SpartaDOS TOOL KIT

ICD

SpartaDOS ToolKit

Professional Tools for
the Most Powerful 8-Bit
Disk Operating System

by ICD

For further information on this system contact ICD, Inc. at 815-968-2228 voice or 815-968-2229 BBS.

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INTRODUCTION

This is an incredible collection of new, unreleased utilities written for all SpartaDOS versions. These are solid tools all written by the professional programmers at ICD. (A few utilities may not be applicable to the older SpartaDOS versions.) SpartaDOS ToolKit is a must for any serious SpartaDOS user. SpartaDOS ToolKit will help you get the most power out of SpartaDOS — the most powerful DOS for 8-bit Ataris!

The included tools are:

RENDIR Rename subdirectories.

VDEL Verify delete (prompts you to delete a file or not).

WHEREIS Find a filename fast (full or partial) anywhere on your drives.

MIOCFG Save and reload MIO configurations.

SORTDIR Sort directories by name, extension, size and date.

DISKRX The SpartaDOS disk editor — edit sectors, trace files or sector maps in any density, rebuild directories, etc. Powerful!

CLEANUP Detects SpartaDOS file structure defects; allows rebuilding of directory structure.

DOSMENU A SpartaDOS menu for Atari DOS 2 lovers (painful for command processor lovers).

PROKEY Adds 20 'pf' (programmable function) keys, path prompt, screen color change, IBM style recall console keys, and more to SpartaDOS.

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RENDIR

Purpose This is a simple external command to rename SpartaDOS subdirectory names. Only the directory name is changed; there is no effect on the contents of the directory.

Syntax RENDIR [Dn:][path>]oldname newname

Description "Oldname" and "newname" may include extentions as desired. RENDIR only allows valid SpartaDOS filename characters. No wildcards are allowed. RENDIR is not case sensitive; lowercase is converted to uppercase and inverse is converted to non-inverse.

VDEL

Purpose This is a simple command which prompts you whether or not the file should be deleted.

Syntax VDEL [Dn:][path>]filename.ext

Description The "filename.ext" will usually include or be replaced with wildcards. That is when VDEL becomes most powerful. It will find any filename matches, display each one, and prompt you for a 'Y' or 'N' to delete or not. <ESC> is also an option if you want to quit the procedure. At the end of the process, a message appears reporting the number of files deleted.

WHEREIS

Purpose To quickly find a filename (full or partial) anywhere on your drives.

This becomes especially useful on a hard disk with multiple partitions or any disk with subdirectories. WHEREIS can search all directories on all drives for filename matches.

Syntax WHEREIS [Dn:]filename.ext [/D]

Options D Display filesize and time/date with each file found.

Description The "filename.ext" may include wildcards as desired. Any and all matches found will be displayed with the full path from the root directory to the filename match. The number of matches found will be displayed at the end of the search.

Specifying the optional drive number "Dn:" will limit the search to that specific drive, otherwise, all drives will be checked.

The optional 'D' parameter will display the matching filenames as in the SpartaDOS long form directory so you can see bytes, date, and time, for each file.

MIOCFG

Purpose To save and reload Multi I/O configurations.

Multi I/O configurations may be saved as files and then reloaded as desired. This is especially useful for Multi I/O owners without hard drives since they previously had no means to save a configuration. Alternate configurations may also be loaded as a quick alternative to manually changing the menu screens.

Syntax MIOCFG [Dn:][path>]filename.ext [/SLN]

Options

S Save Configuration File.

L Load Configuration File (formats the Multi I/O RamDisks).

LN Load Configuration File — Do not format.

Description The "filename.ext" may include wildcards as desired. The first match will be used. The 'S', 'L', or 'LN' parameter is required and selects the mode of operation. Like most other SpartaDOS commands with '/' parameters, a space is required between the end of the filename and the '/' character. (COPY with '/A' APPEND is the only SpartaDOS exception.) All Multi I/O configuration menu selections are saved in a file with the 'S' parameter.

When the file is reloaded using the 'L' mode, all MENU defaults are set up according to the file loaded. The Multi I/O RamDisks are then automatically reformatted using the default SpartaDOS type double density format.

When the file is reloaded using the 'LN' mode, no format is executed. This mode should not be used if the RamDisk starting and ending sectors will be changed.

SORTDIR

Purpose To sort directories by name, extension, date, or size.

Directories can now be sorted quickly and safely! SORTDIR will quickly read the directory specified, sort it according to the mode selected, and rewrite the directory in sorted order. Forward and reverse sorts are supported as well as double priorities in all modes (e.g. TIME is a second priority to DATE when the '/D' mode is selected).

Syntax SORTDIR [Dn:][path] [/NTSDX]

Options

N	Sort by Filename
T	Sort by File Type
S	Sort by File Size
D	Sort by Creation Date
X	Reverse Sort (include with other modes)

Description SORTDIR may be entered with the optional drive specifier but must include at least one of the mode parameters. If no mode parameter is specified, the list of parameters and meanings is displayed. A second parameter 'X' may be included for a reverse (descending) sort. "Sort Completed!" is printed when the sort is finished.

When sorting by name, type (".ext") is the second priority. When sorting by type, name is the second priority. When sorting by date, time is the second priority. When sorting by size, filename is second priority with type as third priority. Numbers come before letters in sort order. Specifying the path will allow you to sort any directory on any drive from any other directory. Path, along with a simple batch file, will allow you to sort multiple directories easily.

DOSMENU

Purpose A SpartaDOS menu for Atari DOS 2 lovers

Syntax DOSMENU

Description This is a painless way for Atari DOS 2.0 or 2.5 addicts to use SpartaDOS. DOSMENU is a Command Menu for SpartaDOS which loads in and replaces the Command Processor user interface. DOSMENU does take up some user RAM so some programs may not be compatible with it. (Press 'Y' then MEM to find out where MEMLO is.) Wildcards are supported by most commands. Either a comma or a space may be used as the delimiter when using Copy, Rename, etc. A sample menu display is shown below.

```
Directory:  1-8 (Long), !-@ (Short)

A. Disk Directory    L. Binary Load
B. Run Cartridge     M. Run At Address
C. Copy File         O. Make Directory
D. Delete File       P. Pick Directory
E. Rename File       Q. Kill Directory
F. Lock File         T. Printer: Off
G. Unlock File       V. View File
I. Format (Sparta)   X. Disk Info
J. Duplicate Disk    Y. Do DOS Command
K. Binary Save       Z. Reboot System

Enter Command or Return For Menu: !
```

Notes The "Format" command loads the SpartaDOS XINIT.COM file, so it must be on disk if you are going to format.

The "Duplicate Disk" selection requires DUPDSK.COM. DUPDSK requires disks to be preformatted in matching densities (source and destination).

Most of the selections are XIOs of internal SpartaDOS commands.

PROKEY

Purpose This command shell adds 20 "pf" (programmable function) keys, path prompt, screen color change, IBM style recall console keys, and more to SpartaDOS.

Syntax PROKEY

Description PROKEY.COM loads in and supports the SpartaDOS command processor with the following extra commands and features.

PF Keys The programmable function keys are used by holding down the control key and the appropriate number key (<CTRL><number key>). A second bank is selected by the addition of the <SHIFT> key (<CTRL><SHIFT><number key>). These keys are programmed by typing "PFn string" (where "n" is the number and "string" is the string of characters to be stored in the function key). Valid "PF" numbers are 1-20. There may be up to 20 characters in the string. Use the '@' character at the end of a string to execute a <RETURN>.

CLPF Clears all 'pf' keys.

PROKEY.BAT Batch files are a natural way to load the PF keys. Upon initialization, PROKEY looks for a file called PROKEY.BAT. You can keep alternate sets of keys stored for use with ACTION!, BASIC, etc. (See our example batch files.)

<CTRL> S If PF1 is loaded, <CTRL> S replaces its toggle function to start and stop scrolling.

<CTRL> C If PF3 is loaded, <CTRL> C replaces its normal function (end of file indicator).

BELL The BELL command has been added to replace the normal <CTRL> 2 function. (You would use this in batch files as a warning indicator, etc.)

Screen Color Entering either "BLACK", "GREEN", or "BLUE", will change your display color which may help make it more readable. (Helps on monochrome also.) We prefer "BLACK" for good resolution on our inexpensive monochrome monitors.

COLD or EXIT The commands "COLD" and "EXIT" just do a "cold start" of your computer system. This is the same as typing in "RUN E477" which many of you already know. A cold start is about the same as turning the power off and on to your computer except for two distinct differences.

- There is no waiting required on an expanded memory XL for the RAM chips to bleed down and lose their memory.
- The internal RAMDISK data is still there. You can get at it by RD.COM with the "no format" parameter.

HELP or ? The commands "HELP" and "?" give you a brief help menu with a list of the available commands and/or features.

PATH This is similar to the "PROMPT" command in MSDOS. "PATH ON" or "PATH OFF" are the two valid commands. With "PATH ON", the directory path is displayed as part of the "Dn:" prompt. After every <RETURN>, a "?DIR" type query is done through SpartaDOS, the drive is read, and the path displayed.

IBM Mode If IBM mode is on ("IBM ON"), PROKEY will emulate the use of cursor keys like MS-DOS does. Each keypress operates on the "last line buffer"; that is, the last command line that you entered into PROKEY. To turn IBM mode off, type "IBM OFF".

These special editing keys are as follows:

<Right arrow> The right arrow key will pull the next character from the last line buffer and place it into the current line.

<Left arrow> Will backspace one position (identical to the <BackSpace> key).

PROKEY (continued)

<CTRL><Insert> Will place you into "insert mode". All keypresses will be processed without advancing the last line buffer's index.

<CTRL><Delete> Will advance the last line buffer's index, thereby "deleting" characters from the last line buffer (NOT the current line!).

<START> Will repeat the remaining characters in the last line buffer. If you are in the first position of the input line, pressing <START> will repeat the entire last line.

<SELECT> Works like the <START> key, except that the next word only is pulled from the last line buffer.

<SHIFT><Delete> The <Shift><Delete> key will erase the entire current input line, placing the cursor back in the first position of the line.

Example of using IBM mode As an example, let's say that the last command line executed looked like this:

COPY D1:DOS>PROKEY.COM D3:PROKEY.*

Now, let's assume that you also need to copy the PROKEY.DOC file, too. Instead of keying in the entire line again, just do this:

- hit the right arrow key 21 times
- key in DOC
- press the <START> key

CLS The command "CLS" takes the place of the <SHIFT><CLR> (clear screen) function which is lost with "IBM ON" command mode.

DISKRX

Purpose Edit sectors, trace files or sector maps in any density, rebuild directories, etc.

DiskRx is the ICD SpartaDOS sector editor. Most of its functions are for SpartaDOS disks, however, it can also be used as a basic read/write editor for non-SpartaDOS disks.

DiskRx operates in two modes: Disk mode and File mode. File mode may be used on SpartaDOS disks only. In Disk mode, the sectors of any disk are accessible sequentially or by random access (sector number). In File mode, only those data sectors belonging to the specified file may be viewed.

Syntax (1) DISKRX

(2) DISKRX Dn:

(3) DISKRX [Dn:][path>]filename.ext

Options Option 1 will prompt you to select a drive. Option 2 selects the drive specified. These two options begin in Disk mode. Option 3 begins in File mode referencing the file specified, if found; otherwise it begins in Disk mode with the drive that was specified in the filename. If "Dn:" was not specified it is assumed to be the default drive (the drive number in the DOS prompt). It is not necessary to specify a path name; DiskRx will find the first occurrence of a file unless a path is given.

Description Once DiskRx is finished loading, the Main Screen is displayed. At the bottom of the screen is a line showing how to get to the Menu or exit the program. Above that is the prompt line where various messages are displayed. The information area seen above the prompt line shows the current mode, drive number or file name, sector number, sector type, bytes/sector, whether or not the disk is a SpartaDOS disk, and whether or not the current sector is allocated in the SpartaDOS bitmap. If in File mode, the first sector map, first data sector, and index into the file of the current sector are also shown.

DISKRX (continued)

The sector type is represented by a four-letter abbreviation. Seven types are recognized:

- BOOT - sectors 1 through 3
- BMAP - bitmap sector
- DIRM - sector map of main directory
- MDIR - main directory
- SUBM - sector map of subdirectory
- SDIR - subdirectory
- DATA - all other sectors

Only BOOT and DATA are shown on non-SpartaDOS disks, or disks on which the directory tree cannot be mapped.

Bytes/sector (b/s) is 128 or 256. SpartaDOS disks show a 'Y' in the 'sparta' field. The bitmap allocation of a sector on a SpartaDOS disk is shown in "alloc" by a 'Y' or 'N'.

Above the information area is the data area. Two fields are displayed; the bytes in the current sector are shown on the left in their HEX form and on the right as ATASCII characters. At the far left side of the HEX field the byte index is shown. This ranges from "00:" to "F8:" (for 256 byte sectors) or from "00:" to "78:" for 128 byte sectors. Eight bytes are shown in each row across the display. 128 byte sectors are displayed entirely on one screen and 256 byte sectors occupy two separate screens. Press '>' to view the second half of a 256 byte sector; '<' returns to the first half.

Two Menu screens are available which show the available commands. Once familiar with the program, you should not need these.

You will find DiskRx easy to use. In most cases, prompts will guide you to the next step.

The following commands are valid from the prompt cursor:

(A) Arithmetic conversion Converts decimal, HEX, and binary numbers. Default is decimal; to indicate binary enter a 'B' and to indicate a HEX number use either 'H' or '$'. Press <RETURN> or <SPACE> after entering the first number, then enter 'D' (decimal), 'B' (binary), or 'H' or '$' (HEX) indicating the desired conversion. Trivial conversions, i.e. binary to binary, are ignored.

(B) Blank sector Blank sector in the buffer which may then be edited and written if so desired.

(C) Change disk Change disk, drive, or mode. When editing a SpartaDOS disk, 'C' forces a remapping of the directory tree; when rebuilding a damaged directory, use this command to see how well you are doing. If in File mode, 'C' forces a change to Disk mode. You may enter '1' through '8' to select a drive, or indicate the default drive by a <SPACE> or <RETURN>. The default is the drive shown in the DOS prompt.

(D) Directory Valid only on SpartaDOS disks, it will display all directory entries on a disk whether or not they are presently valid or in use. Optionally, a subdirectory path may be selected. Note that in DiskRx, all path names begin at the Main directory. The directory display shows:

- the full name of the file and its size
- the present status of the entry
- the first sector map of the file
- the sector(s) where the entry is actually written

The status codes are displayed on the screen bottom. If a path was specified, it is shown near the top of the page. Some of the status options shown are not valid under Spartados 3.2 or earlier, but will be in effect with the SpartaDOS X cartridge; these are Archive, Hidden, and Open.

DISKRX (continued)

(EA) Edit ATASCII & (EH) Edit HEX The cursor is positioned in the ATASCII or HEX fields of the current sector. The arrow keys are used to move the cursor to the desired position; editing is terminated by the <ESC> key. If editing the HEX field, only '0' through 'F' may be entered; in ATASCII edit, all characters may be entered except the cursor movement and <ESC> characters. To enter these characters, move to the HEX field and enter the HEX equivalents. Note that the sector display is instantly updated, and all characters changed are highlighted in the HEX field. To terminate Edit, press <ESC>. Note that changes are not permanent until the sector is written with a 'W' command.

(F) File mode Either specify a file name (optionally with a subdirectory path) or leave file mode by pressing <ESC> or <RETURN>. You can also use the 'F' key to change drive numbers by entering only 'Dn:'.

A path is assumed to begin at the main directory. Paths are not shown on the information field as there is not sufficient room. Note that the program will find a file without a path name; you need to specify the path only in the case of multiple copies of the same file on the current disk. You can list all occurrences of a file with the directory command. Due to space limitations in the prompt line, only 38 characters may be used to show a path/file name. Use '*' abbreviations to access longer path names.

If a "Dn:" is not specified in the file name, the currently selected drive is used. You may also view the sectors of any directory by typing the directory name. The Main directory is referenced by the name "MAIN". A file may only be rewritten on sectors already allocated.

(H) HEX This command toggles the numbers in the information and prompt fields between HEX and decimal display.

(M) Menu In Menu, change page with 'P' and exit with <ESC>. All commands may be run from the menu and all but 'H', 'P', and <CTRL>'P' will get you out of the Menu to the appropriate screen and command.

(O) Override parameters Useful in disk recovery where the first sector has been damaged and the basic status of the disks is not readable or is incorrect. Use some caution as you may get in trouble by injudicious use of override. You can change:

- SpartaDOS status
- maximum disk sectors
- bytes/sector
- disk write locked parameters

Optionally, these parameters may be rewritten to sector 1, assuming that it is not a bad sector.

(QP) Quit Quit DiskRx and re-enter DOS.

(R) Read Sector Read a sector from diskette. You have three options:

- R Read next sector in sequence
- R n Read sector number "n"
- R L Read Last sector

In Disk mode, the "raw" sector number is specified. In File mode, the sector number relative to the beginning of the file is specified.

(SH) Search HEX & (SA) Search ASCII Search from the current sector through last sector of either the disk or file (depending on current mode) for a sequence of bytes. Wildcard or unknown characters may be specified by a '?' in the character sequence entered. The search string may be up to 18 bytes in length. If a match is found, the sector is shown and the index into the sector where the string begins is printed in the prompt field. You are also asked if you want to continue the search. The ESC key will terminate the search at any time.

(T) Toggle allocation Allocates/deallocates current sector in the SpartaDOS bitmap.

DISKRX (continued)

(W) Write Sector Write displayed sector to disk. You have two options:

- W Write data to the current sector
- W n Write data to sector number "n"

In Disk mode, the "raw" sector number is specified. In File mode, the sector number relative to the beginning of the file is specified.

(>) Read next & (<) Read previous Read next (or previous) sector of file or disk. If 256 bytes/sector, read either the alternate half of the sector or the first half of the next (or last half of the previous) sector. If 128 b/s, or in sectors 1 - 3, read the next (or previous) sector.

When examining a sparse file (one in which not all sectors have been actually allocated), any such sectors will show a blank sector in the data field , and "Sector not allocated" will be displayed. No file index, bitmap allocation, or sector number will be shown in this case.

(+) Scan forward & (-) Scan backward Quick scan forward (or backward), until end (or beginning) of disk or file, or until a key is pressed. In File mode, only allocated sectors are displayed.

(1) Recover Write tagged sectors to a file on another disk. Useful in file recovery. After locating the desired data, tag the sector with <SPACE> to write it to the new file specified. A sector may not be written more than once. Terminate the function and close the file with a '1' or by leaving the program. Note that the new file is written only to a different drive, because the main use of this function is in recovering text or data from a disk with a severely damaged directory.

(2) Recover Point to a sector map and write a file to another disk from the map. Again, this is useful when a directory has been destroyed.

(3) Recover Create a new directory entry from a sector map. The name and optional path are entered. The new entry is always written at the end of the directory chosen; remember that a SpartaDOS directory may have a maximum of 127 entries (this limitation does not apply to SpartaDOS X). The new entry is given a status of "in use" and you must modify this if wanting to protect it, create a subdirectory, etc. The current system time/date is used. The end of the directory is denoted by a status byte of zero. This function writes at that point, so if you want a directory entry at a certain place, use the edit function to put a zero in the correct position. *See the SpartaDOS manual Chapter 19 for more detail.*

(4) Recover Write the current contents of the main buffer to any sector of any disk. This is most useful if you have a bad sector one on a disk. You can get a good copy from another SpartaDOS disk and use this command to write it to the faulty disk. Then you can edit the disk parameters in your new sector one as required for the target disk. Another possible use is capturing system sectors in a file for study or modification. *See SpartaDOS manual chapter 19 for further details.*

<CTRL> P toggles the printer on and off. Only sector reads and directories are printed. If a printer is not on line, this menu option won't be displayed.

<ESC> <ESC> is the general purpose get-out and terminate command. You leave the Menu, Override, and Directory screens and the Edit function with this key. It will also get you out of any place you don't want to be (within reason).

Other DiskRx Notes Two types of error messages are used in DiskRx. The message "Disk error# [num] at sector [num]" refers to errors on the disk being edited. Usually this will be either an error 138, for a drive not on line or door open, or an error 144 for a bad sector. The message "System Error# [num]" refers to an error detected from SpartaDOS and would almost always occur either when using File Recovery functions 1 and 2 to write to another disk, or when specifying a file name with a directory path.

DISKRX (continued)

When editing a non-SpartaDOS disk, only Disk mode is valid. The 'D', 'F', 'T', '2', '3' commands may not be used.

Upon entering the program, mapping of the disk directory tree is attempted. If the program appears to be locked or running wild, press <ESC> to exit. The directory will not be mapped and only BOOT and DATA sectors will be displayed. The usual reason for this condition is a messed-up bitmap or directory sector map.

Similarly, upon entering File mode, mapping of the file is attempted. Again, <ESC> terminates this if it appears unsuccessful. The main reason is generally a scrambled file sector map.

If the boot sectors are damaged, the program may not be able to determine the disk status. The message "Unable to read boot sector" will be shown. You can then press <ESC> at the next drive prompt and use Override (O) to gain access to the disk.

The edit functions are used to repair damage. The file recovery functions can be used to retrieve "lost" data or rebuild a directory from scratch by locating all the sector maps in a manual search. You can also use the program to "patch" any file, customize prompts, etc.

Study the SpartaDOS manual carefully for a complete explanation of the structure of a SpartaDOS disk, and use DiskRx to explore a good disk. This knowledge will enable you to rebuild or recover your trashed disks!

CLEANUP

Purpose This program detects file structure defects on a SpartaDOS disk and alerts the user to their existence. In some cases, the user is able to correct the defects with CLEANUP. In other cases DiskRx, the ICD Sector Editor, will be required.

Syntax CLEANUP Dn: [/P]

Options P Echo CLEANUP's output to printer

Description "Dn:" represents the drive you want to inspect/correct. Optionally you may specify a "/P" from the command line to get the program's output echoed to the printer.

At any time when you are asked by CLEANUP if it is OK to do something, respond with the 'Y' key for "yes" and any other key for "no".

CLEANUP first attempts to map the entire directory structure on the disk. During this process, it reports back on several types of findings:

(1) files or directories with invalid file name characters. This is a non-fatal, but often annoying, defect, as you will not be able to access these files.

(2) files with a first sector map of $0000. This is a non-fatal defect.

(3) files with a non-zero, non-valid sector map chain. This is a fatal type of defect in that if such a file is erased from DOS, a number of other files will be corrupted. The data will still be present, but some of the sectors will have been deallocated. If a disk write is subsequently performed, the good data will have been overwritten.

(4) files which, under SpartaDOS X, were opened for write/update and never properly closed. This is a fatal type of defect because the data in these files is not valid.

CLEANUP (continued)

(5) directories with an incorrect length. This is a non-fatal error, but should be corrected, as SpartaDOS does use this information to test for end-of-directory.

If any flaws of types 2 through 4 are detected, you will be given the opportunity to mark the file as deleted. This means that the directory entry is marked "erased" although the sectors are not deallocated as when erasing in DOS.

If a flaw of type 5 is detected, you will be given the opportunity to have CLEANUP correct it.

At the end of the mapping process, the total number of valid files and directories is reported.

Once the directory has been mapped, CLEANUP constructs a new bitmap of the drive. In a bitmap, each bit corresponds to one sector on the disk. If a bit is set ('1') the sector is not allocated. If it is clear ('0') the sector is allocated to a file, directory, bitmap, or boot sector.

During the process of building a bitmap, if any sector is claimed by more than one file or directory, a collision has occurred. In this case, all the files claiming the sector are shown and you will be given the opportunity to mark one as deleted. If one is so marked, the mapping process starts over. If you choose not to mark one deleted, the program regards this as a fatal type of error, because erasing one of the files may erase valid data actually belonging to the other file(s).

In some cases you may be able to decide which file or directory to keep, by its name, or time/date stamp. Certainly, in many cases, it will be necessary to merely make a note of the names and use DiskRx to inspect each file before deciding which one to keep.

The mapping process and collision deletion continues until all collisions have either been resolved or ignored.

CLEANUP then compares the new bitmap with the drive's present bitmap. If any differences are found, you are asked if it is OK to print out a report. If your answer is 'Y', a report of the differences is displayed in the following format:

```
Bitmap   Byte   Bit(s)        Disk Sector
-------------------------------------
$0004    $01    1,3,4           $0008
                                 $000A
                                 $000B
```

Explanation The difference was detected in bitmap sector 4, which is usually the first sector of the bitmap. The difference was found in the second byte of the sector (the first byte is $00). Bits 1, 3, and 4 differed from the original bitmap (bit 1 is the high order bit). The corresponding sectors on the disk are 8, 10, and 11.

CLEANUP then compares the new number of free sectors with the disk's original number. If there is a difference, it is reported.

If any fatal errors found have been resolved, you are given the opportunity to write both the bitmap and the number of free sectors permanently on the disk.

Finally, a series of cautionary messages may appear depending on the sort of errors found and (in the case of fatal errors) left unresolved.

CLEANUP will be most useful on hard disks with a large number of files — which sometimes become corrupted in one or more of the above ways. Such corruption is often due to such things as power failures or surges while using the disk, or pressing <RESET> while in the midst of a disk write.

Another possible cause is an untested or faulty program running wild! Programmers, note that it is usually recommended that you test new programs on a RamDisk or a floppy until you are satisfied with their performance. Having your latest masterpiece trash your hard drive is guaranteed to start the day off wrong.

CLEANUP (continued)

One last caution — there are certain 'buggy' public domain programs, "pirated" programs, and programs infected with a computer "virus", available which are guaranteed to send your SpartaDOS disk to never-never land! When using an untested program for the first time, it is advisable to disconnect your hard drive. If you forget, it will probably be possible to use DISKRX and CLEANUP to reconstruct most of the disk — at the expense of several hours of painstaking work.