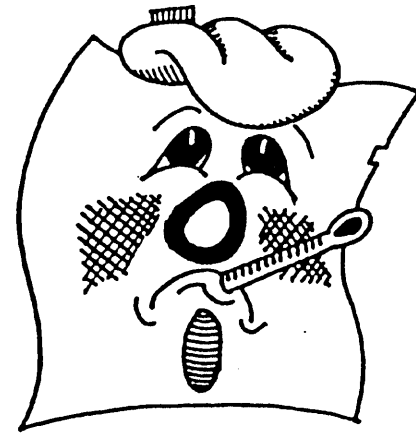


THE

ZAPPER



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DISCLAIMER

Although this software package is designed to prevent the accidental loss of data, the deleting of important files is still possible.

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WARNING:

This software can be very dangerous if used improperly. Before using this program on ANY disk, first make a BACKUP!

The Zapper

Release 1.00

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INTRODUCTION

The Zapper is a utility that allows you to patch files as well as entire disks directly. The Zapper displays your file or disk in a format similar to the dump command that comes with OS9. You can then directly edit the file or disk in either hexadecimal or ASCII.

The biggest use of this product will come with patching commands. No longer will you have to load the command, patch it in memory, fix the CRC, and finally save it back to disk. All of this can be taken care of directly from The Zapper.

Another important use of this program will be the patching of 'crashed' disks. The Zapper has a special search command that will help you find lost text. You can then use The Zapper's save command to retrieve the lost information.

The Zapper can also be used to retrieve previously deleted files. When a file is deleted it is not completely removed from the disk. This allows you to retrieve the deleted file if the space that it occupies has not been taken by another file.

If The Zapper is used properly and carefully it will prove to be a very useful tool. I must stress that This program be used very carefully. It is possible to damage the file structure of your disk with this utility, leaving your disk useless. You should always make a backup of the file or disk that you use The Zapper on before you begin.

OVERVIEW

The Zapper is relatively easy to use. To run the program simply type:

Zapper <pathname>

Where <pathname> is either a pathlist to a file on disk, or a device name. If you specify a device name, The Zapper will display extra information (tracks & sectors) that are useful when working on disks. If you specify a file this information will not be displayed.

Once the program is run, it will display the file or disk on the screen one sector at a time. Other sectors can be accessed with the arrow keys etc. The sector can then be edited and re-written.

Help can be obtained by pressing '?'. A menu window will then be displayed with all possible options.

INSTALLATION

REQUIREMENTS

Radio Shack Color Computer with at least 64k of memory
At least one disk drive
OS9 Level I or II

MAKE A BACKUP

The first thing that you should do when you receive your software package is make a backup. To do this follow these steps:

- 1> Get a new blank diskette.
- 2> Format the new diskette (Format /d0).
- 3> Backup the Zapper diskette (Backup /d0 #40k).

COPY THE ZAPPER TO YOUR WORKING DISKETTE

Once you have a backup of the Zapper diskette, you are ready to copy The Zapper to your working OS9 disk. To do this follow these steps:

(for users with two disk drives)

- 1> Place your Zapper disk in drive 1.
- 2> Place your OS9 disk in drive 0.
- 3> If you are using OS9 Level II and want the 80 column version type:
Copy /d1/Zapper_80 /d0/cmds/Zapper
- If you are using OS9 Level I or you want the 32 column version type:
Copy /d1/Zapper_32 /d0/cmds/Zapper

(for users with a hard drive)

- 1> Place your Zapper disk in drive 0
- 2> If you are using OS9 Level II and want the 80 column version type:
Copy /d0/Zapper_80 /h0/cmds/Zapper

If you are using OS9 Level I or you want the 32
column version type:

Copy /d0/Zapper_32 /h0/cmds/Zapper

(for users with one disk drive)

1> Place your Zapper disk in drive 0

2> If you are using OS9 Level II and want the 80
column version type:

Copy -s /d0/Zapper_80 /d0/cmds/Zapper #40k

If you are using OS9 Level I or you want the 32
column version type:

Copy -s /d0/Zapper_32 /d0/cmds/Zapper #40k

RUN ZAPPER

Once The Zapper is installed, you are ready to run it. To do this follow these
steps:

- 1> Place your working OS9 disk in drive 0.
- 2> Change your execution directory to drive 0 (CHX /d0/cmds)
- 3> Type: Zapper <pathname>
(pathname is either a device or file name)

SUMMARY OF COMMANDS

[UP][ARROW]

Move to the previous sector if using the 80 column version,
or to the previous 1/4 sector if using 32 column version.

[DOWN][ARROW]

Move to the next sector if using the 80 column version,
or to the next 1/4 sector if using 32 column version

[SHIFT][UP][ARROW]

Move to the previous track (if editing a disk)

[SHIFT][DOWN][ARROW]

Move to the next track (if editing a disk)

[+]

Move forward n sectors. The Zapper will prompt you for the
number of sectors to move.

[-]

Move backward n sectors. The Zapper will prompt you for the
number of sectors to move.

[G]

Go to sector n. The Zapper will prompt you to enter the
Logical Sector number.

[F]

Find text. The Zapper will prompt you for the text to find.
It will then search from the current sector to the end of
the file or disk; unless you press a key, in which case it
will stop the search.

[M]

Change numeric mode. The Zapper will prompt you to enter
The new numeric mode to use. This will either be 'd' for
decimal, 'x' for hexadecimal, or 'o' for octal. The numeric
mode does not effect the hexadecimal sector display, this
will always be in hexadecimal.

[E]

Edit the sector. The Zapper will allow you to move about
either the hexadecimal display, or the ASCII display and
change information as you please. To change a hexadecimal
value, simply position the cursor on the number to change
and type the new number. To change an ASCII value, simply
position the cursor on the character to change and type the
new character. To move from the hexadecimal display to the
ASCII display press the [SHIFT][RIGHT] arrow key. To move
back to the hexadecimal display press the [SHIFT][LEFT]
arrow key. When you are finished editing the sector, simply
press the [ENTER] key. You will then be asked if you wish
to re-write the sector. If you want the changes you made to
be permanent, press 'Y'. The sector will then be re-written
to the disk, and the changes made permanent.

[S]

Save the sector. The Zapper will ask you for a file name in
which to save the sector. If you press [ENTER] without
entering a file name, the operation will abort. If the file
you specify already exists, the sector will be appended to
the end of the file. This allows you to put many sectors
onto a file to be edited later.

[Q]

Quit The Zapper and return to OS9

USING THE ZAPPER

THE DISPLAY

The Zapper's display is formatted for either an 80 column OS9 Level II window, or a 32 column text screen. On the top of the screen is a line with the following information:

Logical sector, Track, Sector, and numeric mode.

The Logical sector is the number of the current sector. A file or disk is organized in logical sectors. Logical sector numbers start at 0 and go to the end of the file or disk. Different size files and disks will have different sizes of logical sectors.

The track is the current track on the disk. This information is only given if a disk is being edited. This field is blank if editing a file. Tracks are rings on the disk device. Standard floppy disks have 35 tracks. Some disks have 40 or even 80 tracks. Hard disks can have any number of tracks.

The sector is the current sector on the disk. This information is also only given if a disk is being edited. This field will be blank when editing a file. Each track on a disk is divided into sectors. Standard floppy disks have 18 sectors on every track. Hard disks can have any number of sectors per track.

The numeric mode displays the current numeric mode. There are three possible numeric modes:

- x - Hexadecimal (default)
- d - Decimal
- o - Octal

Hexadecimal is the default because it is usually convenient use hexadecimal numbers when patching a file or disk. The mode can be changed by pressing the 'M' key. You will then be prompted to enter 'd', 'x', or 'o' for Decimal, Hexadecimal, or Octal respectively.

NOTE: The numeric mode does not effect the sector display, only numbers input on the command line.

After this information is displayed, the sector information is shown. On the left is the sector values in hexadecimal, on the right is the sector in ASCII. If you are using the 32 column (Level I) version, only 1/4 of the sector will be displayed at a time.

MOVING ABOUT A FILE OR DISK

To move around a file or disk, simply use the arrow keys. The up-arrow will go the previous sector. The down-arrow will go to the next sector. Shift up and down arrows move by track instead of sector if an entire disk is being edited.

You can jump forward or backward several sectors at a time by pressing '+' or '-'. You will then be asked how many sectors to jump. If it is possible to move that far, you will immediately jump the specified number of sectors.

If you know exactly what sector to go to, you can press the 'G' key. You will then be asked for the logical sector number to go to. If you enter a valid sector number, you will immediately jump to the specified sector.

Another way to move around is to search for text. If you don't know where something is, but you know what it is (text), you can find it quickly by pressing 'F'. You then enter the text to search for. If the text is found, the search will stop at that sector. The search will only be conducted forward, so if you want to search for more than one occurrence of the text it is possible. If you press any key during a search, the search will stop at the current sector.

EDITING A SECTOR

To edit a sector, simply go to the sector that needs to be edited and press 'E'. The cursor will then appear at the top of the screen in the hex display. You are now in hexadecimal edit mode. You can use the arrow keys to move up, down, left and right. If you want to change a value, simply position the cursor on top of that value and type the new value. If you want to edit the sector in ASCII simply press shift right arrow. The cursor will then move to the ASCII section, and you can edit the sector in ASCII. Pressing shift left arrow will return you to the hexadecimal mode. When you are finished editing press <ENTER>. You will then be asked if you want to rewrite the sector. If you answer no, any changes you made will not be permanent. If you specify yes the sector will be rewritten and the changes will be made permanent.

NOTE: Changes made in the ASCII mode will not appear in the hexadecimal section until the sector is rewritten. The same is true for the hexadecimal mode.

PATCHING COMMANDS

To patch commands using The Zapper is a fairly simple task. It takes the labor out of the job. If you have a patch script for modpatch it can easily be converted to Zapper commands. First, run The Zapper with the file name as a parameter (Zapper <filename>). Then, go to the specified location to change. To get to this location, look at the first two digits of the hexadecimal address to change, and enter this for the logical sector number in the [G] command. For example, if the modpatch script is 'C 09BC 0B 0C', press 'G' then enter '09' for the logical sector. That sector will then be displayed on the screen. If you are using the 32 column Level I version, you may have to press the [DOWN] arrow until the proper 1/4 of the sector is displayed. Press 'E' to edit the sector. Now press the [DOWN] arrow key until the number on the left corresponds with the next digit in the address ('B'). Now use the [RIGHT] arrow key to position the cursor under the number on top that corresponds to the last digit in the address ('C'). You should now be in the proper location. Verify this by checking that it is in fact a '0B'. If it is type '0C' and the address will change. If the next address in the script is '09BD' you can simply press the [RIGHT] arrow key and enter the new value for that address. When you are finished patching the sector, press [ENTER] and type 'Y' to the rewrite prompt. NOTE: If you patch a command file you will need to fix the CRC.

FIXING CRC'S

If you patch commands with The Zapper you will corrupt the module's CRC value. This can be fixed by pressing 'C'. If the file is a valid module, the CRC will be checked. If the CRC is bad you will be asked if you want to correct it. Type Y and the CRC will be fixed. This is very convenient when patches to commands are necessary.

SAVING SECTORS

If you wish to save the information in a sector to a file, press the 'S' key. You will then be asked for the name of the file to save the sector to. If the file you specify already exists, the sector will be appended to the end of the file. This can be used to save the information in previously deleted files quickly and easily. NOTE: The save command writes a NEW COPY of the sector, therefore it can be written to a different disk than the one being edited. The 32 column version only writes 1/4 of a sector at a time.

RECOVERING LOST FILES

One of the best uses of The Zapper is to recover lost or deleted files. To do this follow these steps:

- 1> Make a backup of the original disk (just in case).
- 2> Run The Zapper on the old disk (Zapper /d0)
- 3> Find some text that you know is in the file (F command).
- 4> Find the beginning of the file by pressing [UP] until you see the beginning of the file.
- 5> Save the file back to disk one sector by sector.
- 6> The file may not be in one place on the disk, in which case go back to step 3 but use text that is in the next portion of the file.
- 7> Quit The Zapper (Q command).
- 8> Edit the file and remove any excess junk that may have been added.

NOTE: All of the file may not be recoverable, but usually at least some will be.