

Remote Job Entry-II
(RJE/1000-II)

Technical Data
Remote Job Entry-II
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For HP 1000
Computer Systems
Product Number
91781A

RJE/1000-II provides batch communications capability between HP 1000 computers and other computers emulating the widely implemented IBM 2780/3780 protocol.

- + Up or downloading of jobs from a host computer
- + Submission of jobs for remote processing
- + File transfer to other computers emulating the 2780/3780 workstation
- + Remote spooling of files

Features

- + 2780/3780 emulation
- + Up to 19.2 Kbps
- + Greater than 90% line efficiency
- + Less than 10% CPU overhead (even at 19.2 Kbps)
- + Interactive use
- + Programmatic use
- + Automatic post-processor scheduling of user programs
- + Background use
- + Multiple users
- + Disk file transfer
- + File queuing
- + Automatic data conversion (EBCDIC/ASCII)
- + Bisync protocol (contention)
- + Intelligent microprocessor-based I/O card
- + Diagnostic utilities
- + Communicates with JES2, JES3, and HASP II

- † Communicates with accurate emulations of 2780/3780 workstations
- † Switched (dial-up) or leased (dedicated) communication lines

Functional Description

2780/3780 Emulation

RJE/1000-II is a software package that lets HP 1000 E/F- and A-Series computers emulate the IBM 2780/3780 workstation. This product allows HP 1000 users to send and receive files (jobs) from remote job entry subsystems on IBM and IBM plug-compatible hosts. The job entry subsystems that are supported currently are JES3, JES4, and HASP II. Contact your support engineer for the latest list of supported job entry subsystems.

RJE/1000-II also enables HP 1000 users to transfer files with other computers that have accurately implemented the 2780/3780 protocol. This capability is supported on the HP 1000, HP 3000, and HP 9000 computers (RJE/1000-II only on the HP 1000 computers).

Interactive Use

RJE/1000-II allows users to interactively send and receive files using a set of powerful but simple commands. In addition, RJE/1000-II gives powerful diagnostic tools to trace and check status. Additional tools are provided to abort and route HP 1000 destinations for files which are already in transmission.

Custom Interface

RJE/1000-II may be invoked from a user's program. It will return status parameters to the calling program. This gives the user the flexibility to design custom interfaces to suit his own needs. Optionally, the user may write special programs that send and receive files via RJE/1000-II, allowing unattended operation. On completion of transmission RJE/1000-II can schedule a program to handle the file received. The program scheduled will run independently of RJE/1000-II and perform post processing upon received file; eg, route files to the appropriate device or program as required.

Flexible Usage

RJE/1000-II allows multiple users to send and receive files through one copy of executing code. The users may send multiple requests, which are queued up for transmission. Data files may be binary or ASCII. RJE/1000-II performs automatic data conversion of ASCII to EBCDIC for transmission; it also converts received data from EBCDIC to ASCII. Automatic queuing and data conversion provide a user-friendly interface.

Distributed Processing

RJE/1000-II uses a microprocessor-based intelligent I/O card to handle the bisync protocol to the host computer. This Programmable Serial Interface (PSI) card offloads much of the I/O handling and task scheduling, thus lowering CPU usage and increasing effective throughput.

Functional Specifications

Workstations

The following IBM workstations are emulated:

- | 2780
- | 3780

Remote Systems

The host computer must run with one of the following job entry subsystems using bisync contention protocol:

- | JES2
- | JES3
- | HASP II

or

- | HP 3000 with RJE
- | HP 9000 with RJE, Series 300 only
- | HP 1000 with RJE/1000-II

Please contact your SE for the latest list of supported systems.

Communications Link

The Communications Link must have the following features:

- | Switched or nonswitched

- † Up to 19,200 bps
- † 2780/3780 Protocol^{1/2}(EBCDIC and Transparent line codes are supported, ASCII line code is not supported)
- † Binary synchronous contention protocol
- † Point-to-point lines

Modems Supported

Connection to the communications line is made through a modem obtained and installed independently of RJE/1000-II. One modem links the Programmable Serial Interface card in the HP 1000 and the communications line. Another modem connects the communications line to the host computer. The modems must be compatible with each other and must be strapped properly.

The following modems are supported:

- † Bell 201C (2400 bps)
- † Bell 208A (4800 bps)
- † Bell 208B (4800 bps)
- † Bell Dataphone II 2024 (2400 bps)
- † Bell Dataphone II 2096 (9600 bps)

Modems operating at 19.2 Kbps may be used if they meet the following criteria:

1. Provide, transmit, and receive clocks for the PSI card
2. Ensure ground isolation between the communicating systems
3. Support the DTR, DSR, RTS, CTS, CD, and RI handshake signals

RJE/1000-II Commands

The following commands are supported by RJE/1000-II:

Command	Description
Send	Send a file to remote site
Route	Route file to another HP 1000 output (file classification)
Trace	Modify trace control and remote logfile
Status	Check status of monitor, PSI card, or data link
Abort	Stop data transmission or reception
Close	Drop data communications link and terminate

Product Requirements

- An HP 1000 E/F-Series or A-Series disk-based system
- RTE-6/VM for E/F-Series; RTE-A for A-Series (rev 2340 or later)
- PSI card (see hardware requirements for details)
- Switched or nonswitched bisync line to the host computer
- Matched compatible modems
- A supported job entry subsystem configured to emulate a 2780/3780 workstation

Enough memory on the HP 1000 for work area, program area, memory area, and the operating system: 128 Kbytes minimum (66 Kbytes for RJE/1000-II plus 16 Kbytes per user)

Installation and Customer Responsibilities

Installation is not included with RJE/1000-II. It is the responsibility of the customer to install the product. HP will provide installation service at the prevailing service rates.

Installation of all communication facilities (cables and modems) and their connection to the HP 1000 computer systems for RJE/1000-II is the customer's responsibility.

The establishment of successful communication between the HP 1000 computer system running RJE/1000-II and the host computer is the customer's responsibility.

Prior to the customer's installation of RJE/1000-II on the HP 1000, the customer is responsible for installation of a switched or nonswitched bisync communications line between the HP 1000 and the host computer. This line must be matched with a pair of modems that are compatible with RJE/1000-II at each end of the line. The customer should verify the functioning of the line and modems.

Prior to installation of RJE/1000-II the customer should install the necessary host computer system software and hardware to support RJE/1000-II. The customer should ensure that the host software is compatible with RJE/1000-II and consistent with the specifications of RJE/1000-II. Modifications may prevent operation of RJE/1000-II. Hewlett-Packard does not warrant the successful operation of RJE/1000-II if modifications have been made.

Ordering Information

To order RJE/1000-II, the customer must order the PSI card and RJE/1000-II software.

RJE/1000-II Hardware Requirements

One of the following PSI cards must be used with RJE/1000-II, depending on the processor owned:

12043A¹/₂A-Series

12260A¹/₂E/F Series

RJE/1000-II Software Requirements

The RJE/1000-II software must be ordered with one of the processor options listed below:

91781A Right to use RJE/1000-II on HP 1000.

Must order **one** processor option and one media option

400 Use on A400

600 Use on A600

601 Update to latest version of 91781A for 91781A customers not on support services

700 Use on A700 or E/F-Series

701 Update to latest version of 91781A for 91781A customers not on support services

Customers using RJE (91780) may use this option to upgrade to **91781A**

890 Use on A900

891 Update to latest version of 91781A for 91781A customers not on support services

990 Use on A990

991 Update to latest version of 91781A for 91781A customers not on support services

Media Options

022 7908/11/12/14 Cartridge

042 5 1/4-inch Flexible Disk

0500 800 bpi Mag tape (E/F-Series only)

051 1600 bpi Mag Tape

91781R Right-to-Copy RJE/1000-II to one system.

Must order **one** processor option

400 Use on A400

600 Use on A600

601 Update to latest version of 91781R for 91781R customers not on support services

700 Use on A700 or E/F-Series

701 Update to latest version of 91781R for 91781R customers not on support services

890 Use on A900

891 Update to latest version of 91781R for 91781R customers not on support services

990 Use on A990

991 Update to latest version of 91781R for 91781R customers not on support services

Options to upgrade to higher end processors are also available. Please see your HP Sales Representative for more information.

Documentation

91781-90001 RJE/1000-II
Reference Manual

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.