 printers and punches at any one time.)

- 7 card readers
- 7 printers
- 7 card punches
- 1 console

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## Product Requirements

† An HP 3000 running the current version of the MPE Operating System.

† HP 30251A BSC Link.

† A data communications line

– either switched or leased

– between the HP 3000 and the IBM host.

† The IBM host must support one of the following job entry systems:

– JES2

– JES3

– RES

– RSCS

\* However, automatic output routing can be performed through a mapping of the IBM host Special Forms name to an MPE FILE equation.

## Installation and Configuration Policy

MRJE/V is customer installable. However, Hewlett-Packard will perform minimum configuration of MRJE/V in order to verify minimum product functionality. This task, performed by HP, is included in the product purchase price.

For product configuration tailored to the customer's specific needs, or for a complete HP implementation, HP offers a comprehensive range of integrated and flexible support services. Please refer to the Network Support data sheets in this guide for more information on these services.

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## Customer Responsibility

Prior to having HP personnel onsite to perform minimum configuration of MRJE/V, the customer is responsible for the following:

- † Providing HP with the information necessary to complete the Network Implementation and Support Plan (NISP) including:
  - system configurations
  - logical network map identifying relevant traffic flow
  - physical network map identifying relevant network hardware components.
- † Verifying that the necessary remote system software is installed and configured to support MRJE/V.
- † Updating the HP 3000 system to the proper release level and installing the MRJE/V software using AUTOINST. Refer to the HP 3000 Software Update Manual (32033–90036).
- † Verifying that all of the necessary software modules have been successfully installed by AUTOINST and are at the correct version levels using the MRJECONTROL CHECK command.
- † Performing full system backups as necessary and ensuring that the HP 3000 system and personnel with HP 3000 system management knowledge are available when HP is onsite to complete the minimum configuration of MRJE/V.



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The customer is also responsible for completing the configuration in order to fully integrate MRJE/V into the existing customer network after HP has completed the minimum configuration of MRJE/V.

#### HP Responsibility

Following the installation of MRJE/V, HP is responsible for the following:

- † Confirming that all of the necessary software modules have been installed and are at the correct version level.
- † Configuring the MRJE/V product to a minimum configuration in order to verify software and hardware functionality. This includes configuring MRJESTR, MRJECON, and MRJETABL for the default host.
- † Verifying the MRJE/V configuration by issuing the MRJECONTROL START command and ensuring MRJE starts without problems.

These steps complete HP's portion of the installation and minimum configuration of MRJE/V.

HP effort spent on problems which are not caused by HP installation and configuration activities is considered HP Consulting Support and is billable to the customer at normal HP time-and-materials rates.

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## System Environment

MRJE and BSC Link are available on the entire HP 3000 product line running MPE/V.

## Ordering Information

**30249A** MRJE Multileaving Remote Job Entry Requires 30251A BSC Link

Select **one** processor option. Upgrade credits may be used where applicable.

## Processor Options

**310** For Series 37, 37XE or MICROS

**320** For Series 39–58

**330** For Series 64–70

## Upgrade Credit Options

**OCD** Upgrade Credit for Option 310

**OCE** Upgrade Credit for Option 320

## Support Products

HP offers a spectrum of support service products to help plan, implement, operate, and manage your multivendor network throughout the network lifecycle.

For more information, contact your HP Sales Representative, or refer to the HP data sheets for specific support services.

## Documentation

**30249–90001** MRJE User/Programmer Reference Manual