



B20



B20 ISAM

STYLE NUMBER: B20IS4

CATALOG NUMBER: 3667 9462

We welcome you to our family of B20 Program Product users. As you put your program product to work, you will find that it will become an integral part of your business.

This package contains:

- Two Diskettes containing Burroughs B20 ISAM Release Level 4.0.
- B20 Systems Indexed Sequential Access Method (ISAM) Reference Manual, form #1168465.
- B20 ISAM 4.0 Technical Notes.

Your B20 ISAM, level 4.0, has been qualified to run with Burroughs B20 Operating System Release Level 4.0. The instructions to install ISAM are explained in the B20 ISAM 4.0 Technical Notes. You should read and follow the procedures indicated before attempting any operation of this system. If a diskette is found to be defective, contact the source from which you acquired this program product for a replacement.

Form No. 109100584 09/18/84



Burroughs

B20 ISAM

(B20IS4)

RELEASE LEVEL 4.0 TECHNICAL NOTES

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SECTION 1

RELEASE CONTENTS

ISAM 4.0 is designed for use on both fixed disk and dual floppy systems. When ISAM is installed on fixed disk systems, some utilities may optionally be installed, or used from the floppy disk to reduce the amount of disk space required. The diskette set may also be prepared for use in a B26 dual floppy standalone environment.

MEMORY REQUIREMENTS

ISAM 4.0 default parameters result in the following memory requirements:

Hard disk, standalone environment:	56K bytes.
Hard disk, multi-user environment on B21 and B22 systems:	83K bytes
Hard disk, multi-user environment on B26 systems:	92K bytes
Dual floppy, standalone environment (B26 only):	87K bytes

HARD DISK SPACE REQUIREMENTS

ISAM 4.0 requires a minimum of 600 sectors when installed on a fixed disk. Installation of optional ISAM utilities require an additional 600 sectors of fixed disk.

SOFTWARE DEPENDENCIES

This release has been qualified to run on the B20 BTOS operating system, level 4.0.

SECTION 2

INSTALLATION INSTRUCTIONS

HARD DISK SYSTEMS

Step 1. If the ISAM services are not installed in memory, go to step 3.

If the ISAM services are installed in memory, it is necessary to remove them. Follow these directions:

- a. Enter RENAME in the Command form.
- b. Press the RETURN key.
- c. Fill in the RENAME form as shown below:

```
      Rename
      File from           [Sys]<Sys>SysInit.JCL
      File to            [Sys]<Sys>SysInit.JCL-Save
      [Overwrite ok?]    y
      [Confirm each?]
```

- d. Press the GO key.
- e. Press the RESET button.

Step 2. When the system has rebooted, log onto the executive.

Step 3. Insert the ISAM distribution diskette, B20IS4-1, in floppy drive [f0].

Do not press the RESET button.

Step 4. a. Enter SOFTWARE INSTALLATION in the Command form.

b. Press the GO key.

Step 5. Follow the instructions displayed on the screen.

Step 6. When installation is complete, remove the distribution diskette and store it in a safe place.

DUAL FLOPPY STANDALONE SYSTEMS

- Step 1. Boot your system using a working copy of the OS Boot diskette, B26SF4-1, and log onto the Executive.
- Step 2. Insert a working copy of the OS diskette B26SF4-2 in floppy drive [f0]; it must be write enabled.
- Step 3. Be sure that the ISAM distribution diskettes, B20IS4-1 and B20IS4-2, are write-enabled.
- Step 4. Insert diskette B20IS4-1 in floppy drive [f1].
- Step 5.
- Enter SUBMIT in the Command form.
 - Press the RETURN key.
 - Fill in the SUBMIT form as shown below:

```
Submit
File list           [f1]<Create>ISAMFloppy.sub
[Parameters]
[Force Expansion?]
[Slow Expansion?]
```
 - Press the GO key.
- Step 6. Follow the instructions displayed on the screen.
- Step 7. When the installation is complete, remove the distribution diskette, and write-protect both ISAM diskettes.

SECTION 3

LIMITATIONS AND RESTRICTIONS

- o Multiuser ISAM cannot access local data sets at a cluster workstation. Refer to Appendix C, Software Requirements, of the ISAM User Manual regarding limitations of data set manipulation in a cluster environment.
- o Always use the ISAM Copy utility to copy ISAM data sets. Using the Copy command will cause the files to be inaccessible to ISAM.
- o When reorganizing on ISAM data set, do not use the index file as a workfile. This will cause loss of data set information.
- o Do not attempt to close or otherwise manipulate ISAM file handles for files which have been deleted or which are not currently open. This may result in the ISAM services crashing.
- o ISAM COPY and ISAM STATUS do not allow use of write-protected floppy disks. When attempting to use these utilities on data sets located on floppy diskettes, be sure they are write-enabled.
- o If ISAM has been installed and a submit file tries to install ISAM, the resulting error will close the submit file, so that any remaining commands will not be executed. Standalone and Multiuser JCL files have been distributed with this release to install ISAM services when the system is booted. Batch.run is also provided for standalone hard-disk environments.
- o When using floppy disk based ISAM utilities, do not attempt to remove the diskette containing the utility until the utility has completed operating.

- o Beginning with ISAM 4.0, runtime memory requirements are determined by the number of users indicated when the ISAM services are installed in memory, and the parameters defined in the ISAM.Config file. The configuration parameters distributed in ISAM.Config have been changed from those documented in the ISAM manual. The values now distributed in ISAM.Config are now consistent with previous Burroughs ISAM installation parameter recommendations. The recommended values for ISAM 4.0 are:

BUFFER SIZES:

Data Buffers: 2
 Index Buffers: 2

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Heap Size (K Bytes)	4			13		16				
Data Buffers (number)	3			8		10				
Index Buffers (number)	3			16		20				

Swap Zone Size: 8

The use of the default parameters specified in ISAM.Config results in the following memory requirements:

Type of ISAM Server	# of Users	Resident Code	Swapping Area	Heap Size	Data Buffer Space	Index Buffer Space	Total Bytes
Swapping	1	37.5K	8K	4K	3*1K	3*1K	56K
Swapping	4	37.5K	8K	13K	8*1K	16*1K	83K
Swapping	6	37.5K	8K	16K	10*1K	20*1K	92K
Resident	1	76.5K	none	4K	3*1K	3*1K	87K
Resident	4	76.5K	none	13K	8*1K	16*1K	114K
Resident	6	76.5K	none	16K	10*1K	20*1K	123K

Run time memory requirements for ISAM can be calculated as follows:

$$\begin{aligned}
 \text{Total Memory} = & \text{Resident Code Size} + \\
 & \text{Swap Area Size} + \\
 & \text{Heap Size} + \\
 & \# \text{ data buffers} * \text{data buffer size} + \\
 & \# \text{ index buffers} * \text{index buffer size}
 \end{aligned}$$