

OS4 TECHNICAL BULLETIN

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Engineering Reference Number
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REVISION HISTORY

<u>Revision</u>	<u>Issue Date</u>	<u>Comments</u>
B1	Nov. 1978	Original issue.
C0	Dec. 1978	OS4 C0 Engineering Release.
C1	Feb. 1979	OS4 C1 Production Release.
D0	Aug. 1979	OS4 D0 Production Release.
E0	Mar. 1980	OS4 E0 Production Release.
E4	May 1980	OS4 E4 Production Release.
F0	May 1981	OS4 F0 Production Release.
G0	Oct. 1981	OS4 G0 Production Release. Information herein corresponds to software release G100.

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The G100 release of OS4 incorporates a number of modifications to the system. This bulletin summarizes those modifications. In addition to the functional changes described below, many REAs were fixed. Refer to the G100 Engineering Notice for a list of these REAs.

1. The LABEL Utility and SFM have been modified to support imperfect media. It is no longer necessary to ensure that media are perfect when using LABEL. LABEL will relocate or break up the F-LIST, root directory, and free file as necessary.
2. When labeling a device, the override feature is no longer available. If the volume name contains characters not recognizable to E:GFN, the appropriate diagnostic must be used to reformat the device. Also, when a carriage return is entered as response to the ENTER VOLUME NAME> prompt, unless the old volume name was SCRATCH.VOL, it is now required that the name be retyped in order to add extra security when relabeling.
3. Several prompts have been added or modified. See 5.1.1, Program Execution Sequence (LABEL Utility), of the OS4 System Reference Manual Notification of Documentation Change. In addition, many of the bugs in older versions have been fixed.
4. It is now possible to label a device with more than 4032 files. LABEL will allocate additional maintenance block entries as needed.
5. It is again possible to label 5MB and 300MB disk drives.
6. The file manager has been updated to handle noncontiguous system files. A check is now made when the device is mounted to determine whether or not the F-LIST is contiguous. If it is noncontiguous, bit 2 of the DIB flag word is set. This is done so we can quickly determine whether a simple multiplication is necessary or searching through the extents is necessary to find the proper entry. Noncontiguous directories are also supported.
7. A facility for dynamically extending directories has been added. When labeling a device or creating a directory, a secondary extent field is set up in its F-entry. Once the directory is full, a check is made to determine if its secondary extent field is zero. If it is zero, the directory is indeed full and the proper prompt is displayed. If not zero, the directory is extended by the number of AU's specified in the secondary extent field.
8. Software has been added to support the Phoenix and Winchester drives. The Phoenix drives use the high capacity disk controller; the Winchester has its own controller, but is HCDC compatible.
9. In order to support the Phoenix and Winchester drives, a new DIB and CIB were developed: DIB:DK and CIB:DK. Their purpose is to create a DIB and CIB for any disk device like the Phoenix and Winchester. They are general enough to create a DIB and CIB for any disk device by using a new family name identifier. See the IOS4 Reference Manual for more details regarding syntax.

10. New macro and library files have been added to incorporate SCOUT multi-channel boards.
11. A universal floppy driver for SCOUT has been added which will configure itself to either single density or dual density floppies on the quad floppy driver.
12. The AUTOLOAD command in OS4 is now usable on SCOUT systems. Any file being AutoLoaded must reside in the root directory of the specified disk.
13. DEBUG has been updated to configure itself whether it is running on a SCOUT with an SPI board, on a SCOUT with the multi-channel, or on an NM4 with DIO.
14. The VIEW utility has been modified to increase the viewing speed.
15. There have been many changes to EDIT. These include, but are not limited to the following:
 - o The COPY command (C) which will copy text from one location to another.
 - o A vicinity option has been added to the FIND command where the prompt appears after the line found. If FIND has no argument, it will now find the next occurrence of the previous string. Users may advance or go back a fixed number of lines by using + or - commands. The end of data lookup now points to the last line, not past it.
 - o An option has been added to allow substitution at the end of a line.
 - o Several bugs from previous versions of EDIT have been fixed. See the Source Editor Reference Manual for more information on these updates.
16. MULTED has been significantly revised. It uses the latest version of EDIT. OCP has been removed. The command line has been modified. Several new terminal commands have been added. Read the new MULTED manual carefully for details.
17. There have been modifications to the character driver. A system configured for MULTED is no longer affected by one of its devices being turned off. A similar problem also fixed was the print utility on a serial printer running in conjunction with any other utility.
18. The macro assembler was updated to clear up a few outstanding bugs.

19. The libraries incorporated in the G100 release package log on with the following revision levels:

RTX/RTXD	F001
IOS/IOSD	F100
SFM/SFMD	F100
DEBUGM.OBJ	E800
DEBUGS.OBJ	E800
DEBUGX.OBJ	E800
MCS.LIB	F100
OS4SYS.LIB	F100
OS4AUX.LIB	F100
OS4.LIB	F000
EMLTR.LIB	F000
ADA.LIB	E100
EII.LIB	E700
SORT.LIB	E600

20. The utilities incorporated in the G100 Release Package log on with the following revision levels:

EXEC:::SYS	F101
MTEX:::SYS	F101
LABEL.SYS	F104
OS:::SYS	G100
OS:::SCT	G100
EDIT.SYS	F300
MACRO.SYS	F200
DEBUG.SYS	E800
LINK.SYS	F200
PATCH.SYS	E600
OLE.SYS	E400
CNC.SYS	E600
D2D.SYS	E400
HELP.SYS	E600
TCDUMP.SYS	E600
DOWNLOAD.SYS	E600
ROMGEN.SYS	E600
AUTOGEN.SYS	E600
SORT.SYS	E600
MERGE.SYS	E100
COBOLSORT.SYS	E600

21. Notifications of Document Change are also released for the following manuals:

1. OS4 System Reference Manual (91-93460-00E1)
2. NM4 Standard Disk File Format Reference Manual (90-93440-01E0)
3. NM4 Debugging Monitor Reference Manual (90-93015-00E0).

These Notifications are "bandaids" to the three manuals. They are intended as updates to the material included in each Notification only. In many cases this is only a part of a page of an existing manual, so the existing pages should not be discarded. That is, they are not ordinary change pages. Material included in these three Notifications will be incorporated in the next manual revision cycle.