Multi Mark v.1.2a

GPA (c) August 2014

This program is now freeware !

Multi Mark is a disk system utility. It allows you to format and verify disks using classic formats, detect and put a mark on corrupted sectors, make a copy of their catalogs.

Thanks to Kris and Maxit, I have made a ROM release of Multi Mark 1.2. It is a little bit smaller than the disk release (end of memory used is &A5B5), so it might be easier to use with other ROM tools.
As there is no config file in this release , you can change default paremeters in the ROM file with CONFROM.BAS program.

1) FORMAT - Format a disk ('F' key)

Format option is easy to use. You just have to enter the kind of format you want to start (Data or Vendor). Then, the process begins, using disk Setup parameters (number of tracks, etc..). Before formatting, each sector is tested If there are bad ones, at the end of the verification, a 'ghost' file named ' ERROR . ', including all wrong sectors, will be created. You can then work with these disks without any problems (only files copy, of course).

If the diskette is too damaged, you can stop verification step by pressing the 'ESC' key.

For expert users, it is possible to modify several parameters so that you can create special formats. You can define in the Setup option :

* number of tracks (1 to 99)
* number of sectors per track (9 or 10)
* number of 'disks' per side (1 or 2)
* GAP 3 format value

Now, it is possible to mark a diskette withou format it ('M' command). Why such a stange routine ? Some bad quality diskettes have sectors that are well formatted but become wrong after a little while. Please note that if Mark command detects bad sectors, the disk catalog will be cleared, so all the datas on your diskette will be lost.

2) VERIFY - Verify a disk ('V' key)

This part allows you to test a disk using Setup parameters. Verify analyses Basic format (Data or Vendor), read the catalog disk, and try to load each sector of the disk. You can have a printed report for each bad sector detected including track number, sector number and corresponding file (deleted files are not considered). You can stop the verify option by pressing 'ESC'.

Warning ! Verify command always considers 64 entrie catalog. You can use it with a 128 entrie catalog, but only the 64 first entries will be used to look for the corresponding filemane of a wrong sector.

3) MIRROR - Make a save copy of disk catalog ('M' key)

The purpose of Mirror option is to make a copy of a disk catalog track on another track. It allows you to rebuild a disk catalog when the catalog track is unreadable. Mirror use must be restricted only for 'filled' disks (it means :

no work disk, where you regularly save and delete files). Its means too, NO COMMERCIAL PROTECTED GAME DISK (unless you just want to destroy it...). 'Mirror track' number can be changed in the Setup menu.

Warning ! This command does not work properly with 2 x 40 special format (it only saves the first catalog).

4) RESTORE - Rebuild a catalog disk ('R' key)

It's the associated Mirror command. To Restore a catalog disk, a Mirror track must exists and not be corrupted. There are two ways of using Restore option.

- You start it on the disk whose catalog is out. Catalog track will be formated, and Restore will try to copy the Mirror track on it. If a catalog sector is still wrong after formatting, Restore attempt will not be efficient. There, you must try the following method.

- Copy the damaged disk on a perfect disk with a physical duplicating program. Then start the Restore command.

5) SETUP - Config menu ('S' key)

This part is very important, because it makes it possible to change parameters used by all the other options of Multi Mark. On each page, you can move the cursor with up and down keys, change parameter values with left and right keys and validate commands with Space (the commands are : Saving Config, Select another page). Warning, before modifying parameters, you must know what you do ! Don't try to put 80 tracks on a 40 track floppy, for example !

Main screen

* Select floppy A: paramaters page
* Select floppy B: parameters page
* Selection FDC parameters page
* Attempt of reading a sector before to declare it corrupted
  (1 to 255)
* Activate printer (0 or 1) 1 = printer messages active
* Save Setup config
  parameters are saved in a binary file called 'MM-12 .CFG'

Floppy A: screen

* Number of track (1 to 84)
* Number of 'disks' per side (1 or 2)
* Track Mirror number (0 to 83)
* Sectors per track (9 or 10)
* Sectors per block (2 or 4)

Floppy B: screen

* Number of track (1 to 84)
* Number of 'disks' per side (1 or 2)
* Track Mirror number (0 to 83)
* Sectors per track (9 or 10)
* Sectors per block (2 or 4)

FDC screen

* GAP 3 format of A: floppy (0 to 255)
* GAP read/write of A: floppy (0 to 255)
* GAP 3 format of B: floppy (0 to 255)
* GAP 3 read/write of B: floppy (0 to 255)

6) DIR - directory of a disk

It's just a little routine to display disk files. Now, you may not format 'wrong' diskettes ! This command can read directories of a 'two sides' diskette (2x 40 tracks).

7) Disk formats

Multi Mark can create more or less classical disk formats. Let's see what we can do with it !

Basic formats.

Amsdos operating system disk is able to recognize three kinds of formats, named DATA, VENDOR and IBM (never used). Usually used by cpc owners, unfortunately they don't allow to work with 80 track disks.

- Data format

  40 tracks, 9 sectors per track (&C1 to &C9), 512 bytes per sector
  178ko storage capacity per side
  GAP 3 format = 82
  GAP 3 read/write = 42

- Vendor Format

  40 tracks, 9 sectors per track (&41 to &49), 512 bytes per sector
  169ko storage capacity per side
  Tracks 0 and 1 set for CPM system

GAP 3 format = 82

GAP 3 read/write = 42

Special formats.

None of the following formats is a standard. They always need init loaders and sometimes special filecopy programs. But, they make possible to increase storage capacity of a disk. Some of the following format are already used by some P.D. utilities.

- 42 track format

42 tracks, 9 sectors per track, 512 bytes per sector

187ko storage capacity per side (data format)

178ko storage capacity per side (Vendor format)

Standard GAP 3

Utility : Crime ((c) Crown of Beng!), Disc'o'Magic

for : no Dos init program to start before loading file on tracks 40 and 41.

against : Mirror command can not be used in data format (only track 1 for Vendor format)

- 208ko format ((c) Amsteph & AM-MAG)

42 track, 10 sectors per track (&C1 to &CA), 512 bytes per sector

208ko storage capacity per side (data format only)

GAP 3 format = 38

GAP 3 read/write = ?

Utility : 'formateur 208ko' from Amsteph (published in an old French

cpc magazine, AM MAG issue 38)

for : maximum storage capacity for a 3" disk.

against : no track can be reserved for Mirror. A Dos init program must be started before working on that format.

- 57 track format (drive 60 or 80 tracks only !!!!)

57 tracks, 9 sectors per track, 512 bytes per sector (Data)
59 tracks, 9 sectors per track, 512 bytes per sector (Vendor)
254ko storage capacity per side
Utility : Copyluck

for : no Dos init program to run to read files on tracks 40 to 56 or 58.

against : only 254ko ?

- 2 x 40 format (drive 80 tracks only !!)

2 x 40 tracks, 9 sectors per track, 512 bytes per sector
2 catalog tracks !!!
356ko space free in data format (2 x 178)
338ko space free in vendor format (2 x 169)
Utility : MultiArc.

for : First part of the disk can be used like an common disk.

against : No utility existing to make filecopy on the second part of the disk. Only first catalog track can be saved with the Mirror

command. A new english utility, called MultiArc (it allows you to archive 3 inches diskettes) uses this format. It has been tested in Amstrad Action issue 107.

- Magic Dos format ((c) Serge Querne (Longshot))

82 tracks, 10 sectors per track, 512 bytes per sector
410ko capacity storage
4 sectors per block !
64 catalog entries per side
GAP 3 format = 48
GAP 3 read/write = ?
Utility : Magic Dos

for : 410ko per side !

against : Mirror not usable. A Dos loader must be executed to init Magic Dos format.

8) MML-12 .BAS Loader

This little program allows you to run a BINARY program when you leave Multi Mark with the command Quit. The only thing you have to modify if you want to utilize it is the name of the file to load. Edit MML-12 .BAS file and change FILENAME$ value (12 characters obligatory !).

9) RSX commands

To use under Basic 2 x 40 and 57 tracks formats, the program MM-12RSX.BAS adds new commands :

* |DK1 : first part of a 2x40 formatted disk is the default part

* |DK2 : second part of a 2x40 formatted disk is the default part

* |D246 : init 55 track format mode. |DK1 command allows you to return to a 'normal' format.

  |D246 is not able to use all the tracks of a 57 tracks format. In fact, Amsdos doesn't like to have more than &F7 blocks on a disk. Why, I don't know ! If you put an higher value, computer crashes when you use commands |A and |B. So, use a copy utility, like Copyluck !

10) MM-12LOAD.BIN program, B: drive files launcher

With this little program, you may use programs who init Dos system using &BCCE vector on your B: floppy. No 100 % guaranty of success ! It only avoid the drive number being initied, it doesn't save special format parameters. Note that MM-12LOAD can work with two sides diskettes (2x40 or 2x42 tracks).