

AllowBad0.6

MIKEMASTER

COLLABORATORS

	<i>TITLE :</i> AllowBad0.6		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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Chapter 1

AllowBad0.6

1.1 AllowBad 0.7B © Mikolaj Calusinski 1995-1996

AllowBad 0.7 (Beta version)

© Mikolaj Calusinski 1996. Freeware.

User Manual

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1.2 AllowBad 0.7B: Introduction

AllowBad is freeware (see
Distribution
) and copyright 1995-1996 by Mikolaj
Calusinski. All rights reserved.

 IMPORTANT!

IF YOU ARE A FASCIST OR NAZI YOU ARE *NOT* ALLOWED TO USE THIS PROGRAM!!!

1.3 AllowBad 0.7β: Distribution

[The following text has been derived and adjusted from 'FileMaster~3.0.guide'
 © Toni Wilen 1995 (I don't want to reinvent the wheel). I hope~Toni, you
 don't mind.]

AllowBad may be distributed freely, providing the following criteria are~met:

- None of the files in the AllowBad distribution archive may be modified~or omitted.
- No money is charged for it apart from media and small handling fee.
- AllowBad may be included in freely distributable software libraries, including the Fred Fish collection and CD-ROM distributions of the~Aminet FTP site contents.
- AllowBad may not be bundled with any commercial hardware or software product without prior written consent from the author.
- You may not reverse-engineer or modify the AllowBad executable on disk~or on memory except for compressing it.

1.4 AllowBad 0.7β: Disclaimer

[The following text has been derived from 'FileMaster 3.0.guide' © Toni~Wilen 1995 (I don't want to reinvent the wheel). I hope Toni, you don't~mind.]

THIS PRODUCT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. ALL RISKS AND~DAMAGES, INCIDENTAL OR OTHERWISE, ARISING FROM THE USE, MISUSE, OR INABILITY~TO USE THIS PROGRAM ARE ENTIRELY THE RESPONSIBILITY OF THE USER. THE AUTHOR~DOES NOT MAKE ANY GUARANTEES OR REPRESENTATIONS REGARDING THE CORRECTNESS,~RELIABILITY, ACCURACY, CURRENTNESS, ETC. OF THIS PROGRAM. THE AUTHOR WILL~NOT ACCEPT RESPONSIBILITY FOR ANY DAMAGE OR LOSSES RESULTING FROM THE USE,~MISUSE, OR INABILITY TO USE THIS PRODUCT.

1.5 AllowBad 0.7β: What is that for?

This program was written as a replacement for good, but old ↔
 BFormat 4.0.

Its~purpose is to format disks of any *floppy-based* devices, which have hard~(media) error on them. Such disks cannot be formatted (and hence utilized)~by system 'Format', so only thing you could do was getting rid of

them.~Optionally, you could use BFormat of course, but such prepared disks were~very unstable under AmigaDOS, and gave 'read-write' errors quite often. This~was because of way BFormat works - it allocates only blocks which appeared~to be corrupted, leaving rest of the track for use by filesystem. It sounds~quite logical and give you more free space on disk but doesn't work that~well with floppies. For safety of stored data it is better to avoid whole~track regardless whether there is only one or more bad blocks on it. That is~the way AllowBad handles the errors - it masks the tracks, not blocks.

AllowBad should be able to format disks in all floppy-like devices, which~have the following parameters (and these are checked when device type is~determined to be floppy or not):

- number of surfaces must be 2
- starting cylinder (LowCyl) *must* be 0
- ending cylinder (HighCyl) must not be higher than 81
- block per track can be any number above three (so at least four)
- block size must be standard (512 bytes)
- device must use AmigaDOS filesystem (0x444F53XX - 'DOS')
- max unit number is 3 (ranging from 0 to 3)

The above should rule out all harddisks (if you want to format damaged~harddisk use BFormat or Quarterback), CDROMs, etc. AllowBad works (and has~been tested) with trackdisk (DFx:) and diskspare [(c) 1992-1994 by Klaus Deppisch] (DSx:) devices. It should~support all possible future devices which comply to the specs mentioned.

The program is aware of high density (HD) floppies and should support them,~but unfortunately I was unable to test it (hence the Beta status of~AllowBad). Please, report all the possible bugs to the
address
found at
the~end of this document.

You can format RAD: device with AllowBad (as long as it complies to above~specs) but this does not make much sense.

1.6 AllowBad 0.7B: Requirements

As most of nowadays programs, AllowBad requires at least ↵
version 2.04
of~operating system. Reasons are obvious: it is much easier for programmer (me)~to code the whole thing and most Amiga users have already upgraded their systems anyway. If you want to use DIRCACHE~filesystem you need OS 3.0 or higher (however AllowBad can format dircache~disks under 2.04, too).

AllowBad also requires some free memory; its amount depends on device. For~further details see

Way of operation
section.

1.7 AllowBad 0.7β: Limitations

AllowBad is somehow a little bit more tollerant than other programs of its-kind - it can properly format and initialize disks, which have track 0 (boot)-damaged! The only requirement for such disks is the ability to-read/write first two block on track 0 (ie. bootblocks) and one block on-middle track of disk (ie. rootblock). So, if you have for example the disk-which has damaged only block number 3, there is a good chance AllowBad will-be able to initialize this disk and make it available for file storage (with-low side of track 0 allocated as bad). But remember: such a disk is-extremely vulnerable and unstable. Be sure not to store any important files-on it!

In previous version (0.5β) AllowBad also was able to initialize disks which had the root track corrupted. Unfortunately, current version of AmigaDOS cannot write to tracks which contain corrupted blocks (it can read from them, however), so such disks most propably would be of no use anyway. In current version the disk must have whole root track not corrupted to be properly initialized.

This version of AllowBad is meant as a CLI command and cannot be used from-Workbench (it has no GUI, so no pain I think).

1.8 AllowBad 0.7β: Usage

Standard template (can be obtained via use of question mark) looks like~this:

```
DRIVE/K/A,NAME/K/A,OFS/S,INTL=INTERNATIONAL/S,DIRCACHE/S:
```

As you can see only two parameters must be specified - drive name and name~you want your disk to have. Drive name is standard doslevel device name such~as 'df0:', 'dsl:', etc., case insensitive. Must end with colon. Name of the~disk must not exceed 30 chars (this limit is imposed by current version of~AmigaDOS). Names longer than permitted will simply be truncated. If you want~the disk name to contain spaces, you must use quotes. Remaining three~parameters are optional and pertain to type of filesystem used while~initializing the disk. INTL (equivalent to INTERNATIONAL) denotes INTL FFS~(DOS3) and DIRCACHE - DC FFS (DOS5), respectively. If you use both of them~at the same time DIRCACHE will be used (DC implies INTL anyway). When none~of switches is present the disk will be formatted with default normal FFS~(DOS1).

Use OFS switch to format disks with OldFileSystem (1.3 Kickstart compatible). But be warned, that 1.3 DOS ignores all protection bits except 'd' (deletable) and you can access the faked dummy.file accidentally, causing 'Read/Write Error' requester to appear. So, don't be surprised when this happens and take some care when using disks prepared by AllowBad under Kickstart 1.3.

While formatting, the program can be interrupted with CTRL-c. If this is so, execution is terminated with RC (return code) set to 5 (WARN) and message '~***BREAK' is printed.

1.9 AllowBad 0.7β: Way of Operation

At start AllowBad checks whether the parameters issued by user are correct (they are obtained through standard ReadArgs() function). At this analyzing stage, availability of disk unit is also confirmed. If disk is not in use, AllowBad immediately allocates it (by Inhibit() function). Else program quits with error message 'AllowBad failure: object is in use'. Unfortunately some programs (such as great disk editor DPU 1.5 or recovery utility Quarterback Tools 2.2) ignore the fact that the drive is inhibited by someone else and allow you to work with such a drive. This could lead to interference between those programs and AllowBad, resulting in incorrectly formatted/initialized disks. This is NOT my fault, but programmers of those utilities! My advice is not to use any disk utility while AllowBad executes.

If everything went okay (and there is a write-enabled disk in drive) two memory buffers are allocated (and these are the only memory allocations made by the program) - first buffer is the three times of one track in size (calculated as follows: $3 * \text{BlocksPerTrack} * 512$), and the second one is 83 bytes. Thus currently the most 'memory-hungry' situation I can think of will be HD disk formatted using diskspare.device [(c) 1992-1994 by Klaus Deppisch]. In this case AllowBad will need $3 * 24 * 512 + 84$ (= 36948) bytes of free memory. The type of allocated memory (chip, public, etc.) depends on flags parameter in device's FileSysStartupMsg (you can specify it in BufMemType parameter in mountlist).

Because Allowbad is system friendly, it uses standard device calls for accessing the disk (via IORequest). First, each track of disk is formatted (using command #11 - FORMAT) with special data pattern. Then (after flushing device buffers for reliability) contents of this track is read back from disk and compared with pattern data. If operation is successful, the same track is written with zeros and once again verified. During all of this program informs briefly about what is going on. Each error encountered is notified in the second buffer and the appropriate message is displayed. Each track can be accessed up to four times, so AllowBad undoubtedly is not the fastest formatter around. But when dealing with corrupted media, reliability is what counts, not time.

When formatting completes, AllowBad attempts to initialize the disk - first boot blocks are written (and verified) then so is root. If above could be done, disk state info (as obtained during format stage) is analysed and place for other control blocks is determined. These blocks include: - dircache info block (if DIRCACHE switch was specified), bitmap block, file info block and eventually some file extension blocks. The last two can be needed only if there were errors detected.

AllowBad masks corrupted areas using dummy file which pretends to occupy all the bad tracks. This keeps the AmigaDOS filesystems from using those places and you can store files the same way as on good (error free) disks. To avoid confusion the file is protected from reading, updating, deleting, etc. and should remain as such (don't play with this file - it IS completely

faked~and does not contain anything intreresting!) The name of the file is~'dummy.bad'.

Because of way AllowBad works (and I can't think of anything better, can~you?) disks prepared by it can *only* be used under DOS, even that with some~limitations. Don't try to diskcopy to such a disk! Use DOS command 'copy'~or any file managing program instead. Also, don't try to optimize bad disks~with Reorg or like. If you want fast directory listings use dircache (OS 3.0~rules!) And remember that AllowBad DOES NOT repair anything - it only allows~bad disks to be used while they actually still remain bad!

On completion AllowBad informs you about number of blocks allocated (this~not includes boot, root, DC, bitmap and FIB blocks).

1.10 AllowBad 0.7β: Bugs

During my tests (well, not very intensive) no bugs were ←
detected, which
does~not mean there aren't any. If you find any error or have some ideas
of~improvement (or if you simply wanna chat a little, receive the source,
etc.)~please
contact
me!

1.11 AllowBad 0.7β: History

History:

- V0.5β - (24.12.95) - first release
- V0.6β - (3.3.96) - added some enhancements:
 - removing disk while prog executes is now handled properly
 - added waiting for user response before any action is done (security)
 - added OFS switch (but
watch out
1.3 freaks!)
 - displays 'cylinder' rather than 'track'
 - fixed minor bug
- V0.7β - (29.5.96) - minor fixes
 - fixed very stupid bug with disk labels longer than 30 chars
 - no longer crashes when attempted to run from WB
 - removed some even more stupid grammar errors in documentation ;)

1.12 AllowBad 0.7β: Contact address

Unfortunately, I still have no direct access to Internet (must buy a modem~first) so you can reach me only by snail mail, sorry. Here is my address:

Mikolaj Calusinski
ul. Olsztynska 113/117

42-200 Czestochowa
POLAND

I hope you find this little proggy useful. Have fun!

Mike.

-----> AMIGA - THE BEST COMPUTER EVER <-----
