

floptical

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| | <i>TITLE :</i> floptical | | |
| <i>ACTION</i> | <i>NAME</i> | <i>DATE</i> | <i>SIGNATURE</i> |
| WRITTEN BY | nsoggia@telnetwork.it | February 12, 2023 | |

REVISION HISTORY

| NUMBER | DATE | DESCRIPTION | NAME |
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As products born for the PC market, they have to be fixed a little before working correctly: dosdudes are so happy to install patches on their system that hardware makers can't keep them unhappy. So I had to write a patch called FWen (Floptical Write ENable) to be able to write data on the disks. I also had to write FFmt (Floptical ForMaT) as SYS:System/Format seems to fail formatting 720Kb and 1.44Mb disks. Yes, HDToolBox is able to low level format 1.44Mb disks, but then I have to "format quick" each floppy; and the 720Kb disks? Oh, well, they are too small to be RDB'ed media so HDToolBox will not low level format them.

COMPATIBILITY

I tested the programs on my A3000/030 using the built-in SCSI controller and a Iomega Io20S*F (v1.7) drive. I also own a GVP Impact S2/A500-HD+ but it is actually out of order and I am looking for someone who repairs it. If FWen and FFmt don't work on your GVP controller and your gvpscsi.device version is less than 4.4, you may try using a "GVPPatch -o" once before running FWen or FFmt. If my programs don't work with your setup please let me know, if they work let me know anyway ^_^

INSTALLATION

I didn't write a Installer script, maybe I will write one if I revise FFmt to support Workbench. Installation is however quite simple: both FFmt and FWen are stand-alone programs, my suggestion is to copy them in the SYS:System/ directory and run FWen early in the S:Startup-sequence.

1.3 Useful Notes

FLOPTICAL WRITE ENABLE (FWEN) TIPS

Drives have to be write enabled once every time you reboot and not every time you have to write on the disk, so the right place for FWen is the startup-sequence. If you don't automount the volume(s), it is a good idea to put FWen before the Mount command to let the disk-validator repair the disk if it is damaged.

If you own more than one Floptical drive connected to the same controller, remember that it is possible to specify more than a unit number on the same command line.

If you insert or remove a disk in the drive while FWen is enabling the unit, FWen may return a SCSI status error and the drive will stay write protected. This problem is related to the drive's firmware and not belonging to any Amiga scsi device or to my programs.

FLOPTICAL FORMAT (FFMT) TIPS

As FFmt is designed to support only Floptical drives, when run it first checks the unit and its geometry by a single SCSI command. This command fails if the unit is not a floptical or the unit is empty, FFmt is too lazy to ask you to insert a disk if the drive is empty and it quits immediately. When you get a "mode sense, no medium" error, simply insert the disk to format and run FFmt again.

FFmt stops formatting when it finds a faulty track, no retries are attempted.

Actually it is not possible to select the start and stop tracks to low level format, the default start and stop tracks are the first and the last physical tracks: in other words FFmt isn't able to format a particular area of a disk but only the whole medium. If you wish to format just one partition or you want to preserve the RDB data, you have to use the Format command supplied on you Workbench disk as FFmt will always overwrite every partition and the RDB area (if present).

FORMATTING 21 MB DISKS

Floptical disks are sold already low level formatted and don't need to be low level formatted again: a "Format quick" is enough to initialize a partition, if you want to support RDB mounting, don't forget to prep the disk before formatting its partition(s).

If you have to create a RDB on the disk, it is more comfortable to use HDToolBox (or any similar prep utility) to low level format, prepare and partition the disk and then use the standard Format command to "Format quick" each partition than using FFmt which wasn't designed for this purpose. Anyway FFmt recognizes and supports 21Mb disks, if you have to low level and then high level format a RDB-less disk (such as MS-DOS disks or startup-mounted 21Mb ffs disks) FFmt comes handy enough.

Low level formatting a 21Mb disk is quite a waste of time, always consider a "Format" or "Format quick" on disks with no bad tracks. If a disk has bad tracks because you pulled out a disk during a write, you can try to low level format the disk, but if the cause of the damage is the quality of the medium, HDToolBox's low level format is better than FFmt because the former tries to remap errors, the latter quits on write errors.

1.4 The icons drawer

THE ICONS DRAWER

I provided three icons sets: MagicWB, NewIcons and Standard WB. As Workbench can't display disk icons in drawer windows, I added some fake project icons to let you preview the disk images. Each set consists of three icons, an icon for FWen (#?_FWen.info), a disk icon (#?_Disk.info) for 21Mb volumes, and a project icon (#?_Dsk.info) with the disk icon imagery. FFmt hasn't its icon because actually it's a shell-only command. Each set has its prefix: "MWB" for MagicWB, "NI" for NewIcons and "WB" for standard 4 colours Workbench (2.0+ palette).

WORKBENCH 1.2 AND 1.3

In this distribution archive there is no icon attached to the FWen program, to let the program appear in a Workbench window you'll have to borrow an icon from the icons drawer, e.g. by:

```
copy Floptical_37.01/Icons/WB_FWen.info Floptical_37.01/FWen.info
```

1.5 FWen user manual

FWEN REQUIREMENTS

Kickstart 1.2 or later, at least a 4Kb stack, about 2Kb of free memory, at least a SCSI controller supporting SCSI direct commands, one or more floptical drives. The program is pure and runs from CLI/Shell and Workbench.

PURPOSE

FWen removes the software write protection of a floptical drive. Floptical drives after a soft or hard reset write protect themselves even if the disk tab is in write enable position. This behavior is due to the technology of the PC controllers which may write spurious data when the dos is not consistent (no comment). FWen have to be run once for each installed Floptical drive every time your Amiga reboots.

SHELL ARGUMENTS

-V=VERBOSE/S setting this switch forces the program to output a text line for each floptical successfully write enabled. It is a debugging switch, in normal use it may be better not to set it to keep closed the initial cli window. **KICKSTART 1.2/1.3 NOTE:** to set this option add a "-v" as the first parameter of the command line, "verbose" under 1.x doesn't work.

DEVICE/A this required parameter is the exec device name of the controller connected to the floptical drive(s). Only one exec device name can be set on each command line, so if you own many controllers with different exec device names you'll have to run the program as many times as the number of different exec device names. Dos device names are not supported!

UNIT/N/M/A each number of this required list is the exec device unit number of each Floptical drive connected to the controller suggested by the device argument.

ERROR HANDLING

If of error a return code of 10 (general error) or 20 (allocation failed) is set, and a string to the standard output handle always explains the failure details. If the program was run from Workbench, a requester will replace each line sent to the standard output handle.

WORKBENCH TOOLTYPES

VERBOSE If set, the program opens a requester when an error occurs or when a floptical drive is found and then write enabled. This could be useful to check if all the tooltypes are set correctly, as errors in tooltypes are not reported. If not set, the program opens a requester only when an error occurs.

DEVICE= Specifies the exec device name of the controller connected to the floptical drive(s). Example: **DEVICE=scsi.device**

UNIT= Specifies the unit number(s) of the floptical drive(s), this tooltype can be repeated.

Example: **UNIT=1 UNIT=2**

1.6 FFmt user manual

FFMT REQUIREMENTS

Kickstart 2.0 or later, at least a 4Kb stack, about 32 Kb of free memory, at least a SCSI controller supporting SCSI direct commands, one or more floptical drives. The program is pure and doesn't support Workbench.

PURPOSE

FFmt removes the software write protection of a floptical drive, guesses the correct disk geometry and low level formats the medium. If enough parameters are given and the low level format was successful, it will try to high level format the volume.

SHELL ARGUMENTS

A drive can be identified by its dos device name or by the exec device name and unit number. This means that DRIVE/K and DEVICE/K+UNIT/K/N are mutually exclusive ways to specify the same physical device.

DRIVE/K this parameter is the dos device name (e.g. "DH2:") of the drive which will format the disk. The dos device name must have the trailing colons.

NAME/K this parameter is the volume name of the formatted medium (e.g. "Empty"). If you set it, FFmt will try to high level format the volume if the low level format was successful. If you don't specify this parameter, only a low level format will be performed. Low level formatting a volume means preparing its surface to keep the data you want to save, but over the low level format it is always needed a high level format to tell the filesystem how to store the data you will save on the disk.

DEVICE/K this parameter is the exec device name (e.g. "scsi.device") of the drive which will format the disk. Using this parameter a device unit number is needed.

UNIT/K/N this parameter is the device unit number (e.g. "1") of the drive which will format the disk. Using this parameter a exec device name is needed.

QUICK/S this parameter tells FFmt to skip the low level format procedure if possible, an already low level formatted disk can infact be high level formatted very quickly. If not set, FFmt will always low level format the volume, even if it is already low level formatted. This parameter needs NAME/K to be set. As it is not possible to high level format a non low level formatted disk, this switch will be automagically disabled when a completely blank disk is inserted in the drive.

USAGE

FFmt, when run, needs a disk to be already in the drive to select the right geometry. When the drive is empty, FFmt will exit quickly with a "mode sense, no medium" error. Simply insert the disk to format and run FFmt again.

1.7 HideUnits user manual

HIDEUNITS REQUIREMENTS

Kickstart 2.0 or later, at least a 4Kb stack. The program is pure and doesn't support Workbench.

PURPOSE

HideUnits temporarily hides physical devices to HDToolBox (or any similar prep utility) by patching the OpenDevice() exec function; all other applications will continue working as before while HideUnits is running. Hiding all devices except the boot partition and the automount devices helps in getting a faster bootstrap.

SHELL ARGUMENTS

DEVICE/A this required parameter is the exec device name of the controller connected to the physical devices to hide. Only one exec device name can be set on each command line, so if you own many controllers with different exec device names you'll have to run the program as many times as the number of different exec device names. Dos device names are not supported!

UNIT/A/N/M each number of this required list is the exec device unit number of each physical device to hide.

USAGE

Run the program before running HDToolBox, and send it a CTRL-C break signal after exiting from HDToolBox. This is just a quick hack for people who knows what they are doing: if you know why and when you should hide a unit to HDToolBox you can safely use this program, otherwise be careful or you may lock yourself out of your hard disk (if you want to experiment, always keep handy a boot floppy containing HDToolBox or any similar prep utility).