

**Installation Procedures:** Refer to "LS-DOS 6.3 installation instructions" provided with the LS-DOS 6.3.0 Update.

**Added/Modified Features:** The following list documents the changes introduced since the 6.3.0 release:

All copyrights and welcome messages have been changed to "MISOSYS, Inc." reflecting the current ownership and copyrights of the LS-DOS product.

**CREATE:** The *SHRINK* parameter has been added to **CREATE**; when specified, the created file will be established to deallocate unused space. Note that (*Fill=dd*) is now documented to fill the created file with the specified byte value, *dd*.

**DATE:** The **DATE** command and the "Date?" prompt on boot now support a date range of 32 years; from January 1, 1980 through December 31, 2011. Years from 2000 to 2011 are entered as 00-11.

**DIR:** The display of the time field in the **DIR** command's output can now be altered to display the time in 12-hr clocktime or 24-hr clock time. Specifying **SYSTEM (AMPM=ON)** will cause a 12-hr clock display; specifying **SYSTEM (AMPM=OFF)** will cause a 24-hr clock display. This option is configurable and pertains only to the **DIR** display.

**DISKCOPY:** **DISKCOPY** has been modified to check for the presence of a system disk in drive 0 at the completion of the copy before prompting for a system disk. It has also been modified to allow the source disk to be an "alien" disk structure such as a Memdisk or DiskDISK.

**DO:** The **DO** command has been enhanced to automatically search for the first available non-write-protected drive to create the output **SYSTEM/JCL** file. This guards against **DO** aborting when you have a **SYSTEM/JCL** file on a write-protected drive 0.

**HELP:** The **DOS/HLP** file has been changed to conform to the changes introduced by version 6.3.1.

**ID:** The 6.3.1 disk, as released, contains no customer service number. The **ID** command will generate "*No service contract*" when invoked. This indicates that there is no telephone support of 6.3.1 and no customer support beyond the 30-day warranty period unless a service contract has been purchased.

**LIST:** The **LIST** command's display output has been enhanced to default to paged display mode. Only 23 lines of information will be displayed, then the listing will pause. [ENTER] will resume the display. Specify **LIST . . . (NS)** to force the listing to display in non-stop mode. **NS** may be abbreviated to "N"; note that "N" is no longer an acceptable abbreviation for the "NUM" parameter. If you select the (**P**) output mode (i.e. output to a printer), (**N**) is automatically specified.

**MEMORY:** The **MEMORY** display output has been enhanced to display the status of switchable memory banks known to the DOS. It also displays a map of modules resident in I/O driver system memory and high memory. The **MEMORY** command now accepts a (**Print**) parameter to direct its output to the line printer.

**RESET:** The **RESET** command has been improved with the addition of two parameters. **RESET filespec (LRL=n)** alters the logical record length of the file to the value *n*; appropriate values of *n* are in the range 0-255, with 0 implying a record length of 256.

A DATE parameter has been added to allow the file's directory date to be altered somewhat. Specifying RESET filespec (DATE=OFF) restores the file's directory entry to the old-style dating of pre-6.3 release. The old "user" password field will be set to blanks. This may be useful for files which must be transferred to an older DOS release, such as by the TRSDOS 1.3 CONVERT utility. Specifying RESET filespec (DATE=ON) will establish the file's directory date as that of current system date and time. Note that when this option is specified, the MOD flag will be set to indicate a file change.

**SPOOL:** The SPOOL command has been modified to permit the BANK parameter entry to range from 0-30 instead of 0-7. This may be useful for machines with extended memory installed.

**SYSGEN:** SYSGEN will no longer abort if within a JCL file; JCL, if active, will be temporarily suspended during the configuration generation. SYSGEN will abort with an appropriate error if the drive specified to receive the configuration file is write protected.

**SYSTEM:** An option to enable or disable the printer time-out and error generation when line printer output is requested and the printer is unavailable has been added. This option is specified by the SYSTEM (PRTIME=ON|OFF) facility and is configurable with the SYSGEN command. Specifying SYSTEM (PRTIME=ON) establishes an approximate 10 second time-out on printer unavailable and generation of the "Device not available" error code. Specifying SYSTEM (PRTIME=OFF) disables any time-out; if the printer is unavailable, the DOS will hang!

A parameter has been added to the SYSTEM command to enable the swapping of any two logical drives by switching their drive control table assignments. Specifying SYSTEM (DRIVE=d1, SWAP=d2) switches drive d1 for d2. Either may be the system drive, and a Job Control Language file may be active on either of the swapped drives. Note that SYSTEM (SYSTEM=d) is equivalent to SYSTEM (DRIVE=0, SWAP=d).

**TED:** The TED text editor has been enhanced with the addition of print and directory query commands. [CTRL-P] will print the entire text buffer; [CTRL-B] followed by [P] will print the contents of the first block encountered. [CTRL-Q] will now prompt for Drive? Entering [:d] will display an abbreviated directory of visible files in drive "d". You may restrict the display to files matching a particular extension by entering [/ext:d]; a "\$" character matches any character in the position entered. It is necessary to depress [ENTER] at the completion of the directory display to restore the text screen. The message display of TED has been improved slightly to display *Load Filespec?* for [CTRL-L] versus *Filespec?* for [CTRL-F] to differentiate the two visually.

**Technical Changes:** The owner password for all system files [BOOT/SYS, DIR/SYS, and SYSn/SYS] has been changed from "LSIDOS" to "SYSTEM6".

The @DATE Supervisor call (SVC) now returns a string of the form "MM/DD/YY", where the "YY" field can be 80-99 or 00-11; 00-11 are indicative of 2000-2011. All software programs supplied as part of LS-DOS will generate the directory file date using 80-99 or 00-11 as the year, or 1980-2011 where 4-digit years are generated.

The IFLAG\$ now uses bit-4 set to specify 24-hr clock display.

The @SEEKSC Supervisor call (SVC-71) which functioned as a high-level file record seek has been deactivated as unnecessary; if SVC-71 is requested, the DOS will return without generating any error.

The end-of-file pointer in the directory for MODELA/III has been corrected.

The binary storage for the year is excess 1900; thus years 1980-2011 are stored as 80-111.