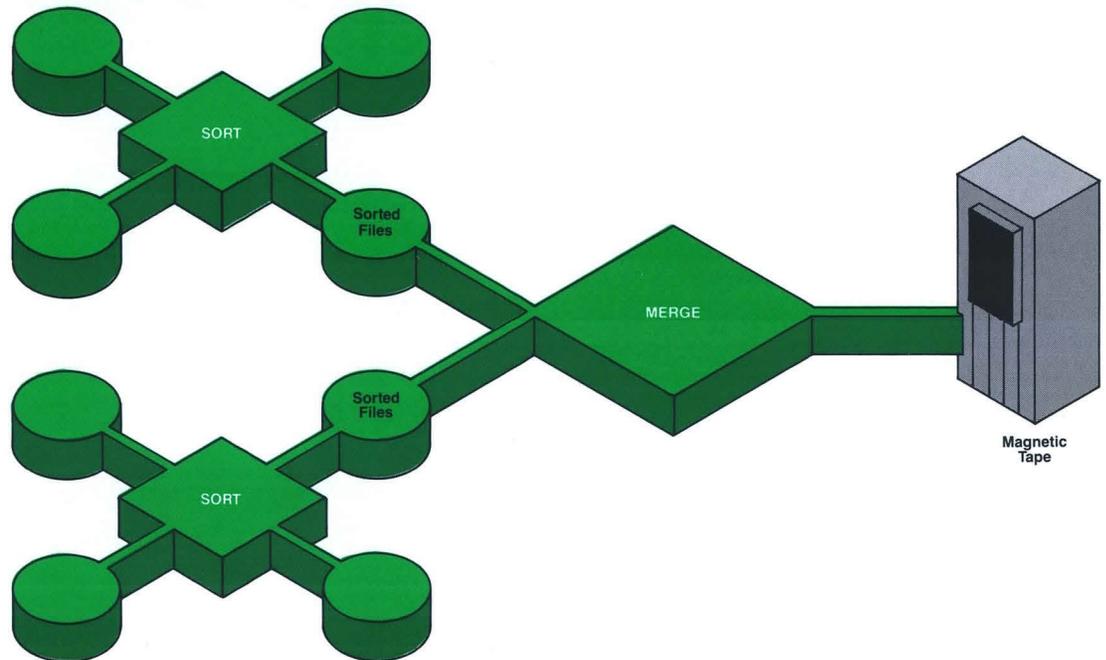


# SORT/MERGE II



## Product Overview

SORT/MERGE II is a high-performance utility available for Perkin-Elmer Series 3200 32-bit computers, which includes two versatile processing tools. The first tool, SORT, arranges multiple input files into one file in mixed ascending

or descending order, and in user-specified key sequences. The second tool, MERGE, produces a sorted file from multiple input files presorted in identical key sequences.

## Features

- Unlimited number of keys in mixed ascending and descending sequences.
- Computational, display, packed, decimal, and floating point key fields.
- Multiple input files.
- Interactive and batch command input modes.
- Dynamic error correction and recovery mechanisms.
- Automatic multivolume and interfile prompting.
- ANSI and IBM standard labeling and blocking conventions.
- User exit for special handling of duplicate keys at output time.
- Automatic scratch file allocation.

## Product Description

SORT/MERGE II performs as much in-memory sorting as possible to minimize work file I/O. Additionally, this utility is designed to take advantage of pre-sorted lists, thus minimizing total processing wherever possible. Among the factors affecting performance are file size, the number of and types of keys, and the randomness of the distribution. The user of SORT/MERGE II can further increase performance by providing additional resources such as more memory or separate devices for overlapping I/O.

SORT/MERGE II is an easy-to-use and highly efficient utility. It is designed to utilize the full power of the 32-bit architecture, to maximize processing throughput. Simple commands optimize command entry speed, and recovery from non-fatal errors enables continuous processing. SORT/MERGE II is well-suited for large data file applications requiring high performance, such as the commercial and scientific user environments.

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### Sort/Merge II Keys

The desired record sequence is determined by an unlimited number of user-specified sort keys. These keys are specified in order of control significance from major to minor. Every key is individually eligible for ascending or descending sequence. This flexibility enables SORT/MERGE II to generate data files prepared for any report-generating program, with no limitation on the number of control breaks or group levels.

SORT/MERGE II handles a variety of commercial key field types. Fields can be display strings (either ASCII or EBCDIC), signed computational, or packed and zoned decimal. In addition, floating point keys from scientific output applications are supported. Fields can begin in any character position of the record, and the maximum key size is 1024 characters. With a maximum record size of 4096 characters, SORT/MERGE II is well-suited for data records from any environment.

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### Multiple Input Files

SORT/MERGE II can produce a single sorted output from many input files. This capability is useful when handling tape files originating from different installations, and data files that span many volumes. The user can specify multiple input files in one

command line, or can request the SORT/MERGE II program to prompt the user for each file specification automatically at the end of each input file. Up to 256 files can be specified for sorting. Files may reside on any storage medium.

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### Interactive And Batch Command Input Modes

Users can run SORT/MERGE II via interactive console dialogue or by specifying a file containing the desired command sequence. Simple dialogue requirements keep the number of commands needed to a minimum. Command formats are simplified. Once proficient with the utility, users can abbreviate commands and omit arguments, with defaults assumed.

Frequently used command sequences can be catalogued in a file for batch mode. If SORT/MERGE II encounters a command error in the batch file, it ceases file processing, and scans the rest of the file for any errors. Automatic hard-copy logging of commands and error messages are possible. New users can conveniently spell out each command while more experienced users can save time by taking the appropriate shortcuts.

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### Dynamic Error Correction And Recovery Mechanism

During terminal dialogue, users can dynamically correct entered specifications by retyping the respective command line or sequence. These corrections can be entered any time before the 'SORT' or 'MERGE' commands are issued. After they are issued, SORT/MERGE II can recover from many run-time error conditions by causing a return to dialogue mode, awaiting user corrections. Thus, the SORT/MERGE II design offers dynamic recovery procedures throughout the run, reducing potential operator errors.

When processing more than one input file, SORT/MERGE II can, optionally, pause and prompt the user for action between files, allowing the user to mount the next volume or tape reel, or to select the next filename. Even when the interfile prompting option is not requested, SORT/MERGE II will pause for recoverable errors such as end-of-disk volume or end-of-tape reel.

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### ANSI or IBM Standard Tape Labeling And Blocking

SORT/MERGE II can read standard unblocked Perkin-Elmer tapes, and magnetic tapes having labels and fixed length blocked records according to ANSI or IBM formats. Output files can be produced

in these same formats. The user can specify all information for IBM or ANSI labeled tapes in a single command line.

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### User Exit For Special Handling of Duplicate Keys

Options are provided for SORT/MERGE II to handle the output records in which all key fields are equal. If the user's file design did not intend to allow duplicate keys, or if master records are to be built from multiple records, SORT/MERGE II provides for automatic duplicate key handling or user-coded decision subroutines written in FORTRAN, COBOL, or

CAL. The automatic handling includes automatic record deletion and message logging when encountering duplicates. The user-coded routines can decide how to proceed in such conditions. These features give the system developer exceptional control in data file manipulation.

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### Automatic Scratch File Allocation

SORT/MERGE II requires only one temporary work file for sorting. This area can be pre-allocated by the operator or allocated by SORT/MERGE II. The system

eliminates the need for the operator to allocate sectors, by automatically creating the temporary file from available workspace.

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### System Requirements

**Minimum Software Requirement**  
OS/32 Version 6.2 or higher.

**Minimum Hardware Requirement**  
Any Series 3200 Perkin-Elmer Processor.  
42KB of memory above the requirements of the Operating System (Additional memory for workspace may be allocated).

1 command device  
1 logging device  
1 output file  
1 disk overlay file  
For SORT-1 input file and 1 scratch disk file  
For MERGE-2 input files

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### Product Number

S90-408 SORT/MERGE II

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### Related Documentation

29-615 SORT/MERGE Reference Manual

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The information contained herein is intended to be a general description and is subject to change without product enhancement.

**PERKIN-ELMER**

Data Systems Group

2 Crescent Place • Oceanport, N.J. 07757  
(201) 870-4712 • (800) 631-2154 (U.S.A. Only)

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