Product Bulletin

Prime™

# SyncSort/PRIME

## Features

High performance.
The fastest sort/merge/copy facility available for 50 Series™ systems.

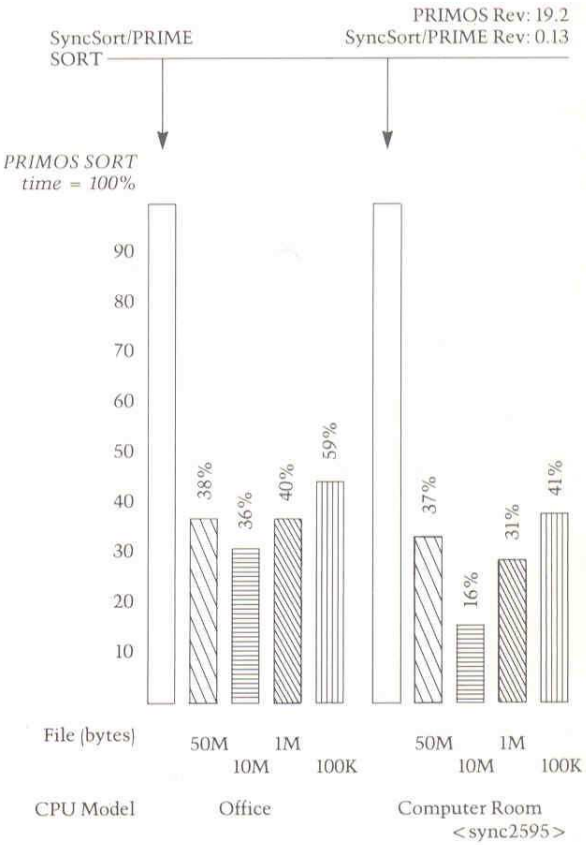
High-speed general data utility functions for all important file handling tasks. Includes copying and reformatting files and converting file types.

Reduces disk work space requirements dramatically.

Easy to learn and use.
Includes a full-screen interactive menu interface with help facility.

Compatible with 50 Series systems, PRIMOS® operating system sort and COBOL sort and merge verbs.

**SyncSort/PRIME: Performance as Function of File Size (average)**



## Description

SyncSort/PRIME software is a high-performance data utility with generalized file manipulation, data, output, sort, merge and copy capabilities. It is a fundamental data processing tool that adapts to each computer system's configuration, applications and environment.

The first implementation of the proprietary SyncSort sorting technology on 32-bit superminicomputers, SyncSort/PRIME is the fastest sort, merge and copy utility program available for all 50 Series computers. It runs on PRIMOS revision 19.2 or subsequent versions. It is completely compatible with the PRIMOS sort function and has program, call, command line and interactive interfaces.

## Capabilities

*Ease of use.*

SyncSort/PRIME offers two interactive interfaces:

- a full-screen, menu-driven interface for beginners, and
- a quick-prompting interface for experienced users.

The menu interface can automatically store SyncSort/PRIME applications, and it also offers full-text user messages and on-line help to assist users in utility task development.

SyncSort/PRIME run-time, task-tuning messages can be used to optimize applications.

SyncSort/PRIME supports PT200,™ PST100™ and PT45™ terminals directly, with a built-in tool for automatically configuring support of other terminal types. It also can be used in a mode that is completely compatible with the PRIMOS sort so that no changes need to be made to existing programs or command files to obtain improved sort/merge performance.

The user schematic below illustrates interface activity alternatives.

## 50 Series Architecture Features

*Compatibility.*

Prime® systems are designed for hardware and software compatibility. All 50 Series systems run under the PRIMOS operating system. This single operating system ensures total software portability across all Prime systems. User programs developed on one system will run on all the other systems without recompilation or modification. In addition, programmers use the same set of commands on all systems.

*Software.*

The PRIMOS operating system supports both interactive and batch processing on all 50 Series systems. The operating system supports reentrant procedures, letting many users share a single copy of a software module.

A wide range of high-level, industry-standard languages run on Prime systems. Available languages include: ANS FORTRAN 77, ANS 74 COBOL, ANSI/IEEE Pascal, ANS PL/I and PL/I Subset G, C, ANS BASIC and RPG II. The Prime Macro Assembler, the Source-Level Debugger and EMACS, the extendable screen editor, support these standard languages.

Prime offers a comprehensive family of data management products. Central to these are MIDASPLUS™ and PRISAM™ indexed sequential access manager and CODASYL-compliant Prime DBMS. Complementing these data managers are: FORMS for screen management and the DISCOVER™ product for query and reporting on PRISAM and Prime DBMS files.

Other Prime software offerings include: PRIMEWAY™ development and transaction management system; Prime INFORMATION™ software, a fourth generation, relationally-based data management product; and the Prime Office Automation System (Prime OAS).

### SyncSort/PRIME: Usage Schematic

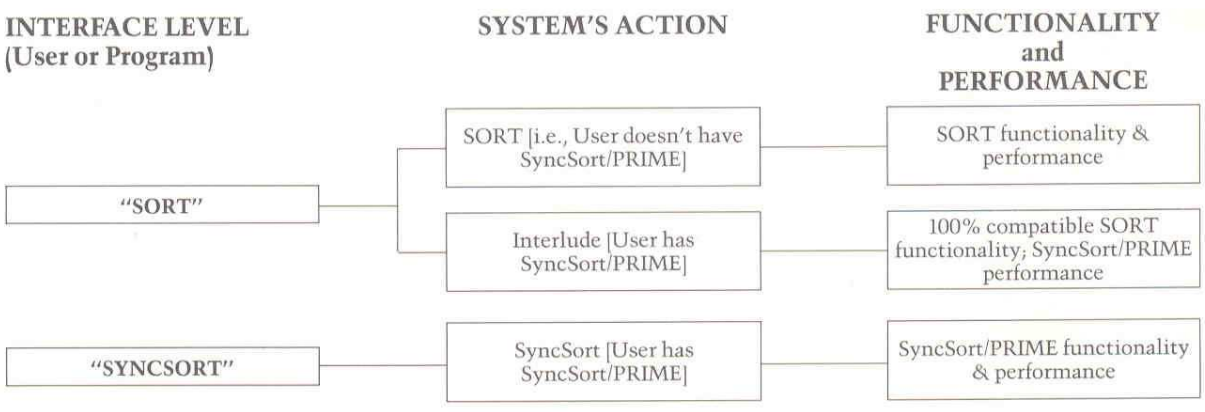



**Figure B**

For CAD/CAM/CAE applications, Prime offers: the PRIME MEDUSA™ design and drafting package; the Product Design Graphics System™ (PDGS)™; GNC,™ Graphical Numerical Control program; and the SAMMIE™ ergonomic design software packages. In addition, a large library of application packages is available from the Prime Users Library Service (PULSE) and from the Joint Marketing Agreements (JMA) with third-party software houses.

*High performance.*

Independent sort, merge, copy and input/output file processing functions support high performance without wasting system resources. Blank records can be eliminated before processing begins. Input file manipulation and selection features work to minimize use of time and system resources during processing. SyncSort/PRIME reads only specified fields of an input record, creating a work file that it then processes. The input file is not affected.

A specified number of records can be skipped from file start before sort/copy begins. The number of records released to a sort/copy can also be limited. This feature is also useful for applications and development.

*Advanced data utility.*

Because SyncSort/PRIME is able to convert files easily, it facilitates application porting between 50 Series systems and those of other vendors. It also facilitates inter-application data file passing, including the ability to convert between PRISAM™ and MIDASPLUS™ files.

SyncSort/PRIME can be used to create highly presentable program output through the use of its record/data field manipulation and output formatting features. Applications can be created in SyncSort/PRIME itself, either as standalones or to enhance application programs written in COBOL, FORTRAN, BASIC, C, RPG, Pascal and PL/I. SyncSort/PRIME can also operate on ADDROUT files, or create ADDROUT files for subsequent RPG processing.

Sorting, merging or copying can be customized via SyncSort/PRIME support of Prime ASCII, EBCDIC and user-defined collating sequences. Up to eight collating sequences per operation can be used. Because SyncSort/PRIME can create multiple, independently formatted output files during a single operation, diverse output functions can be performed simultaneously. SyncSort/PRIME inputs up to 20 files and has no hard limit on the number of output files.

SyncSort/PRIME has the ability to sum selected numeric fields of records having equal keys while deleting redundant records. Thus, applications requiring arithmetic can be performed, files can be condensed, and application performance can be improved. Provision for expanding summed fields to accommodate arithmetic field overflow is also included. SyncSort/PRIME even notifies users if unplanned overflow causes multiple output records to be written automatically. No sums or records can be lost to output.

*File organizing and formats.*

SyncSort/PRIME includes:

- Seven file organizations – SAM, DAM, MIDASPLUS direct, MIDASPLUS keyed index, PRISAM indexed, PRISAM relative and CAM (at Rev 20.2).
- Four record formats – ASCII compressed ASCII uncompressed, fixed length, variable length.
- Fifteen data formats –
  - ASCII – character
    - signed numeric with leading embedded and trailing embedded sign
    - signed numeric with leading separate and trailing separate sign
    - unsigned numeric
  - packed decimal
  - single-precision, double-precision and quad-precision real
  - 16-bit, 32-bit and 64-bit signed integer
  - 16-bit and 32-bit unsigned integer
- Format up to 64 key fields with total record length up to 32KB.

## Service and Support

SyncSort/PRIME is a fully-supported Prime software product.

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