

# Cpmtools

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

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           Logical extents per physical extent
  os 2.2 | 3 | isx | p2dos | zsys
  libdisk:format name      pcw720, cpcsys
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

```
#-----  
---  
# libdisk  
#-----  
---  
  
tar zxvf libdisk-1.3.3.tar.gz  
cd libdisk-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-  
libdisk=/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 2.19:

- 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

d:\user\pohlers\AltairSIMH>dskscan -formats Disk formats supported:

```
pcw180      : PCW / IBM 180k
pcpsys      : 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
myz80 : MYZ80 8Mb
pcpm320 : IBM 320k (CP/M-86 / DOSPLUS)
```

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

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Last update: **2015/03/12 09:48**

