

CIButil®

version 4.8

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CIButil®

CIButil® is a set of programs and commands, that ease up the daily utilisation of a PC.

The functionality of some of the commands and programs in CIButil®, are also included in DOS. The CIButil® versions is lesser and/or more flexible.

CIButil® contains commands and programs, with functionality similar to other available utility sets, as e.g. Norton Utilities and PCTools. CIButil® id not a competitor, but a suplement to such sets.

ORGANISING

For each program this manual contains:

- the name of the executable program or command
- brief function description
- definition of commandline parameters
- important notes on the use of the program or command

KONVENTIONER

CAPS

Words, that should be typed as shown, such as commandnames or fixed parameters, is shown in capital. The commands can of course be typed in lower case.

italic

Words, that should be replaced, is shown in italics, such as varibel parameters.

[]

Brackets notes optional parameters. The brackets is not to be entered.

|

?? xxx seperates mutaly exclusive options.

space

Seperates different commandline elements (can be omitted in some commands).

DEFINITIONS

application	Program with screendialog.
bytes	memory for one character.
driver	Program permanently installed in memory (also known as Resident program), usually without any userdialog. All CIButil® drivere can use UMB. e.g. KEYB.EXE in standard DOS is a driver.
drive	The letter identifying a hard- or floppydisk. Usually the driveletter should be followed by a collon (:)
file	Name of a file, including filetype. No wildcards allowed (cf. files)
files	Name identifying on or more files, wildcards * and ? allowed.
command	Program only temporarily present in memory during program execution. e.g. DOS BACKUP is a command.

parameter	Gives a command or a driver informations on how to act. User changable parameters are shown in italics, keywords in capitals.
path	Directoryname. Standard directory notation used: \ . ..
path-file	Path and file concatenated. Path could be omitted.
path-files	Path and files concatenated. Path could be omitted.
defaultvalue	The value used if a parameter is omitted.
on/off	Semi-resident program. Program permanent in memory, but removable by a second call of same program. The program can be loaded an unloaded repeatedly as needed. If a resident program is loaded after start of an on/off program, it might not be removed, or might not be removed completely.

Notations

The commandline reference manual is constructed with one program per page. Usually an example are also included.

The program and parameter descriptions are on left-pages. The examples on the right. In some of the examples the screenoutput are reduced. This is indicated by ... and is used to display as much relevant information as possible

For a few programs, examples doesnt make much sense. In some cases the example are substituted by a more explicit explanation on how the program works. This can be rather technical, and is intended only for users with heavy experiance and knowledge of DOS and the cunstruction of different types of programs in DOS.

ACTIVECP

command

Display the active CODEPAGE.

ACTIVECP [*text*]

text the text to display with the CODEPAGE number. Defaultvalue is none, displaying only the CODEPAGE.

If *text* contains a # character, it will be substituted by the CODEPAGE number of the active CODEPAGE.

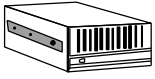


ACTIVECP needs DOS 3.30 or newer.

```
C:\>ACTIVECP AKTIVE CODEPAGE IS #  
AKTIVE CODEPAGE IS 437
```

ATBUSID

command



Returns identification from AT-bus (or IDE) harddisk.

ATBUSID [/R] [drive]

/R Show the text with words reversed
drive driveletter for disk to display informatiaon

Gives all the informations, the harddisc returns ababout itself. Theese informations includes number of tracks, sectors per track, type etc. The information is displayed.

Some of the informations are not fully standarized. And data might thus look scrambled. It is rather frequent to see the text displayed bytereversed i.e. "SUPERDISK " would be displayed as "USEPDRSI K". This can be compensated by the /R parameter.



If **ATBUSID** is used on a non AT-BUS harddisc, the machine or harddisk might halt. It might be nescesarry to reboot with **Ctrl** 5 **Alt** 6 **Esc** 7.

03D4 cylinders →
000F heads
0011 sectors/track

Model →

```
D:\>ATBUSID

CIBMAL. ATbusID 920401 by Eske Rahn
  Usage: ATbusID [/r]      /r : reverse textwords

Gen      045A
Phys    03D4 0000 000F 2596 0236 0011
Res.    0000 0000 0000
SNo.    "          00Z0149083"
Ctrl    0003 0040
ECC     000B
Firm    "04.04.02"
Modl    "ST9144A          "
IO      0008 0000
Reas    0000
Res.    "
          "

Log.    0000 0000 0000
Mode    0000
Phys    0000 0000 0000
Res.    "
...

```

ATCLOCK

commando

Read the time from the internal CMOS memmory to the DOS watch.

ATCLOCK

The program reads the time from the internal CMOS memmory. This timer runs independently of the DOS watch, and is usually more precise.

Can be used on machines where the DOS watch fails. A common course on newer machines is powersaving with reduced clockfrequence, this usally corrupts the timer. Could also be usefull on servers with large up-time periods.

Show DOS watch

```
C:\>TIME
Current time is 12.00.02,03
Enter new time:
```

Fetch CMOS watch to DOS

```
C:\>ATCLOCK
CIBMAL. ATclock 871101 by Eske Rahn
```

Show DOS watch again
The time is fixed

```
C:\>TIME
Current time is 13.52.02,11
Enter new time:
```

ATD

Command



List all harddisks, defined in BIOS.

ATD

ATD read the BIOS and make a list of all registered harddisktypes.

Is almost obsolete, with most newer machines.

Can be use to find the disktype, best fitting a physical disk.

The programmet can not display user defined types, since values are saved differnt in CMOS by differnet BIOS-variants.

D:\>ATD

Typ	Cyl	Head	PreC.	Land.	Sec	Mb	24	615	6	-----	615	26	47	
1	306	4	128	305	17	10	25	615	8	-----	615	17	41	
2	615	4	300	615	17	20	26	615	8	256	615	17	41	
C	3	615	6	300	615	17	31	27	965	10	-----	964	17	80
I	4	940	8	512	940	17	62	28	965	5	-----	964	17	40
B	5	940	6	512	940	17	47	29	814	9	-----	813	32	114
M	6	615	4	-----	615	17	20	30	968	10	-----	967	34	161
A	7	462	8	256	511	17	31	31	989	5	-----	989	17	41
L	8	733	5	-----	733	17	30	32	1020	15	-----	1024	17	127
9	900	15	-----	901	17	112	33	615	6	-----	665	17	31	
10	820	3	-----	820	17	20	34	980	5	-----	980	17	41	
11	855	5	-----	855	17	35	35	1024	9	1024	1024	17	77	
E	12	855	7	-----	855	17	50	36	1024	5	512	1024	17	43
s	13	306	8	128	319	17	20	37	830	10	-----	830	17	69
k	14	733	7	-----	733	17	43	38	823	10	256	824	17	68
e	15							39	615	4	128	664	17	20
16	612	4		663	17	20	40	615	8	128	664	17	41	
R	17	977	5	300	977	17	41	41	917	15	-----	918	17	114
a	18	977	7	-----	977	17	57	42	1023	15	-----	1024	17	127
h	19	1024	7	512	1023	17	60	43	823	10	512	823	17	68
n	20	733	5	300	732	17	30	44	820	6	-----	820	17	41
21	733	7	300	732	17	43	45	64	2	-----		16	1	
22	733	5	300	733	17	30	46	925	9	-----	925	17	69	
23	306	4		336	17	10	47	699	7	256	700	17	41	

ATSETUP

application

Change content of CMOS-RAM.


ATSETUP

The program prompts for register number and value, after entering register number, the current value would be displayed. The value could be kept or changed as needed. The program automatically generates standard checksums in CMOS if any changes are made.

The program demands that the user know the structure of the CMOS-RAM. Help is given for the initial fairly standardized part.



ATSETUP needs at least a 80186 CPU.

The program is ended by pressing  10. The machine will be booted to activate the new values.

```
D:\>ATSETUP
```

```
CIBMAL. ATsetup 920913 by Eske Rahn.
```

```
10 Floppys in halfbytes 0=none, 1=360, 2=1.2, 3=720, 4=1.44
```

```
12 Harddisk types in halfbytes 1-E
```

```
14 Bit 7-6 number of floppys-1 00=1 01=2
```

```
Bit 5-4 disp 00:ega? 01:40 10:80 11:mono
```

```
Bit 1 80?87 y/n ; Bit 0 any floppys y/n
```

```
15 Basememory low byte
```

```
16 Basememory high byte
```

```
17 Ext-memory low byte
```

```
18 Ext-memory high byte
```

```
19 Harddisk C
```

```
1A Harddisk D
```

```
2E High byte of checksum
```

```
2F Low byte of checksum
```

```
30 Ext-memory low byte
```

```
31 Ext-memory high byte
```

```
32 BCD century
```

```
33 Bit 7 128 ext y/n
```

```
Reg : _
```

BIOSDUMP

application

Copies the contents of the BIOS to two files.

BIOSDUMP [name.ext]

name.ext name of the files that should receive a copy of the BIOS. If no name entered, the program will prompt for it.

Copies the BIOS and saves it in two files. Can be used for editing and and production of a fixed BIOS. (make sure your licence agreement allow this !!)

Two files named *nameL.ext* og *nameH.ext*, containing respectively the low and high parts of each word in BIOS, will be generated.

Dump BIOS to files

```
C:\>BIOSDUMP BIOS.OLD
CIBMAL. BiosDump 871101 by Eske Rahn
```

Show the files

```
C:\>DIR BIOS*.*

Volume in drive C has no label
Directory of C:\

BIOSH  OLD      16384 24-09-92  13.56
BIOSL  OLD      16384 24-09-92  13.56
      2 file(s)      32768 bytes
                        2828288 bytes free
```




BOOT

Commando

Reboot the machine.

BOOT [! | !! | !!!]

! soft boot (usually not supported !!)

!! start as by  11  12  13

!!! the most complete boot possible by software. Alternatively press a reset button, or power of and on the machine.



Frequently non CIBMAL programs prevents **BOOT !** from working. Most utilities ignore the original IBM's specifications on this. Among others DOS5 have this bug !!.

Kald **BOOT**

```
C:\>BOOT !!!
```

Maskinen starter
som hvis den havde
været slukket

```
1024 KB OK  
...
```

CHKCLOCK

Command

Check, that the computerwatch have not been set back.

CHKCLOCK

CHKCLOCK read the machine watch, and check with the last known value, saved on last **CHKCLOCK** run. If the watch has been reset or set backwards, **CHKCLOCK** will prompt the user for actual time and date, to be entered using the arrows.



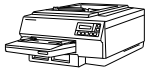
The **CHKCLOCK** should be placed in a `.BAT` file frequently executed, such as the `AUTOEXEC.BAT` or even better in conjunction with a menu system.

The command is suited for machines with faulty battery or for XT machines without a watch.

```
C:\>_
```

CHKPRN

driver



Check printer.

CHKPRN *printerno* *path-file*

path-file

The name of the file that might be copied to the printer

printerno

number, indicating the printerport, to survey. The number in LPTx:
e.g. 2 for LPT2:

CHKPRN is loaded resident, and survey the printer. If the printer is powered off and on **CHKPRN** will copy the file *file* to the printer. **CHKPRN** checks the printer approximately once a second.

The command can be used to assure that downloaded fonts, always are present in the printer, even after a powerdown.

```
C:\>_
```

CLEAN386

commando

Fix for 386MAX version 6.

DEVICE=[*path*]**CLEAN386.SYS**

path path where **CLEAN386** resides

After this command, DOS loadhigh and other UMB-demanding software would work with 386MAX version 6.0.



DEVICE=**CLEAN386.SYS** should be placed immediatly after the DEVICE=386MAX.SYS in the CONFIG.SYS file.


```
C:\>_
```

CLK
application

Change system watch, or file timestamp, using the arrows.

CLK [*file*]

file name of file to modify timestamp on.

If no file is entered, the DOS watch would be changed.

Easy way to adjust the current time/timestamp, using the arrowkeys.

Start CLK and exit

```
C:\>CLK
A Cibmal utility, use ←→↑↓
1992.09.24      14:03:12
```

Start CLK and change time and date the following keystrokes: ←↑→→↓

```
C:\>CLK
A Cibmal utility, use ←→↑↓
1992.10.24      13:03:12
```

show all TEST files

```
C:\>DIR TEST.*
...
TEST      TXT          19 07-10-92   10.30
...
```

note date and time

change date and time by CLK

```
C:\>CLK TEST.TXT
A Cibmal utility, use ←→↑↓
1992.10.07      11:25:00
```

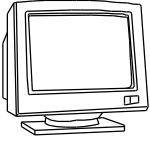
Show all test files again

```
C:\>dir test.txt
...
TEST      TXT          19 07-10-92   11.25
..
```

Date og time changed

CLR

commando



Clears the screen, and reset the screen mode.

CLR

Clears the screen, resetting screenattributes. Resets the screen to 80 characters, 25 lines with white text on black background. identical to **MODESET 03**.



The command works on *CGA*, *EGA*, *VGA* displayadapters.

CLR is usefull to fix a corrupt screen after a program not restoring the screen to a well defined mode.

The screen is in a weird mode
with large characters

```
C:\>CLR
```

The screen is reset to
standard mode

```
C:\>_
```

CMOS

commando

Display the content of the CMOS memmory.

CMOS

Read the contents of the CMOS memmory, and displays it in readable format.

```
C:\>CMOS
```

```
CIBMAL. Cmos reg view, 00 to 7F 920623 by Eske Rahn
```

```
39 00 21 00 09 00 04 24 09 92 26 02 50 80 00 00
40 00 20 00 03 80 02 00 05 0F 0F 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 08
00 05 19 80 00 00 00 00 00 00 00 00 00 00 00 00
01 02 00 01 0C 49 E3 00 18 42 E3 10 22 00 00 82
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 0E 00 00 00 00 80 00 00 00 02 6A
48 CD 13 7B 59 EF 00 6F 48 CD 13 7B 59 EF 0A 6B
```

COMSWAP

kommando

Swaps to serial ports.

COMSWAP *port1 port2*

port1 digit between 1 and 4, indicating a serial port

port2 digit between 1 and 4, indicating a serial port

Logically swaps to serial ports *comport1* og *comport2*.

COMSWAP can be used to logically swapping of two ports. Especially usefull with programs where it is difficult or impossible to select a port.



COMSWAP will not work with programs directly adresssing the hardware, bypassing the BIOS.

swap COM1: og COM2:

```
C:\>COMSSWAP 1 2
```

```
CIBMAL. ComSwap port 1 and port 2 swapped, 920913 by Eske Rahn
```

swap COM3: og COM4:

```
C:\>COMSSWAP 3 4
```

```
CIBMAL. ComSwap port 3 and port 4 swapped, 920913 by Eske Rahn
```

CONVERT

kommando

Convert an `ASCII` value by another in a file.

CONVERT *oldl new file*

file the name of the file wher characters are to be converted

old the `HEX`-value of the bytes, to be converted

new the `HEX`-value of the bytes after conversion

All bytes with `HEX`-value *old* will be converted too to bytes with `HEX`-value *new*.

Can be used to simple characterser conversion. e.g. national characters.



Note only one substitution is possible. If several values is to be changed this could be done using **CONVERT** with each valueset in a `.BAT` file.

```
C:\>TYPE TEST.TXT
Her er en fil, der indeholder et { som skulle være et æ

C:\>DEBUG TEST.TXT
-d100,13F
73D9:0100 48 65 72 20 65 72 20 65-6E 20 74 65 6B 73 74 20 Her er en tekst
73D9:0110 64 65 72 20 69 6E 64 65-68 6F 6C 64 65 72 20 65 der indeholder e
73D9:0120 74 20 7B 20 73 6F 6D 20-73 6B 75 6C 6C 65 20 76 t { som skulle v
73D9:0130 91 72 65 20 65 74 20 91-80 CF 01 81 CD 00 80 E8 .re et .....
-q

C:\>CONVERT 7B 91 TEST.TXT
CIBMAL. Convert 900914 by Eske Rahn

C:\>TYPE TEST.TXT
Her er en fil, der indeholder et æ som skulle være et æ
```

CURSSIZ

commando



Modify the cursorsize.

CURSSIZ *parameter*

parameter

two digits between 0 og 9. the first digit denotes the top line, the second the bottom line of the cursor.

On some displayadapters a recalculation of the parameters for top and bottom lines is performed..

Markøren er en _

Markør fra linie
0 til 9

Markør skiftet

```
C:\>_
```

```
C:\>CURSSIZ 09
```

```
C:\>█
```

CUT

commando

Copies part of a file.

CUT *file1 file2 +bytes/-bytes*

file1 name of sourcefile

file2 name of destinationfile

+bytes the number of bytes, to copy from the beginning of the file
(+ kan udelades)

-bytes the number of bytes to skip, copy the rest of the file

Copies part of *file1* to *file2*. *file1* is unchanged. If *file2* exist, it is overwritten.

Show testfile

```
C:\>TYPE TEST.FIL
```

```
XX - First 40 characters of the line - XXYX - This is the rest
```

Show the resulting file

```
C:\>CUT TEST.FIL TEST2.FIL 40
```

```
C:\>TYPE TEST2.FIL
```

```
XX - First 40 characters of the line - XX
```

Show the resulting file

```
C:\>CUT TEST.FIL TEST2.FIL -40
```

```
C:\>TYPE TEST2.FIL
```

```
YY - This is the rest
```

DDT

command



Disk datatransfer test.

DDT [*drive*]

drive driveletter of drive to test

Determines the speed, transferring data from the disk to memmory, using DOS. The result is displayed on the screen.

The program could be used to find the optimum configuration for a disk.

The speeds measured by DDT depends of the speed in DOS and BIOS, thus the same machine might yield differnt results in multiboot environment.



For some AT-BUS disks, where logically interpretation is possible, differnt interpretations would give differnt results. Typically interpretations with 32 or 48 sectors per track would give the best result. This is due to the internal structure of system and cache software. And usally yields better results than factory given values !!.

No diskcache

```
C:\>DDT C:
```

```
CIBMAL. Disk-Data-Transfer 920623 by Eske Rahn
```

Unique	Repeated	Blocksize
1324 Kb/s	2344 Kb/s	65024 b
1779 Kb/s	2351 Kb/s	32768 b
1751 Kb/s	2280 Kb/s	16384 b
1629 Kb/s	2115 Kb/s	8192 b
1443 Kb/s	1889 Kb/s	4096 b
1150 Kb/s	1577 Kb/s	2048 b
938 Kb/s	1186 Kb/s	1024 b
690 Kb/s	795 Kb/s	512 b

...

diskcache loaded

```
C:\>DDT C:
```

```
CIBMAL. Disk-Data-Transfer 920623 by Eske Rahn
```

Unique	Repeated	Blocksize
2482 Kb/s	17844 Kb/s	65024 b
1461 Kb/s	18043 Kb/s	32768 b
1991 Kb/s	15935 Kb/s	16384 b
1947 Kb/s	12882 Kb/s	8192 b
1192 Kb/s	9941 Kb/s	4096 b
1412 Kb/s	6686 Kb/s	2048 b
3520 Kb/s	3868 Kb/s	1024 b
2054 Kb/s	2126 Kb/s	512 b

DIRDAT

command

Directorylist, including timestamp and archivebit, no headerlines.

DIRDAT *path* [/s]

<i>path</i>	Path for files to be listed
/s	do NOT display subdirectories

DIRDAT gives a list of files with timestamps and archiveattributestatus, with full path for each file. One line per file.

This command is especially useful for surveying changes on a disk or in a subdirectory. Make a list before and after, piping the output to files. Use simple filecompare.

```
C:\>
```

DIRS

command

Display allocated disk space for files/directories

DIRS *path* [/s] [/f] [/t]

<i>path</i>	path to be examined
/s	show also contents of subdirectories
/f	show each file
/t	show timestamps

DIRS displays the allocated disk space for directories (and files)

Very useful during cleanup to track large files, or directories containing many files.

On FAT volumes space is allocated in rather huge blocks, giving relatively huge amount of wasted space on small files.

```
C:\>
```

EATCHUNK

on/off

Reserves largest available UMB block.

EATCHUNK

Can be used to force minor programs to be loaded in small holes in UMB.

When **EATCHUNK** is reloaded, the reserved block will be released.

Loading a resident program, by default goes to the largest available block. Even if it could easily fit in a minor block. This could prevent a larger program to be loaded afterwards.

If the second largest block is to be reserved this might be accomplished by loading **EATCHUNK** to UMB.



There might be problems with EATCHUNK used with netdrivers. Avoid using with netdrivers without heavy testing.

DOS MEM/C

24864 bytes free

Activate EATCHUNK

check again

Now 1024 bytes free

Deaktiviate EATCHUNK

check again

24864 bytes again

```
C:\>MEM/C
```

```
...  
Total FREE :      24864      ( 24.3K)
```

```
C:\>EATCHUNCK  
CIBMAL. EatChunk 920729 by Eske Rahn
```

```
C:\>MEM/C
```

```
...  
Total FREE :      1024      ( 1.0K)
```

```
C:\>EATCHUNCK
```

```
C:\>MEM/C
```

```
...  
Total FREE :      24864      ( 24.3K)
```

ECHOERR

command

Displays the returncode from last program.

ECHOERR [*text*]

text the text to display with returncode, default is the value only.



If *text* contains a # character, it will be substituted by the returncode, otherwise appended. The value can normally only be accessed by `ERRORLEVEL`.

The great advantage of **ECHOERR** to `ERRORLEVEL`, is that **ECHOERR** can send the returncode to a file, that can be used by other programs.



ECHOERR can in current version only be used with PC DOS 3.30 us, MS DOS 5.00 US, MS DOS 6.00 US, MS DOS 6.20 US, MS win 95 US, MS win nt 3.51 US and , MS win nt 4.00 US. This limitation is due to missing of official access to the `ERRORLEVEL` value. If **ECHOERR** is used with a wrong DOS version, curious results might be returned

use KEYSTATE

press  27  28

save returncode via ECHOERR
to TEMP.FIL

```
C:\>KEYSTATE
```

```
C:\>ECHOERR KEYSTATE RETURNED # TO ERRORLEVEL > TEMP.FIL
```

```
C:\>TYPE TEMP.FIL
```

```
KEYSTATE RETURNED 4 TO ERRORLEVEL
```

ED
application

Editor.

ED [*path-file1*] [*path-file2*]

path-file1 One file to edit

path-file2 An other file to edit

The file is edited and saved in the same file. It is possible to save in an other file. In is also possible to make a backup of the original file before exit.

ED is a quick slim editor, for files less than 64Kb. The program have all the usual editing facilities and is marked out by having the most frequently used functions, such as block funtions, available by single functionkeys strokes.

ED can edit all filetypes including `.EXE` filer.

For explanation of the functions in **ED** use the appended manual.

Statusline →

Statuslinin contains
information on filename and
position in file

Name: c:\TEMP.FIL

Push#00%

This textfile is loaded in the ED editor

ENV
command

List DOS **memmory usage.**

ENV

display DOS usage of memory on screen. Usage of UMB also included both in DOS and WINDOWS.

ENV

Header

CIButil INT5

CIButil PRTSCFIL

WordPerfect

DOS COMMAND.COM

C:\>ENV

```
segm. length user CIBMAL. Env 920727 by Eske Rahn
02650h 02A10h SD
05070h 00040h Command sub-segment
050C0h 000A0h <<FREE>>
05170h 000F0h INT5
05270h 000F0h PRTSCFIL
05370h 000F0h REPLACE
05470h 68400h D:\PROG\WP51\WP.EXE
6D880h 00120h COMMAND sub-segment
6D9B0h 00940h COMMAND
6E300h 00110h paramete
6E420h 00120h <<FREE>>
6E550h 31AA0h <<FREE>>
A0000h 386D0h SC
D86E0h 00120h SD
D8810h 012B0h Config!
D9AD0h 00940h Command
DA420h 00100h paramete
```

ERAQ

command

Deletionprogram, prompting for deletion on each file.

ERAQ [*path-files*]

path-files filenames for files, to delete.

ERAQ deletes requested files prompting for confirmation on each file.

Usefull for cleanup in large subdirectories, where it can be difficult to catch the wanted files with plain wildcards.

The function of **ERAQ** is identical to `DEL/P` in DOS5 an above.

Show TEST files

```
C:\>DIR TEST*.*  
  
Volume in drive C has no label  
Directory of C:\  
  
TEST1    FIL           5 24-09-92  18.42  
TEST2    FIL           4 24-09-92  18.42  
TEST3    FIL           7 24-09-92  18.42  
          3 file(s)          16 bytes  
                          2826240 bytes free
```

Delete some TEST files

```
C:\>ERAO TEST*.*  
\TEST1.FIL Y  
\TEST2.FIL N  
\TEST3.FIL Y
```

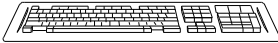
Show all TEST files again

```
C:\>DIR TEST*.*  
  
Volume in drive C has no label  
Directory of C:\  
  
TEST2    FIL           4 24-09-92  18.42  
          3 file(s)           4 bytes  
                          2826240 bytes free
```

TEST1.FIL and TEST3.FIL
deleted

ERKBD

driver



Keyboarddriver.

ERKBD [+ | -]




+ chose to start keyboarddriver with setup 1 active



- chose to start keyboarddriver with setup 1 active



The program can be used to personally keyboard setup. The driver suit several types of PC-keyboards.




The setup is done by **ERKSET**.

The program can be set up in two modes, either tiny and flexible, or extremely tiny.

If the program is set up to use the flexible version, it will contain two full setups, for each all eight combinations of  30,  31 and  32 can be used on each key. Never the less, even in this version it is much less than the standard keyboard driver




Select setup 1 by  33  34

Select setup 2 by  35  36

If setup to tiny version only one set is available, and combinations of  37,  38 and  39 can not be defined.

The program is by default setup to enhanced US as set 1 and enhanced DK as set 2.



With **ERKBD** installed it is possible to break almost any program hung, to DOS by pressing  41  42  43. This should not be used as an alternative exit, but as a soft alternative to a reboot. Many programs will leave the machine in a bad state after this trick, but it might make it possible to e.g. backup a memory-disk before a boot. Do not try to continue normal work after this trick. reboot the machine as soon as possible, unless you are absolutely sure that the program does not leave the machine in an undefined state..

Load ERKBD first time

make changes with ERKSET

reload ERKBD

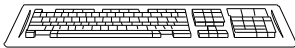
```
C:\>ERKBD
Load of CIBMAL. Multi-Keyboard driver 921014 by Eske Rahn. Setup with ERKset.

C:\>ERKSET
...

C:\>ERKBD
Re-load of CIBMAL. Multi-Keyboard driver 921014 by Eske Rahn. Setup with ERKset.
```

ERKSET




applikation



Setup of ERKBD keyboarddriver.

ERKSET

The program make it possible to adjust any parameter in the keyboarddriver.

Change the function of a key, by selecting the key with the arrowkeys, press  45 and press the the key for the new value. Functionkeystatus might be changed by  46 and  47.

For explanations please refer to the appended manual

ERSHELL

command

Loads COMMAND.COM in UMB.

SHELL=[*path*]**ERSHELL.COM** *dospath parameters*

path path where **ERSHELL** resides

dospath path where den COMMAND.COM, to be used resides

parameters the parameters to be passed to COMMAND.COM

In standard DOS it is not possible to load COMMAND.COM and all its data data such as FILES, BUFFERS etc. to UMB. **ERSHELL** does this.

ERSHELL leaves 4 files in LOW-MEMORY requested by WINDOWS 3.0 og netværk.



ERSHELL demands STACKS=0,0 in CONFIG.SYS

```
C:\>_
```

EURODATE

on/off

Force date to european format.

EURODATE

When **EURODATE** is aktiv, it makes sure that dates er treated in european format no matter the COUNTRYCODE.

The programmet is usefull in circumventing errornous datetreatening in applications.

```
C:\>_
```

FADE256

command



Fades the VGA skærm.

FADE256

Fades the screen by turning the colourintensity down.

Could be cleaned ud by the **CLR** command.


```
C:\>_
```

FASTLOAD

driver



Copies EGA/VGA BIOS **to** DOS **memmory**.

FASTLOAD

Used if the machine does not have BIOS-SHADOW, and an EGA or VGA adapter with slow BIOS-ROM access. Speeds up screenupdates.

If e.g. a memeorymanagement program moves the video BIOS-ROM away from C000:0000, **FASTLOAD** can not be used.

FASTLOAD is usually only relevant wither older machinetypes.



Must be loaded prior to drivers moving pointers to VIDEO BIOS. This might be **VDK**.

```
C:\>_
```

FEQ

command

Compares two files, date og contents.**FEQ** [/t] *file1 file2**file1, file2* files to compare

/t compare timestamps only

Compares two files. The files are compared as textstrings, if equal, the timestamps are compared. The result is returned in `ERRORLEVEL`, Five possible values:

0	files are equal
100	files are equal in contents, but <i>file1</i> is older
101	files are equal in contents, but <i>file1</i> is yonger
200	<i>file1</i> is less than <i>file2</i> , compared as textstrings
201	<i>file1</i> is greater than <i>file2</i> , compared as textstrings

```
C:\>
```

FILES

command

Displays number of free filehandles.

FILES

Returns the number of unused DOS filehandles available.

```
C:\>Files
      39 Filehandle-entries free

C:\>
```

FILTIM

command

Number og timeticks to read a file.

FILTIM [*file*]

file file to read

Returns, in `ERRORLEVEL`, the number of timeticks needed to read the file. Approximately 18.2 timeticks per second. If more than 255 timeticks, 255 returned.

Can be used in network, to check the load of a share or server. Very conveniently in loadbalancing by postponing or redirecting on heavy load.


```
read z:testfil
```

```
run only if read in not over  
two seconds
```

```
C:\>FILTIM z:testfil
```

```
C:\>if NOT errorlevel 36 call q:update.bat
```

FM

kommando

FileManage. Search, Search/Replace in files and deletion of files and directories.**FM** [*path* | *path-files*] [/?][/k] [/p] [/t] [/f] [/c] [/s] ["*searchtext*"] ["*replacetext*"]

<i>path</i>	Path to use, default is current path.
<i>path-files</i>	Files to use.
<i>searchtext</i>	The text to search for. If omitted, a prompt for filedeletion will occur.
<i>replacetext</i>	Text to replace the found text. Must be same length as <i>searchtext</i> .
/?	Brief help
/k	delete the selected files/directories, after confirmation is given. Note that with /s a whole tree could be processed,. This might be very useful in removing temporary og backup files in a tree.
/p	show position of found te4xt, as BYTE-number, first byte zero.
/t	Do not show text nearby the found text
/f	show first occurrence in each file only
/c	Search ignoring case
/s	process subdirectories also

If a /-parameter is given twice, it is canceled. Can be used to overrule choices made in a .BAT file containing standard parameters



The /c parameter works on all characters defined in CODEPAGE 865 defined in both lower and uppercase, as é and É. Ascii zero and space would also be considered equal.

```
C:\>_
```

FORCECP

on/off

Catches request on CODEPAGE.

FORCECP [*codepage number*]

If a program asks DOS for current active CODEPAGE, **FORCECP** returns *codepage number*. Defaultvalue 865.

Can be used as bugfix for program expecting a specific, CODEPAGE, not active.

```
C:\>FORCECP 852
C:\>ACTIVECP ACTIV CODEPAGE IS
ACTIV CODEPAGE IS 852
C:\>FORCECP
C:\>ACTIVECP -*#*-
-*865*-
```

FREE

command

Display amount of free memory in DOS.

FREE

Display the amount of free LOW-DOS memory. if **FREE** is loaded in UMB, the amount of free memory in UMB will be returned.

After **FREE** the number of free 4 Kb blocks is returned in ERRORLEVEL. This is might be very efficient in .BAT files. Pipe the output to NUL and us IF ERRORLEVEL.

631568 bytes free in LOW-DOS

```
C:\>FREE
```

```
631568 bytes free. CIBMAL. 920725 by Eske Rahn
```

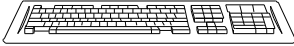
24240 bytes free in UMB

```
C:\>LOADHIGH FREE
```

```
24240 bytes free. CIBMAL. 920725 by Eske Rahn
```

GETANSEN

command



Read key return in `ERRORLEVEL`.

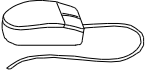
GETANSEN

Awaits a keypress, and return the code in `ERRORLEVEL`. Usefull in `.BAT` files to get character input from the keyboard


```
C:\>_
```

GETKEYMO

command



Read mousebutton or keyboard, return in `i` `ERRORLEVEL`.

GETKEYMO

Awaits either a keystroke, or a pressed mousebutton. Keycode returned in `ERRORLEVEL`.
For mousebuttons the returnvalues are

Right	1
Middle	2
Left	4

If more than one mouse button are pressed, the sum is returned.

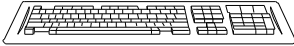
Can be used in `.BAT` files to catch user actions

GETKEYMO is designed for a `MOUSE SYSTEM MOUSE` compatible mouse. No mouse driver needed.

```
C:\>_
```

GOTITSEN

command



Returns the `ASCII` value of a character in `ERRORLEVEL`.

GOTITSEN *character*

The `ASCII` value of *character* returned in `ERRORLEVEL`.

GOTITSEN is similar to **SETERROR**.

```
C:\>_
```

HDIM_C2D

command



Performs a BIOS imagecopy of primary to secondary harddisk.

HDIM_C2D

Performs a track to track imagecopy from harddisk 0 to harddisk 1 (typical C to D). Should be used with extremely caution. The disk should be of similar logical constitution. The destination disk might have larger geometrical properties.

```
C:\>_
```

HDIM_D2C

command



Performs a BIOS imagecopy of secondary to primary harddisk.

HDIM_D2C

Performs a track to track imagecopy from harddisk 1 to harddisk 0 (typical D to C). Should be used with extremely caution. The disk should be of similar logical constitution. The destination disk might have larger geometrical properties..


```
C:\>_
```

INSTHI

command

Redirects program loads to UMB i DOS5 This is not identical to LOADHIGH.

INSTHI [+ | -]

+ aktivates automatic UMB programload

- deaktivates automatic UMB programload

Deactivation is assumed as default.

Forces programloads to UMB. The programs might go to LOW-DOS memmory, if either the needed space isent available, or the program spcificly allocates blocks in LOW-DOS.

INSTHI is extremely conviniant with the `INSTALL=` parameter in the `CONFIG.SYS` file.

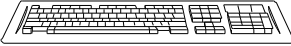
```
C:\>TYPE CONFIG.SYS
...

INSTALL=C:\CIBUTIL\INSTHI.COM +
INSTALL=C:\CIBUTIL\ERKBD.COM
INSTALL=C:\CIBUTIL\INSTHI.COM -
...
```

The above example shows a section of a `CONFIG.SYS` using **INSTHI**. It is not possible to force programs to UMB in `CONFIG.SYS` by standard commands. It is only possible with programs designed as a true `DEVICE DRIVER`. (`ERKBD` is both, and should be kaaded as a `DEVICE DRIVER` with `DEVICEHIGH=` thereby saving memory space)

INT16

command



Show the `CANCODE` and `KEYCODE` for one keystroke.

INT16

Await a keystroke. The `SCANCODE` and `KEYCODE` will be displayed as four hexadecimal digits. the two left digits is the `SCANCODE`, the two right digits is the `KEYCODE`.

The information returned, might be useful in combination with programs as **ERKSET** or **TOKEYBUF**.

The codes displayed, might vary on differnt machines, since they are not fully standarized, and depends on the `BIOS` or a loaded keyboarddriver, e.g. **ERKDB** or `KEYB`.

Press  59

Press  60

```
C:\>INT16
```

```
3F00
```

```
C:\>INT16
```

```
2247
```

INT3

command

Trig a resident debugger, as **ERD**.

INT3

Do a `BREAKPOINT INTERRUPT`.

This 'program' is a simple way to enter a installed resident debugger.

```
C:\>_
```

INT5

driver

Printscreen without blanks.

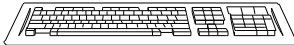
INT5

Copies the ctext contents of the screen to the standardprinter. Trimming rightmost blanks. Standard `BIOS-PRtSc` keeps the spaces. The **INT5** is convenient with old slow matrixprinters, or if printer output is forced to a textfile.


```
C:\>_
```

INT9

command



Show the codes returned from the keyboardcontroller.




INT9

Each time a key is pressed the `MAKECODE` is displayed. When released the `BREAKCODE` is displayed. both codes shown in `i` HEX-format.

The program is exited by pressing and releasing the `F1` 62 key. Before exit, codes for `F1` 63.is displayed



INT9 needs at least a 80186 CPU.

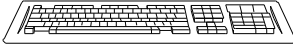
Press  65  66  67

```
C:\>INT9
```

```
CIBMAL. Int 9 viewer 920913 by Eske Rahn  
Codes returned from keyboardcontroller. Use on 186 og higher only  
Press and release the F1-key to exit  
3F BF 22 A2 3B BB
```

KEYINSTR

command, semiresident



Send a sekvens of keystrokes.

KEYINSTR *keysequence*

keysequence The keystokes to simulate. May contain the following special codes:

§	waitt
@xx	asciivaluei, e.g. @0D for Enter
!xx	asciivalue for functionskey, e.g. @3B for F1
&xxyy	key with SCANCODE and KEYCODE, see INT16

The keysequence may contain over 16 keystrokes (the depth of the standard keyboard stack) The program will stay resident, until all keystrokes are sent.

Can be used in a .BAT fil to preanswer questions posed by a subsepect program

```
C:\>_
```

KEYPRESS

command



Check for keyboard entry.

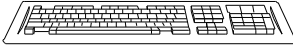
KEYPRESS




if a key is pressed **KEYPRESS** returns the keycoden in `ERRORLEVE`, otherwise zero.

```
C:\>_
```

KEYSTATE





command




Returns state of  70,  71,  72.



KEYSTATE

Returns state as sum in `ERRORLEVEL`. The sum is composed of:

 74 (venstre)	1
 75 (højre)	2
 76	4
 77	8

Both  78 pressed will thus return $1+2=3$ in `ERRORLEVEL`

Type KEYSTATE and press

 79  80

show result with ECHOERR

```
C:\>KEYSTATE
```

```
C:\>ECHOERR KEYSTATE HAS SENT # TO ERRORLEVEL
```

```
KEYSTATE HAS SENT 4 TO ERRORLEVEL
```

KILLBLK

command



Deletes a number of lines above the cursor, and moves cursor up.

DEVICE=**KILLBLK.COM** [=]*deleteparameter*

or

KILLBLK [?][=]*deleteparameter*

deleteparameter name of textfile containing comparemask for the part of screen to delete. Or number of lines to delete

= Indicates that *deleteparameter* must be an exact match

? Pause if no match

The lines of the textfile *deleteparameter* will be compared with the text above the cursor, if matched that part of the screen will be cleared, and the cursor moved up.

A ? matches any character on screen. A space will match a space and a `ASCII` zero.

If the = parameter is not used, two special characters might be inserted as first character on some or all of the lines. * and = indicating that the line might or must exist on screen

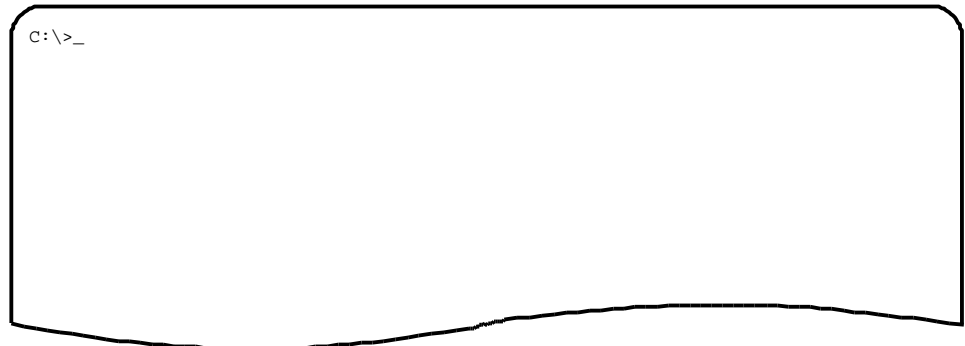
The program returns status to `ERRORLEVEL`:

5	missing parameter
4	Can not open the file <i>deleteparameter</i>
3	Can not read the file <i>deleteparameter</i>
2	The file is larger than the current display contents
1	The file does not match the current display contents
0	The file match the current display contents, block deleted



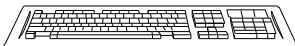
KILLBLK can be used in 80 characters-modes.only

If the textstrings are less than 80 characters, the rest of the line is assumed to be blank.



LCMD

on/off













DOS **commandline buffer.**














LCMD [*digit*]

digit Minimumlength of commands to save, default is 3

Saves the lines entered to `COMMAND.COM`. A line may be recalled and reused.

Functionkeys

- | | |
|---|------------------------|
|  84 | select previous line |
|  85 | select next line |
|  86  87 | delete all saved lines |
|  88  89 | delete current line |
|  90 | jump to first line |
|  91 | jump to last line |
|  92  93 | jump one word left |

 94		jump one word right		
	96	jump to beginning of line		
	97	jump to end of line		
	98	moves one character to the left		
	99	moves one character to the right		
	100	deletes character left of cursor		
	101	delete current character		
	102	toggles insert/overstrike mode		
	103		104	delete to beginning of line
	105		106	delete to end of line


```
C:\>_
```

LPTRERO

on/off



Printerport rerouting.

LPTRERO

With **LPTRERO** loaded the standard printer `PRN` can be rerouted to different `LPT-` ports. By sending `**LPT2` to `PRN` future output is routed to `LPT2`. By sending `**LPT1` to `PRN` future output is routed back to ut til `LPT1`.

This command is useful with programs that only supports one printer. With **LPTRERO** almost any program can access up to four printerports.

Could be used to select printers with differnt paper-forms. It is possible to change printer in a single document or form. This feature is normally not included in wordprocessing..


```
C:\>_
```

LPTSWAP

command



Swaps two printerports.

LPTSWAP *port1 port2*

port1 digit between 1 and 4, indicating a printer port

port2 digit between 1 and 4, indicating a printer port

Logically swaps two printer ports `LPTport1` and `LPTport2`.

LPTSWAP can be used for logically swaping og two printers. Useful with programs where it is inconviniant, difficult or imposible to select printerports

```
C:\>_
```

MODEGET

command



Read screenmode.

MODEGET

Reads current screenmode, returns the mode to `ERRORLEVEL`.

```
C:\>_
```

MODESET

command



Set screenmode.

MODESET *hexbyte*

hexbyte hexadecimal byte, indicating the desired screenmode.

The values allowed for *hexbyte* depends on the displaydriver used.

```
C:\>_
```

MOVE

command

Move of files to other directory.

MOVE *filespath*

filer files to move

path destination directory

Files will be moved from currentdirectory to destination directory. Included in newer dos versions.

??

```
C:\>DIR
DIR BAKS
MOVE *.BAK BAKS
DIR
DIR BAKS
```

MSG

command



Show a framed message on sskreen.

MSG *textline*

Display *textline* in a frame..

```
C:\>_
```

NOBLANK

on/off



Prevents blank lines in tty screenoutput.

NOBLANK

When **NOBLANK** is activated, it will prevent blank lines in display output, with most tty-type applications.

Programs using the display directly bypassing `DOS/BIOS`, or positioning the cursor, might not work correctly with **NOBLANK**.

Useful with programs like `DOS REPLACE` and `DOS COMP` where the output contain an inconvenient and superfluous amount of empty. By removing those more informations will be squeezed onto each screenpage.

Show TEMP.FIL

The file contains blank lines

Apply NOBLANK

Show TEMP.FIL again

The blank lines is left out

Stop NOBLANK

```
C:\>TYPE TEMP.FIL
```

```
THIS IS A FILE
```

```
WITH EMPTY LINES
```

```
THIS IS THE END OF THE FILE
```

```
C:\>NOBLANK
```

```
CIBMAL. NoBlank 920723 Eske Rahn
```

```
C:\>TYPE TEMP.FIL
```

```
THIS IS A FILE
```

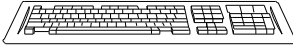
```
WITH TWO EMPTY LINES
```

```
THIS IS THE END OF THE FILE
```

```
C:\>NOBLANK
```



NONUM

command



Turns  113 off.

NONUM

On most computers 102-key keyboards is by standard initiated with  115 on. **NONUM** turns  116 off and could i.e be executed in `AUTOEXEC.BAT`.



If **ERKBD** is used as keyboarddriver, this function could be selected by **ERKSET**.

```
C:\>_
```

NOSNR

command

Removes DOS5 **serialnumber** from a disk or diskette.

NOSNR *drive*

drive the drive, where the DOS5 serialnumber is to be removed

In DOS5 and later, diskettes and disks are poluted with a code created by merging the time and date stamps. This is in the topology of DOS5 called a serialnumber. But it is not a real serialnumber, that might be illegal to remove. It was supposedly introduced to be used with copyprotections schemes.

NOSNR untag this so called serialnumber from a diskette or harddisk.

The serialnumber produces unnecessary output with commands like DIR og CHKDSK.


```
C:\>_
```


Is LOG older than LASTLOG ?
Yes - exit
Print LOG
Save LOG as LASTLOG
Delete LOG

```
C:\>TYPE PRLOG.BAT  
OLDER LOG LASTLOG  
IF ERRORLEVEL 128 GOTO OK  
COPY LOG PRN  
COPY LOG LASTLOG  
DEL LOG  
:OK
```

PARK

command



Park the heads of a harddiskens as far from the BOOTTRACK as possible.

PARK

The heads of the harddisk is moved to a position where damages during transport is minimized.

PARK is usefull with old harddisks without automatic parking. This cammand is rather rudimentary, since almost any harddisks produced in the ninties has automatic parking, some even headlocking.



PARK halts the computer when the head ar parked. This is done to avoid any program or operatingsystem call to reposition the heads to areas with data. It is usually not even possible to reboot with **Ctrl** 120 **Alt** 121 **Del** 122.

```
C:\>PARK
CIBMAL. Park 890418 by Eske Rahn
Drive C is parked. System is halted, you may turn power off . . .
```

PDK

on/off



Convert danish characters æ,ø, and å to HP or ISO codes.

PDK [s] [1] [2] [3] [4] [i]

- s indicates that conversion are performed on the serial port output (COM1-COM4), by default conversion are performed on the parallel port output (LPT1-LPT4)
- 1 conversion on port 1
- 2 conversion on port 2
- 3 conversion on port 3
- 4 conversion on port 4
- i indicates conversion to the danish ISO character set, by default conversion to HP character set is performed

If no port number is given, conversion is done on all ports (1-4).

```
C:\>_
```

PREFORMA

command



Preformaters a harddisk.

PREFORMA *drive*

drive driveletter of physical harddisk to lowlevel format. can only be **C:** for then primary physical disk or **D:** for the secondary physical disk

Preformateres the selected harddisk. All informations will be lost. Information can not be retrived as easy as after a **DOS FORMAT** :

The program demands a user verification.

Since the programs use the **BIOS** format routine, not all harddisk can be preformatted with this command. Normally a **SCSI** or **AT-BUS** disk could not be preformatted through standard bios calls.

The program automatically calculates the optimum **INTERLEAVE** factor on initiation of the format process.



Promformatting is not allowed on all disks. On newer disk, please check your supplier before using **PREFORMA**.



PREFORMA needs a **AT-BIOS** (i.e. not old **XT**...).


```
C:\>PREFORMA C:
```

```
CIBMAL. Preformat 881007 by Eske Rahn
```

```
Are you sure you want to
```

```
PRE-FORMAT
```

```
C:
```

```
Formating 936 Cylinders, 32 Sectors, 16 Heads
```

```
Accept with "Yes<cr>" or quit :
```

PREVSN

on/off

Prevents DOS5 in creating so called serialnumber.

PREVSN

This program prevents DOS5 in creating serialnumbers on harddisks and diskettes while loaded.

In DOS5 and later, diskettes and disks are poluted with a code created by merging the time and date stamps. This is in the topology of DOS5 called a serialnumber. But it is not a real serialnumber, that might be illegal to remove. It was supposedly introduced to be used with copyprotections schemes.

The serialnumber produces unnecessary output with commands like DIR og CHKDSK..

Load PREVSN

```
C:\>PREVSN  
CIBMAL. PreventSN 920821 by Eske Rahn
```

Execute a command that tries
to create a serialnumber

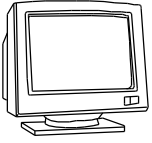
```
C:\>FORMAT A:  
...
```

Unload PREVSN

```
C:\>PREVSN
```

PRTSCFIL

on/off



Redirect  127 to a file.

PRTSCFIL [*file*]

file

The name of the file to contain to screencopies. Default is
\`PRTSCFIL.TXT` on the default disk

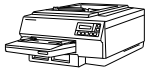
When loaded the program will trap  129 and redirect the output to *file*.

After each screencopy a `FORMFEED` code is inserted.

```
C:\>_
```

PRWAIT

on/off



Utility program to make printersharing working smoother.

PRWAIT

PRWAIT extends the number of retries on printererrors. this is extremely useful with printersharing by network or printerbox.

After a `PRINT SCREEN` a `FORMFEED` code is sent to the printer. this assures that screendumps is not mixed with other output, that might belong to a different user.

Is useful with processes or commands that aborts very fast on printererrors. i.e. `□ 131`.

```
C:\>_
```

RANDOM

application



Harddisk random read- and seektest.

RANDOM

When **RANDOM** is started a prompt for testtype and harddisk will be made. The testtype is seektest or readtest. Then a prompt for which part of the disk to test and the number of tests will appear.

Initially a dummy testloop is performed, to calculate the amount of time used that is not due the diskactivity.

Next the test choosen is performen on cylinder 0 and 1, to make it possible to seperate headsetteling-time and seek-time.

Finally the test is performed on random cylinders in the selected range.

The numbers returned might be incorrect if the parameters known by BIOS is not the physical parameters. On many newer disks a logical to physical translation is done by the disk. The reason for this is the limitations in the old software interface that is unfitted for modern harddisks.


```
C:\>_
```

READALL

command



Read all sectors on a disk.

READALL

Can be used to measure harddiskperformance, where **DDT** is non-applicable.

The program reads all sectors on the primary harddisk, typical c:.

READALL display a progressindicator by a * for each cylinder read.



The proces might be very timeconsuming. On slow system it might be several seconds per Mb. If the program is to be aborted this might be done by a reboot (do not turn off !) either by **Ctrl** 135 **Alt** 136 **Del** 137 or by presing a **RESET** button if present. The program might be aborted without reboot with **Ctrl** 138 **Alt** 139 **Ins** 140 if **ERKBD** is loaded as keyboard.



NEVER turn of a computer during harddisk access. This might destroy the disk, and in rare cases even the rest of the hardware system !!!.

```
C:\>_
```

REFORM

application



Reformats the harddisk.

REFORM

Lowlevel formats the harddisk without destroying the harddisk contents. Can be used if the preformatting of part of the disk has been destroyed, or to optimize the `INTERLEAVE` factor.

The program can also perform nondestructive surfacescan readtest or destructive preformat if desired.

When the program is started the user will be prompted for type of operation, disk, and on which part of the disk the operation is to be performed. Finally the user will be prompted for confirmation to start the operation.



Promformatting is not allowed on all disks. On newer disk, please check your supplier before using **REFORM** to reformat or preformat.



Readtest can be done on any computer, reformatting and preformatting can be done on computers with a `AT-BIOS` (i.e. not old `XT...`) only.

```
C:\>_
```

RENA

command

Rename files og directory.

RENA [*directory1*] [*directory2*]

eller

RENA [*pathfile1*] [*pathfile2*]

directory1 the name of the directory to rename. Path is not allowed.

directory2 the new name of the directory. Path is not allowed.

pathfile1 the name of the file to rename

pathfile2 then new name of the file

Renames files or directories, be renaming data is not physically moved on disk.

```
C:\>_
```

REZAT

command

Updates the content of the CMOS memory.

REZAT

Must be initialized with **REZATINI**. **REZAT** restores the first 64 bytes of the CMOS memory to the content present when **REZATINI** was used.

The program can be used, where the full version **REZUP** works unsatisfactory. Not all computers allow the full version.


```
C:\>_
```

REZATINI

command

Initialize the REZAT program.

REZATINI

Stores the first part of the CMOS memory for later use in **REZAT**.

```
C:\>_
```

REZUP

command

Updates the content of the CMOS memory.

REZUP

Must be initialized with **REZUPINI**. **REZUP** restores the CMOS memory to the content present when **REZUPINI** was used.

```
C:\>_
```

REZUPINI

command

Initialize the REZUP programmet.

REZUPINI

Stores the first part of the CMOS memmory for later use in **REZUP**.

```
C:\>_
```

ROMPRTSC

command



Move the `PRINT SCREEN` function to be performed by the displayadapters BIOS.

ROMPRTSC

The program will pass further screencopy to be performed by the displayadapter BIOS instead of the standard BIOS. Not all displayadapters support this. The modes supported by display adapters also vary.

Most computers only supply screendumping of 80x25 text-modes as standard. the displayadapter may provide enhanced screendump-handling. I am not aware of any adapters supporting non textmode screendumps.



The funtion is limited to some EGA or VGA displayadapters. On some adapters the cammand might disable screendumping !


```
C:\>_
```

SAMEDATE

command

Copies the timestamp from one file to another.

SAMEDATE *file1 file2*

file1 the file, from which the timestamp is to be copied

file2 the file to receive the timestamp

SAMEDATE read the time and date property from *file1* and synchronize *file2* with the values.

```
C:\>_
```

SCOMMAND

command

Save the display content during temporary call of `COMMAND.COM`.

SCOMMAND [*parameters*]

parameters any parameters allowed by `COMMAND.COM`. Check your `COMMAND.COM` for details with `/?`

Loads a new temporary copy of `COMMAND.COM` using `COMSPEC`.

SCOMMAND saves the content of the display, and writes it back on exit.



The command currently supports 80 by 25 modes only.

```
C:\>_
```

SETERROR

command

Sets the value `ERRORLEVEL`.

SETERROR *hexbyte*

Sets the value of `ERRORLEVEL` to *hexbyte*, must be a two digit number in `HEX`-format. Can be used similar to **GOTITSEN**.

```
C:\>_
```

SHOWBMP

command



Show a `.BMP` file on a VGA display.

SHOWBMP *file*

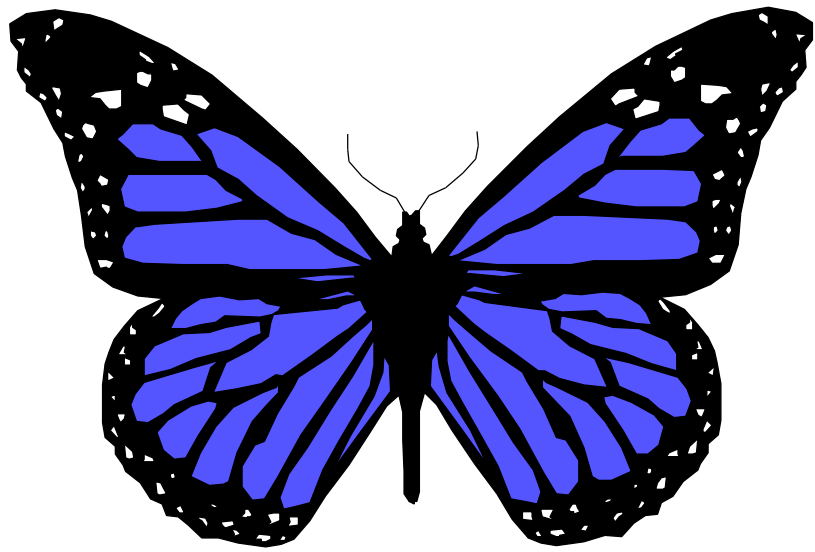
file the name of a file in `.BMP` format

The file is read and displayed on a VGA display.



Needs a VGA adaptor with a TSENG 4000 compatible CHIP.


```
C:\>SHOWBMP BUTFLY.BMP
```



SHWB1024

kommando



Show a `.BMP` file on a **1024x768** VGA display.

SHWB1024 *file*

file the name of a file in `.BMP` format

The file is read and displayed on a VGA display.



Needs a VGA adaptor with a TSENG 4000 compatible CHIP.

```
C:\>_
```





SKIPNXT



command

Optionally skips next lines in CONFIG.SYSDEVICE=**SKIPNXT.SYS** [+|-]*keys* [*number*]

<i>keys</i>	decimal number indicating the keycombination to check. Sum of keys.
+	perform the next <i>number</i> lines only if the selected keys are pressed
-	skip the next <i>number</i> lines if the selected keys are pressed
<i>number</i>	the number of lines in CONFIG.SYS, to optionally skip. Default is one line.

The keys have following values:

 153 (left)	1
 154 (right)	2
 155	4
 156	8

If **SKIPNXT** should check for  157  158, the number $4+8 = 12$ should be used.

```
C:\>_
```

STAT

command

Display drive, printer, serial og coprocessor overview.

STAT

An overview of drives, printer, serielle kanaler and coprocessor is displayed.

```
C:\>STAT
```

```
CIBMAL. Stat 880117 by Eske Rahn
```

```
1 Floppy drive(s) installed  
1 Coprocessor installed  
1 Parallel port(s) installed  
1 Serial port(s) installed
```

TAGBYUSE

on/off

Modify fileattributes on fileaccess.**TAGBYUSE** [+S | -S] [+R | -R] [+H | -H] [+A | -A]

+S	set SYSTEM flags
-S	removes SYSTEM flags
+R	set READONLY flags
-R	removes READONLY flags
+H	set HIDDEN flags
-H	removes HIDDEN flags
+A	set ARCHIVE flags
-A	removes ARCHIVE flags

TAGBYUSE traps opening of data- andprogramfiles, and tag the files.

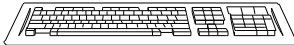
The program is used surveil which files are used.

e.g. files might be put in a known attribute state with the DOS command `ATTRIB` with `-A` parameter to remove the `ARCHIVE` attribute for all relevant files. Load **TAGBYUSE** with the `+A` parameter. After a period it could be checked if any files still havent got the `ARCHIVE` attribute. If any, the files are most likely not to be used, and may be moved to another directory, for later deletion.

Removes archive attributes	C:\>attrib c:\testdir*. * -a /s
Load TAGBYUSE	C:\>TAGBYUSE +A
Run the relevant program(s)	C:\>testprog
Unload TAGBYUSE	C:\>TAGBYUSE
List any files that has not been accessed	C:\>dir c:\temp /a-a C:\>_

TOKEYBUF

command



Send keystrokes to the keyboardbuffer.




TOKEYBUF *keys*

keys The sequence of keystrokes, to send to the keyboardbuffer

Send keystrokes to the keyboardbuffer. A maximum of 15 characters is allowed, this is due to a limitation in the standard DOS keyboardbuffer.

Ordinary keys, function keys, or keys including `SCANCODE` may be used.

To send ordinary keys simply write the key, for special `ASCII` values, use the hex-value with a leading `@`. Functionkeys are indicated by their hex-values with a leading `!` keys with `SCANCODE` are indicated by a leading `&` followed by the `SCANCODE` and the `KEYCODE` both in hex.

TOKEYBUF `abG@0D!3B&011B` would send the letters `abG` followed by  160 and  161 and finally  162 with `SCANCODE 01` to the keyboardbuffer.

The `&-inputformat` is made, to make it possible to send keystrokes to programs that expects that a `KEYCODE` is associated with a specific `SCANCODE`. `WordPerfect` is an example.

Values for `SCANCODE` and `KEYCODE` could e.g. be found with **INT16**.

```
C:\>_
```

TUMB

command

Check if RAM is available for UMB.

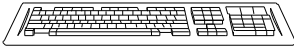
TUMB

Displays an overview of memoryblocks in the area between 640 Kb and 1 Mb. For each 4 Kb block is indicated if read and write or only write is possible

This test only checks if write is possible. It will thus see an EMS FRAME or a adaptercard as available memory even though the area are not available as UMB.

TYPMATIC

command



Sets keyboard repetition rates.

TYPMATIC *hexvalue*

hexvalue Value of repetition parameter, in hexadecimal

The parameter is a sum of the value for repetition frequency, and the value for time delay before repetition.

```
C:\>_
```

VDK

driver



Danish ø og Ø samt 0 to EGA and VGA displays.

DEVICE=VDK [*parameter*]

eller

VDK [*parameter*]

parameter to digits between 0 and 9. The first digit indicates the topline, the second the bottom of the cursor.

VDK is a compact substitute for `DOS-CODEPAGES`, that takes up an extreme amount of memory. **VDK** uses 272 BYTES only. **VDK** can be loaded in UMB.

If *parameter* is present the function will be to initiated the cursorsize as **CURSSIZ**. Additionally **VDK** vil prevent other programs in changing the cursorsize. Might be very handy on some Laptops where the cursor might disapear in some programs.


```
C:\>_
```

WAITKEY

command



Awaits a keystroke, without removing it from the keyboardbuffer.

WAITKEY

Wait for a key to be pressed, but leaves the keystroke as unread in the keyboardbuffer. the ASCII value is returned in ERRORLEVEL. **WAITKEY** are similar to **GETANSEN** but leaves the key in the keyboardbuffer.

```
C:\>_
```

WINBOOT

command

Restart MS-WINDOWS.

WINBOOT

Restart MS-WINDOWS without restarting the entire computer.

```
C:\>_
```

WINMODE

command

Checks if MS-WINDOWS is active.

WINMODE

The program returns the result in ERRORLEVEL:

3	MS-WINDOWS is loaded in 386 ENHANCED MODE
2	MS-WINDOWS is loaded in STANDARD MODE
1	MS-WINDOWS is loaded in REAL MODE
0	MS-WINDOWS is not loaded

```
C:\>TYPE WI.BAT  
  
winmode  
if errorlevel 1 EXIT  
win %1 %2 %3 %4 %5
```

The above example shows the contents of a file `WI.BAT`, that might be used to start `WINDOWS`. If `WINDOWS` is loaded `WI.BAT` will return to `WINDOWS` with a `EXIT` command.

??Indledning


ED er en editor, der kan editere såvel `DOS` tekstfiler som alle andre filer, der kan gemmes i `DOS`. **ED** kan således anvendes til at redigere `.EXE` og `.COM` filer. Dette kan være meget anvendeligt, hvis man skal ændre tekster i et program.

ED tillader redigering af to filer samtidig.

Funktion

ED kan anvendes til alle former for redigeringsopgaver. Den fil, der redigeres, vises i tegnformat, hvor hele `8-bit` tegnsættet anvendes. Det gør selvfølgelig programmet bedre egnet til at redigere tekstfiler end maskinekodeprogrammer, men begge dele kan i princippet lade sig gøre.

Start

Tast **ED** *fil* på kommandolinien, hvor *fil* er navnet på den, fil der skal redigeres. Der kan angives to file adskilt af mellemrum, hvilket får **ED** til at gøre begge filer aktive, og det er muligt at skifte mellem dem ved at trykke på  F8.

Skift fil

Fra `DOS` kommandolinie tastes **ED**, og derefter startes programmet. Man kan på kommandolinien angive navne på op til to filer, der er det maksimale antal filer, der kan redigeres samtidigt. Hvis der kun angives ét navn, kan samme fil redigeres i to opsætninger.



Der kan ikke skiftes mellem de to aktive filer, uden at den fil, der skiftes væk fra, bliver gemt. Dette kan virke forvirrende i starten, hvis man er vant til skiftefaciliteter fra andre programmer. Fordelen er, at man ikke glemmer, om filen skal gemmes eller ej.

Funktionstaster

Nogle af de almindelige funktionstaster i ED kan være svære eller umulige at finde på tastaturet hvis man ikke anvender ERKBD som tastaturstyringsprogram. Derfor er der for disse defineret alternative funktionstaster som normalt altid kan bruges.

Navigering




168 169 170 171 Flytter markøren rundt på skærmen.

172 Ny linie hvis markøren står midt i en linie, rykkes sidste del ned.










173 Indsætter mellemrum, hvor markøren står

174 Sletter bogstavet, markøren står på


175 Flytter til begyndelsen af linien

-  176 Flytter til enden af liniens tekst
-  177 Skubber skærmvinduet en linie op
-  178 Skubber skærmvinduet en linie ned













Menu under 179

-  180  181 Gem og hop ud
-  182  183 Gem og fortsæt redigering
-  184  185  186 Lav backup, gem filen og fortsæt redigering
-  187  188 Skifter toplinien mellem funktionstastoversigt og filnavn

Skift fil

-  189 Gem fil og hop til andet redigeringsområde.

Blokkfunktioner

-  190 Udskriver blokken, hvis man er ved at markere ( 191)
Kopierer blokken, hvis man har markeret ( 192)
Henter fra blokhukommelse, hvis intet er markeret,
blokhukommelse indeholder  193  194 filskift
-  195 Sletter et stykke og gemmer det i ??blokhukommelsen, hvis man er ved at markere ( 196)
Flytter et stykke, hvis man har markeret ( 197)
-  198 Fjerner markering
-  199 Starter/afslutter markering (flyt med pilene)
-  200 Slet fra dette tegn og resten af linien
-  201 Skifter et bogstav fra stort til lille eller omvendt
Hvis man er ved at markere, bliver alle mærkede tegn skiftede.
Tegn med accent skiftes kun, hvis de er definerede som både store og små tegn i IBM CODEPAGE 865.

Søg og erstat

F3 202

Indtastning af søge-streng. Hvis der ikke indtastes søgestreng, søges efter det, der er markeret. **F10** 203 hopper til indtastning af erstat, intet giver ??blokhukommelsen. Følgende specialtegn er tilladt:

Ctrl 204 **Q** 205 vilkårligt bogstav

Ctrl 206 **H** 207 vilkårligt tegn der ikke er et bogstav

Ctrl 208 **O** 209 vilkårligt tegn

Ctrl 210 **M** 211 vognretur

Ctrl 212 **L** 213 ny linie

F.eks. vil **Ctrl** 214 **H** 215 **en** **Ctrl** 216 **H** 217 finde ordet **En** men ikke ordet **Men**.

F10 218

Søger fremad som **F4** 219 og erstatter det fundne. (se **F9** 220)

Optager




Shift 221 **F1** 222





Start båndoptagning af taster. Afslut med **Shift** 223 **F1** 224 eller med **Shift** 225 **F2** 226. Hvis der afsluttes med **Shift** 227 **F2** 228, vil senere afspilning gentage sig selv, indtil der trykkes en tast.





Shift 229 **F2** 230





Afspil det med **Shift** 231 **F1** 232 optagede.

Specielle funktioner





 233  234 'Fortryd' sletning(er) med  235

























 236  237 Laver et tegn med ASCII værdi 0 (nul)
 238  239






















 240  241 ??(navigering) Flytter til venstre-kant
 242  243

 244  245 Flytter til højre-kant
 246  247

 248  249 Flytter til øvre-kant
 250  251



 252  253 Flytter til nedre-kant
 254  255

-  256  257 Hop til indtastet linienummer, linie position.
-  258  259 Erstatte repeteret, tryk  260 for forlæns eller  261 for baglæns. Kan afbrydes med vilkårlig tast.
-  262 Søger efter det markerede i filen fra det sted, cursoren står.
-  263 Bagud-søgning, ellers som  264.
-  265 Indsætter ny linie.
-  266  267 Hopper til ny linie og indrykker, til den står under det første tegn, der er mindst "0" efter et tegn mindre end "0" (Dvs. under det første tekst efter noget ikke-tekst.)
-  268  269 ??(navigering) Flytter til toppen af teksten
-  270  271
-  272  273 Flytter til bunden af teksten
-  274  275
-  276  277 Flytter en side op
-  278  279

-  280  281 Flytter en side ned
-  282  283
-  284  285 Gentagen (multipel) indsæt i efterfølgende linie (brug efter  286 og/eller  287)
-  288  289 Analog med Sh-Ins, men sletter.
-  290 Hopper fremad til næste tegnposition der er delelig med 8.
-  291  292 Hopper baglæns til forrige tegnposition der er delelig med 8.
-  293  294 Skifter mellem indsæt og overskriv status.
-  295  296 Slet ord. Sletter frem til første karakter med ASCII værdi mindre end et "0", og derfra frem til første med en værdi på mindst "0". (Dvs. indtil ikke tekst og videre indtil tekst.)
-  297 Sletter tegnet før markøren. Hvis markøren er placeret i første tegn på linien, sammensættes linien med den foregående linie.
-  298 Programmet spørger efter markørnummer og ombytter nuværende markør med markøren med det??
-  299  300 angivne nummer (0..3), hvis den pågældende markør ikke er sat, sættes denne, men markøren flyttes IKKE.

Tekst format

Det kan forekomme, at en fil vises som én lang linie efter indlæsning i **ED**. Dette kan skyldes, at teksten er formateret med LF CR som lineadskillelse i stedet for CR LF. Dette var tidligere en meget udbredt standard.




Problemet kan løses ved at erstatte LF CR med CR LF ved hjælp af 301 og 302.

ERKSET

ERKSET bruges til at opsætte funktionerne i **ERKBD**. **ERKBD** er CIBMALs tastaturstyringsprogram. Dette erstatter f.eks. `KEYB.EXE` i DOS. **ERKBD** har den fordel at det fylder mindre end 3 Kb i den store version og ca. 1,8 Kb i den lille version. Desuden har **ERKBD** flere faciliteter og opsætningsmuligheder end man finder i gængse tastaturstyringsprogrammer.

Når **ERKSET** startes indlæses de opsætninger der er gemt i `ERKBD.COM`. **ERKBD** og **ERKSET** programmerne skal være i det samme bibliotek.

ERKSET anvendes normalt til at ændre følgende opsætninger:

- hvilken opsætning der skal være standard
- startilstand for  303,  304 og  305
- hvilken størrelse af **ERKBD** der skal bruges

Desuden er det muligt med **ERKSET** at ændre følgende opsætninger:

- tastatur type
- hvor lang tid en tast skal holdes nede inden den repeterer
- hvor hurtigt en tast skal repeterer
- hvilke koder de enkelte taster skal sende




Når der laves ændringer til en eksisterende opsætning gemmes ændringerne i filen `ERKBD.COM`. Der er ikke nogen tilhørende datafil.




Når man forlader **ERKSET** kan man vælge om man vil gemme de ændringer man har foretaget, eller om man vil vende tilbage til den opsætning der var inden man startede **ERKSET**.

Når **ERKSET** kaldes kommer et skærmbillede. Skærmbilledet viser en oversigt over tasternes placering på den type tastatur der er aktiv.



















Det kan ikke forventes at tasternes placering er helt som på tastaturet, da der findes en del forskellige måder at placere tasterne på fra forskellige fabrikker.





Gem en kopi af den originale `ERKBD.COM` fil. Denne kan være anvendelig hvis man har lavet rettelser i opsætninger og ikke kan finde ud af at komme tilbage til den originale opsætning.



I den store version af **ERKBD** er det muligt at gemme to forskellige opsætninger. I hver af disse er det muligt at definere alle kombinationer af  306  307  308.




De normale muligheder for at indtaste specialtegn med `ALT-NUMERISK` kombinationer er i **ERKBD** udvidet med muligheden for at indtaste disse koder som `HEX`-værdier i stedet for decimal værdier. Indtastning af `HEX`-værdier foretages som almindelig `ALT-NUMERISK` indtastning, dog skal der samtidig med  309 nedtrykkes den  310 der sidder på samme side af mellemrumstangenten som  311.




Tasterne svarende til cifrene A,B,C,D,E og F er placeret langs kanten af det numeriske tastatur. På de forskellige tastaturtyper findes cifrene således:



XT	AT	ENHANCED
 312 A	 313 A	 314 A
 315 B	 316 B	 317 B
 318 C	 319 C	 320 C
 321 D	 322 D	 323 D
 324 E	 325 E	 326 E
 327 F	 328 F	 329 F

ERKBD behandler ikke  330 som andre tastaturstyringsprogrammer.  331 fortolkes som om der var trykket på både  332 og  333 når den anvendes sammen med taster i det almindelige skrivemaskineområde på tastaturet.


Hvis  334 anvendes sammen med en funktionstast fortolkes den på samme måde som hvis der er trykket på den almindelige  335 tast.







Hvis man skal bruge  336 funktionen på XT eller AT type tastaturer kan dette opnås ved at trykke  337 og  338 ned samtidigt.




Når **ERKBD** opsættes til lille version er der ikke mulighed for at vælge mellem flere opsætninger ligesom det ikke er muligt at definere særlige funktioner af kombinationer af  339  340 og  341.
















Når **ERKBD** er opsat i lille version virker  342 som almindelig  343 tast.









KOMMANDOER

-  344 Afslut programmet. **ERKSET** spørger om man ønsker at gemme eventuelle ændringer inden programmet forlades.




-  345 Skifter starttilstanden for  346
-  347 Skifter starttilstanden for  348
-  349 Skifter starttilstanden for  350



-  351 Tænd/sluk for muligheden for at benytte specielle kombinationer af  352  353.

-  354 Vælg **AT** tastaturtype
-  355 Vælg **ENHANCED** tastaturtype
-  356 Vælg **XT** tastaturtype
-  357 Vælg **SHARP-BÆRBAR** tastaturtype, samt tillad særlige funktioner til styring af **CPU** hastighed.
-  358 Vælg lille opsætning
-  359 Sæt repetitionsventetid og -hastighed
-  360 Slå farver til og fra
-  361  362 tasten placeres logisk til venstre for mellemrumstangenten på **AT** og **XT** tastaturtyper. Denne placering er den normale.
-  363  364 tasten placeres logisk til højre for mellemrumstangenten på **AT** og **XT** tastaturtyper.  365 placeres dermed til venstre for mellemrumstangenten.  366 og  367 er indført for at gøre det lettere at foretage indtastning af  368 numerisk indtastning af specialtegn med en hånd. Normalt kan man afmontere tasternes overdele og ombytte dem.

-  369 Vælg opsætning 1 som standard (leveres som US tastatur)
-  370 Vælg opsætning 2 som standard (leveres som DK tastatur)
-  371 Udvalg en tast til ændring. Når tasten er udvalgt vil den blinke som tegn på, at man kan vælge den nye værdi tasten skal sende. Hvis man ikke har adgang til denne værdi i den eksisterende tastaturopsætning kan den indtastes med ALT-NUMERISK indtastning.
-  372 Nulstil den tast markøren peger på
-  373  374  375  376 Flytter markøren rundt på skærmen.

FUNKTIONSTASTER

I ERKBD er det muligt at vælge om tasterne i kombination med  377,  378 og  379 skal fungere som funktionstaster eller som almindelige bogstavtaster.

Normalt er alle taster i kombination med den almindelige  380 tast funktionstaster mens bogstav-taster i kombination med  381 tasten er bogstavtaster afsat til specielle tegn.

Disse konventioner er ikke gennemført på alle taster og det er med ERKSET muligt for alle kombinationer af at vælge om tasten skal fungere som funktionstast eller som bogstavtast.

1 ??none

2 shift

3 ctrl

4 alt

5 scroll

6 num

7 caps

8 ins



På visse maskiner kan der være problemer med taster der sender α , β eller \equiv . Hvis der i forbindelse med anvendelse af ERKBD opstår problemer som f.eks. at maskinen låser under forsøg på at taste en af disse, kan det skyldes dette forhold.

Hvis en tast defineres til at sende et tegn med ASCII værdi 0, vil tasten blive undertrykt af DOS/BIOS.

386 ENHANCED MODE	Mode of MS-WINDOWS program. See explanation in the MS-WINDOWS documentation.
80186 PROCESSOR	Central processing unit. Normally specification of processor type could be found in documentation or on invoice.
ALT-NUMERISK	
BIOS	Abreviation of "Basic input output system". Covers a set of functions factory installed in the computer. Normally the programs are unmodifiable. Controls all communication between the central processor unit and external units as disks, displays, keyboard etc.
BREAKCODE	Internal code send by the keyboardcontroller to the keyboarddriver. Normally equal to the MAKECODE plus 80h i.e. 128.
DOS	The operationsystem used in most IBM compatible personal computers.
DOS5	Version 5 of DOS.
HEX	Numberrepresentation with base 16, with the digits: 0123456789ABCDEF.

KEYCODE	Internal code sent by keyboarddriver to requesting program.
MAKECODE	Internal code sent by keyboardcontroller to the keyboarddriver.
REAL MODE	Mode of MS-WINDOWS (not version 3.1) program. See explainaion in the MS-WINDOWS documentation.
SCANCODE	Internal code sent by keyboarddriver to requesting program. This code was originally closely related to the MAKECODE.
STANDARD MODE	Mode of MS-WINDOWS program. See explainaion in the MS-WINDOWS documentation.