

New concepts set this DOS apart.

DOSPLUS 3.4

DOSPLUS 3.4
Micro Systems Software Inc.
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\$149.95 disk

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Several new concepts are evident in DOSPLUS 3.4. One of these is the cylinder idea, replacing tracks on disks. This idea comes from hard-disk technology. (The DOSPLUS 3.4 manual is also the manual for DOSPLUS 4.0 which is Micro Systems' new hard-disk operating system.) On single-sided drives, a cylinder is equivalent to a track, and the owner of such drives might see no need for the new terminology, but on double-sided drives, there is a world of difference. DOSPLUS 3.3 handled double-sided drives as separate drives: The first side of the disk was called drive 0 or 0A, while the back side was referenced as drive 0B. This meant that each side had its own directory and files could not span both sides. On DOSPLUS 3.4 both sides are seen as one drive and files can span both sides. Track 1 goes around the first side of the disk and then continues on the back side, so that there are six granules per track (with six sectors per granule). One directory takes care of both sides. Thus a double-sided, 40-track drive is essentially identical to a single-sided 80-track drive. A double-sided 80-track drive would have over 700 kilobytes of space available.

DOSPLUS 3.4 can also read and write 40-track disks in an 80-track drive (with some restrictions). This is done by skipping every other track, and guidelines are given in the manual for carrying this out successfully. This ability partly removes one obstacle

to using 80-track drives: the problem of compatibility with the more common 40-track drives. The only real difficulty remaining is its inability to read self-booting 40-track disks in an 80-track drive.

Another new concept implemented in DOSPLUS 3.4 is that of complete device-handling. The Force and Join commands allow you to tie devices together or redirect them. Even more important is it allows you to use disk files as devices, so all printer or video output could be sent to a disk file for later examination, for instance. It works the other way, too. You can specify a device in place of a file name, such as in a Copy command or in saving or loading from Basic. For example, in Basic you could type SAVE"*DO", which sends the current program to the video display—an interesting but pointless equivalent to List.

A far more important application is saving to the RS-232 device by typing SAVE"*RO". Assuming you were connected via an RS-232 to a friend's computer, also equipped with DOSPLUS 3.4, you could transfer a Basic program very simply. Using the copy command you can transfer practically anything (as long as it is an ASCII file). You could even type and have it appear on his video screen (assuming he was prepared appropriately) by typing COPY *KI TO *RO. To receive type COPY *RI TO *DO. By joining these devices to a disk file or the printer, you can have a permanent record of the conversation.

A third new concept introduced in DOSPLUS 3.4 is that of the wildcard disk file specification. When converting, transferring or purging (along with a few other utilities and functions), you may use a wildcard mask so all fields meeting the desired conditions (such as beginning with CRS or ending with /DAT) will receive the specified action.

The Convert utility (Model III only) now

allows you to convert a single file from a TRSDOS disk, or a select group of files, rather than the whole disk.

To make it easier to remember which files are desired, it is now possible to read the directory of a TRSDOS disk from DOSPLUS.

The new command, CAT (catalog), produces a short directory of a disk (including TRSDOS disks, if specified) showing just the file names and extensions. This is handy if you don't want to wade through all the information that the normal directory gives.

Finally, DOSPLUS 3.4 allows you to save certain system parameters and make them a permanent part of the operating system. In DOSPLUS 3.3 you used the Forms and RS-232 interface parameters, respectively, but it was necessary to reenter these parameters each time you booted the system. In DOSPLUS 3.3 you used the Forms and RS-232 commands to set printer and RS-232 interface parameters, respectively. But it was necessary to reenter these parameters each time you booted the system. Under DOSPLUS 3.4 these parameters may be saved to disk, so the system will always boot up in the desired configuration. The Forms command also has the new option of configuring the printer driver specifically for the popular Epson MX-80 printer so that it will print TRS-80 graphics without sacrificing its other capabilities.

Other new features include the following: The last DOS command typed may be repeated without retyping by entering a slash. You can set the top of memory (HIMEM) from DOS using the clear command. Eight-inch drives are now supported, although appropriate controller hardware is necessary. The new tape utility transfers machine-language programs from tape to disk, allowing relocation and attaching an appendage where necessary to disable DOS upon program load.

There are two significant new additions

to Basic. The first is the INPUT@ command, which vastly improves input formatting. Using this command, you can place the input question anywhere on the screen, and more importantly, you can specify input field lengths so the input string will not overflow the desired length. For example, a program to store names and addresses might have a 15-character address field; using INPUT@128, "Enter the address:", 15, "\$";AD\$ would put an underline on the screen 15 units long, and would not accept any more than 15 characters. In fact, you have the option of directing the program to return as soon as the specified number of characters has been entered, even before enter is pressed. You can also tell it to accept only numeric input.

The other new Basic command is CMD"O", an array sorting utility. Its syntax is compatible with CMD"O" in Model III TRSDOS, but it is far more flexible. It sorts numeric as well as string arrays in ascending or descending order, and will sort other arrays in conjunction with the main array, as either key or tag arrays. For example, a mailing-list program might need all names and addresses sorted by zip code, with the names sorted alphabetically within any given zip-code group. The zip array would be the primary key array, with last names being a secondary key array, and first names and addresses being two tag arrays that would be sorted along with the key arrays. Even with all its flexibility, it is extremely fast. A 1,000-element string array and a 1,000-element numeric tag array will be sorted in about 15 seconds.

The manual is vastly improved. The manual no longer lists only the differences between DOSPLUS and TRSDOS; it now explains everything and gives plenty of examples. It also includes a 42-page technical section detailing the available DOSPLUS system calls.

Drawbacks

There are a few drawbacks to DOSPLUS 3.4. The authors have reverted to the ROM screen printer in the Model III version (in the interest of saving space), which means that graphics will not be sent to the printer. Diskzap, the disk editor, is not set up under the cylinder concept. To examine the back side of a disk you must ask for drive 0B—a fact not mentioned at all in the manual. Unfortunately, the price of DOSPLUS 3.4 has risen with its new capability: DOSPLUS 3.4 costs about \$150, putting it in the same price category as NEWDOS80 and LDOS, thus removing one of the arguments in its favor.

All these new features, along with all the old DOSPLUS 3.3 strong points, such as complete Model I to Model III compatibility, automatic density recognition, variable-save option when chaining programs, all DOS commands available from Basic, print spooling, Basic shorthand commands, Diskzap, and so on, combine with its tremendous speed and ease of use to make it one of the best operating systems available for the TRS-80. ■

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