

# Cpmtools

<http://www.moria.de/~michael/cpmtools/>

GUI → <http://star.gmob.jp/koji/cgi/wiki.cgi?page=CpmtoolsGUI>

<https://www.seasip.info/Unix/LibDsk/>

## Format description

```

diskdef name                format definition
  seclen n                   128,256,512,1024,.. physical Sector length
  tracks n                   1.. Number of tracks                = (Cylinders *
Sides)
  sectrk n                   1.. Sectors per track
  blocksize n                1024,2048,4096,8192,16384 Block size =
(128*(BLM+1))
  maxdir n                   1.. Number of directory entries    = (DRM+1)
  skew n                     0.. Logical sector skew
  skewtab r1,r2,r3,...      skew table
  boottrk n                  Number of system tracks            = OFS
  offset n | nK | nM | nT    n Byte|n Kilobyte|n Megabyte|n Tracks
  logicalextents n          Logical extents per physical extent
  os 2.2 | 3 | isx | p2dos | zsys
  libdsk:format name        pcw720,cpcsys, etc. (Optional kann der Typ
mit übergeben werden: format[,type])
  dirblks n                 to allow reserving blocks after the
directory using an inflated DPB ALV0 (since 2.21)
end

```

Berechnungen:

```

size := (secLength*sectrk*(tracks-boottrk))/blksiz;
if (extents==0) extents := ((size>=256 ? 8 : 16)*blksiz)/16384; if
(extents==0) extents := 1;
Allocatabledatablocks := size-(maxdir*32+blksiz-1)/blksiz);

```

posix:

```
physical pos := ((sector+track*sectrk)*secLength)+offset;
```

win32c:

```
SetFilePointer := ((sector+track*sectrk)*secLength)+offset;
```

libdisk:

```
physical sector := track*sectrk + sector + offset/secLength;
```

Viele Hinweise zu libsk, cpmtools, ... und zur Analyse unbekannter Disketten gibt's von Larry Kraemer

auf <http://forums.debian.net/viewtopic.php?f=16&t=112244>

## Build

Erzeugen mit MINGW/MSYS

```
#-----  
---  
# libdsk  
#-----  
---  
  
tar zxvf libdsk-1.3.3.tar.gz  
cd libdsk-1.3.3  
./configure  
make  
strip *.exe  
make install  
cd ..  
  
#-----  
---  
# cpmtools  
#-----  
---  
  
PDCurses installieren, d:\devtools\MinGW\include\curses.h heißt schon  
richtig?  
  
cd d:\devtools\MinGW\lib\  
copy libpdcurses.a libcurses.a  
  
#-----  
---  
  
tar zxvf cpmtools-2.13.tar.gz  
cd cpmtools-2.13  
./configure --with-diskdefs="" --with-defformat="default" --with-  
libdsk=/local/  
make  
make -i install  
strip /local/bin/*.exe  
  
#-----  
---  
  
tar zxvf cpmtools-2.18.tar.gz  
cd cpmtools-2.18
```

```
es gibt Compiler-Probleme mit den mitgelieferten getopt-Daten, deshalb
- in Makefile.in "getopt$(OBJEXT) getopt1$(OBJEXT) " überall löschen
- leere Datei getopt_.h anlegen (oder vorhandene leeren)
```

```
./configure --with-diskdefs="" --with-defformat="default" --with-
libdisk=/local/
make
strip *.exe
make -i install
```

## Changes

Changes since 2.22:

- o Use 16 bit block pointers for file systems > 256 blocks, not >= 256
- o Translate CP/M file name character '/' to ',' for the host and back
- o dirblks in Kaypro format fixed
- o Misc fixes for directory listing
- o Added bootsec diskdefs option
- o Check Device\_close return value
- o Check for too small block number when reading file data
- o Replaced obsolete macros in configure.in
- o Cygwin/Windows support did not build any more and likely not for quite some time, so it was removed.

Changes since 2.21:

- o Refactored curses terminal calls into own module
- o Many autoconf changes with the hope to improve portability and likely just breaking things
- o New diskdef for HP200
- o Added dirblks to allow reserving blocks after the directory as used by Kaypro
- o Fixed user number output for cpmls -d
- o Added option -u to show all CP/M file names in uppercase

Changes since 2.20:

- o rc759 diskdef renamed to rc75x, as it works for the series
- o diskdefs.5 added
- o Many disk formats from Larry Kraemer added
- o Renamed ampdsdd to ampro400d for consistency with libdisk and because ampdsdd very likely was wrong
- o Check for invalid block size
- o Output line number for diskdefs errors
- o Correctly output create or access time for CP/M 3 in cpmls
- o Spectravideo SVI-728 diskdef added

- o \$DESTDIR support
- o Correctly handle empty files
- o Fix block allocation for large directories.
- o Fix time stamp conversion
- o Allow user number 16-31 for CP/M 2.2
- o Intel MDS/22 formats added
- o Crash when using blocksize 16384 fixed

Changes since 2.19:

- o Fixed bug in cpmfs leading to wrongly allocated blocks

Changes since 2.18:

- o More diskdefs entries
- o New diskdefs option to set the libdisk format
- o Fixed various warnings
- o Fixed Makefile if building without curses

Changes since 2.17:

- o Make timestamps in mkfs.com optional and add date stamper creation
- o Better cpm.5 documentation
- o Updated config.guess
- o Fixed error handling for corrupt images or diskdefs
- o Fixed off by one bug in fsck not detecting a wrong block number
- o Fixed too short directory buffer for directory sizes not matching whole blocks

Changes since 2.16:

- o Improved filesystem documentation
- o Many new diskdefs
- o device\_win32.c fixed by Bill Buckels

Changes since 2.15:

- \* Various small fixes
- \* Datestamper support
- \* Image offset to access disk slices

## libdisk-Formate und Typen

```
d:>dskdump.exe -formats  
Disk formats supported:
```

```
pcw180      : PCW / IBM 180k  
cpcsys      : CPC System
```

```
cpcdata      : CPC Data
pcw720       : PCW / IBM 720k
pcw1440      : PcW16 / IBM 1440k
ibm160       : IBM 160k (CP/M-86 / DOSPLUS)
ibm320       : IBM 320k (CP/M-86 / DOSPLUS)
ibm360       : IBM 360k (CP/M-86 / DOSPLUS)
ibm720       : IBM 720k (144FEAT)
ibm1200      : IBM 1.2M (144FEAT)
ibm1440      : IBM 1.4M (144FEAT)
acorn160     : Acorn 160k
acorn320     : Acorn 320k
acorn640     : Acorn 640k
acorn800     : Acorn 800k
acorn1600    : Acorn 1600k
pcw800       : PCW 800k
pcw200       : PCW 200k
bbc100       : BBC 100k
bbc200       : BBC 200k
mbee400      : Microbee 400k
mgt800       : MGT 800k
trdos640     : TR-DOS 640k
ampro200     : Ampro 40 track single-sided
ampro400d    : Ampro 40 track double-sided
ampro400s    : Ampro 80 track single-sided
ampro800     : Ampro 80 track double-sided
pcw1200      : PcW16 / IBM 1200k
mac400       : Macintosh GCR 400k
mac800       : Macintosh GCR 800k
myz80        : MYZ80 8Mb
pcpm320      : IBM 320k (CP/M-86 / DOSPLUS)
```

```
d:>dskdump.exe -types
```

```
Disk image types supported:
```

```
ntwdm       : NT WDM floppy driver
floppy       : Win32 floppy driver
gotek        : Gotek 1440k disc image collection
gotek72     : Gotek 720k disc image collection
remote       : Remote LibDsk instance
rcpmfs       : Reverse CP/MFS driver
dsk          : CPCEMU .DSK driver
edsk         : Extended .DSK driver
apridisk     : APRIDISK file driver
copyqm       : CopyQM file driver
tele         : TeleDisk file driver
ldbs         : LibDsk block store
sap          : SAP file driver
qrst         : Quick Release Sector Transfer
imd          : IMD file driver
ydisk       : YAZE YDSK driver
raw          : Raw file driver (alternate sides)
rawoo        : Raw file driver (out and out)
```

```
rawob      : Raw file driver (out and back)
myz80      : MYZ80 hard drive driver
simh       : SIMH disc image driver
nanowasp   : NanoWasp image file driver
logical    : Raw file logical sector order
jv3        : JV3 file driver
dc42       : Disk Copy 4.2
cfi        : CFI file driver
```

From:

<https://hc-ddr.hucki.net/wiki/> - **Homecomputer DDR**

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