

**BackMan\_ENG**

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| <b>COLLABORATORS</b> |
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# Contents

|          |   |          |
|----------|---|----------|
| <b>1</b> | <b>BackMan_ENG</b>                                | <b>1</b> |
| 1.1      | BackMan_ENG.guide                                 | 1        |
| 1.2      | BackMan_ENG.guide/Introduction                    | 2        |
| 1.3      | BackMan_ENG.guide/Disclaimer                      | 3        |
| 1.4      | BackMan_ENG.guide/License                         | 4        |
| 1.5      | BackMan_ENG.guide/Registering                     | 5        |
| 1.6      | BackMan_ENG.guide/Requirements                    | 6        |
| 1.7      | BackMan_ENG.guide/Memory_requirements             | 7        |
| 1.8      | BackMan_ENG.guide/Data_Compression_and_Encryption | 8        |
| 1.9      | BackMan_ENG.guide/MUI                             | 9        |
| 1.10     | BackMan_ENG.guide/BackMan                         | 9        |
| 1.11     | BackMan_ENG.guide/Command_Line_Arguments          | 10       |
| 1.12     | BackMan_ENG.guide/BackManMUI                      | 12       |
| 1.13     | BackMan_ENG.guide/Configuration                   | 13       |
| 1.14     | BackMan_ENG.guide/General_Options                 | 13       |
| 1.15     | BackMan_ENG.guide/Backup_Options                  | 14       |
| 1.16     | BackMan_ENG.guide/XPK_Packer                      | 15       |
| 1.17     | BackMan_ENG.guide/XPK_Crypter                     | 15       |
| 1.18     | BackMan_ENG.guide/Restore_Options                 | 15       |
| 1.19     | BackMan_ENG.guide/Backup_Device                   | 16       |
| 1.20     | BackMan_ENG.guide/Tape                            | 16       |
| 1.21     | BackMan_ENG.guide/Disk                            | 17       |
| 1.22     | BackMan_ENG.guide/File                            | 18       |
| 1.23     | BackMan_ENG.guide/Backup                          | 18       |
| 1.24     | BackMan_ENG.guide/Restore                         | 19       |
| 1.25     | BackMan_ENG.guide/Compare                         | 20       |
| 1.26     | BackMan_ENG.guide/Diff                            | 21       |
| 1.27     | BackMan_ENG.guide/File_Selection                  | 21       |
| 1.28     | BackMan_ENG.guide/Filter                          | 22       |
| 1.29     | BackMan_ENG.guide/Suggestions                     | 23       |

---

1.30 BackMan\_ENG.guide/Internals . . . . . 23

1.31 BackMan\_ENG.guide/Caveats . . . . . 24

1.32 BackMan\_ENG.guide/Bug\_Report . . . . . 25

1.33 BackMan\_ENG.guide/The\_Authors . . . . . 25

1.34 BackMan\_ENG.guide/Thanks . . . . . 26

1.35 BackMan\_ENG.guide/Concept\_Index . . . . . 26

# Chapter 1

## BackMan\_ENG

### 1.1 BackMan\_ENG.guide

BackMan

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BackMan 1.3

User's Manual

Copyright (C) 1995 Sandro Tolaini and Flavio Stanchina.

|               |  |
|---------------|--|
| Introduction  | What is BackMan?                                 |
| Disclaimer    | No warranties!                                   |
| License       | Legal issues.                                    |
| Registering   | A program worth using is a program worth buying! |
| Requirements  | What you need...                                 |
| BackMan       | Command Line (CLI) version.                      |
| BackManMUI    | MUI version.                                     |
| Suggestions   | How to get the best out of BackMan.              |
| Internals     | Some words about BackMan's routines.             |
| Caveats       | Be sure to read this!                            |
| Bug Report    | We hope you will not need this...                |
| The Authors   | The creators of BackMan ...                      |
| Thanks        | We would like to thank...                        |
| Concept Index | For quick reference...                           |

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This manual has been formatted by makeinfo.

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## 1.2 BackMan\_ENG.guide/Introduction

### Introduction

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A very simple question like "What is BackMan?" has a very simple answer: "More than a simple backup program". But what's a backup program?

If you have an hard disk, probably you know what we're talking about. If you don't have it, please consider such an upgrade for your Amiga! Finally, if you have an hard disk but you don't know what a backup is, please continue reading: maybe you will be surprised...

When a vast amount of data is stored on your hard disk, you are interested in its integrity. But, you know, hard disks are subject to failures (well, luckily not very often) and small accidents caused by users' mistakes, and in accordance to the Murphy's laws hard disks' crashes come always in the worst moments.

But you can save your data, and thus your money, by making a copy (we'll say backing up) on floppy disks, removable disks, tapes, etc., which will then be stored in a safe place. Such backups should be done frequently, in order to have all your recent data safely stored.

To make a backup, you might copy your hard disk file-by-file, but this is not very handy, especially if you backup to floppy disks. It's better to use a backup program, like BackMan.

There are several backup programs for the Amiga, but now we will explain why this program is a step before the others. BackMan was born because one of the authors (Flavio) felt the lack of a backup program that could handle muFS partitions and take full advantage of diskspare.device, so the first, simple shell-only version of BackMan saw the light; but then, with the addition of a state-of-the-art user interface (MUI is wonderful), data compression (XPK libraries are wonderful, either) and SCSI tape streamer support, the project turned into a full-featured backup utility, able to compete with similar commercial products.

Anyway, these are the main features of BackMan:

- \* A very user-friendly MUI (MagicUserInterface) GUI (Graphical User Interface) which makes use of this program a lovable task.

MUI is copyright (C) by Stefan Stuntz. See MUI.

- \* Support for muFS (MultiUser File System), a shareware project that provides file protection for multi-user Amiga environments.

muFS is copyright (C) by Geert Uytterhoeven.

- \* Support for XPK (eXternal PacKing libraries) for data compression and encryption, to save space and add security to your backups.

The XPK libraries are copyright (C) by Urban Dominik Müller,

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Bryan Ford and others.

- \* Support for almost all the backup media (floppy disks, tapes, removables, AmigaDOS files, etc.) and alternative devices (diskspare.device, mfm.device, etc.).

The diskspare.device is copyright (C) by Klaus Deppisch.

- \* Constant support by the programmers (remember that popular and expensive backup programs like Quarterback have been discontinued), which are sensible to suggestions and bug reports.

These are only the features that BackMan has and other software have not. All the usual features (file selection filters, incremental backups, etc.) aren't mentioned here, but are available!

IMPORTANT NOTICE: A Pentium will never have a program like this.  
WC-Dog is too lame! Amiga will live forever!!! ;^)

And please let me say something to Irving Gould and Mehdi Ali: the Day will come, and you will face the Creators (of Amiga, of course!)... I hope there will be no second chance for you... suckers!

## 1.3 BackMan\_ENG.guide/Disclaimer

Disclaimer

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THERE IS NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO THE QUALITY OR PERFORMANCE OF THIS PROGRAM. THE ENTIRE RISK FOR THE USE OF THIS PROGRAM IS ASSUMED BY THE USER (YOU). THE AUTHORS MAY NOT BE HELD RESPONSIBLE FOR ANY LOSS OR CORRUPTION OF DATA, EQUIPMENT OR OTHER GOODS RESULTING BY THE USE OR POSSESSION OF THIS PROGRAM, EVEN IF IN KNOWLEDGE THAT SUCH LOSS OR CORRUPTION MIGHT HAPPEN.

However, the authors dedicated themselves to ensure that the program will behave very likely as described in this manual and that it does not contain evident flaws. It has been continuously and thoroughly tested throughout development, and it has proven to be reliable in everyday use. The authors are willing to maintain the program and correct misbehaviours, though they cannot make any promises on this.

In other words, we did the best to write a reliable backup program, and in fact we rely on it enough to use it for our very own backups, but we wrote enough programs to know that there is always another bug buried somewhere, no matter how good the programmer is. Be careful the first times you try a program like this, which will be responsible of keeping your data safe, and start using it for important backups only after you've acquired a certain feeling on it.

## 1.4 BackMan\_ENG.guide/License

### License

\*\*\*\*\*

BackMan is offered to you under the concepts of shareware. You can use it for an evaluation period of up to 4 weeks without paying any charge, but if you are going to use BackMan after the evaluation period, you must register, or your conscience will haunt you forever! See Registering, for more details.

Backup and restore are limited to about 4 Mbytes for unregistered users.

In the following paragraphs, BackMan and all the related distribution files will also be indicated as the software or the files. The licensee will also be indicated as you.

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- \* Install and use the software for your personal use on a single computer at a time; you may install the software on more than one computer, but you cannot use it on more than one computer at a time.

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(If you'd like some programming hints on how we did it, feel free to ask. All in all, we're programmers more for the joy of it than for the money.)

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You agree to cease distribution of the software if the authors request so.

The program is released "as is", without any warranty, either expressed or implied, and in no event will the authors be liable for any damages caused by the use of this program. See Disclaimer.

## 1.5 BackMan\_ENG.guide/Registering

### Registering

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If you think that BackMan is useful and you wish to continue using it, you should register by sending 40.000 Lit., 40 DM or 25 US\$ to one of the authors. You will receive a keyfile which enables all the features of BackMan, for this and all future releases!

Once you are registered, you can upgrade to a new version of BackMan by simply downloading the latest release from your favourite BBS or Aminet ftp site!

To register, follow these steps:

1. Print the registration form that comes with the distribution archive of BackMan. If possible, fill in the registration form (except for your signature) with a text editor before you print it.
  2. If you haven't done it yet, fill in the empty fields in the printed form: please write in capitals and make sure the form is easily readable. Here you can choose your preferred payment method: we strongly suggest to use an international Postal Money Order, because the currency exchange is handled automatically and you don't take the risk of sending cash.
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If you send your money via a Postal Money Order, you should be allowed to write a short message on the back of it: please duplicate the important informations on the registration form, such as your email address and the preferred method for receiving your keyfile. This will allow us to process your registration quickly even in the unlucky case that your registration form gets lost along the way.

3. Send the registration form to one of the authors (see The\_Authors). Please, help us to equally distribute the work! If you were born on an even day, send the registration to Flavio Stanchina, otherwise send it to Sandro Tolaini.

REMEMBER: If you choose to send cash along with your registration form, PLEASE use a thick envelope so that it cannot be seen through, and send it by registered letter. We are not responsible if your money is stolen!

4. Wait a few weeks for your key to be delivered. Normal processing requires about 6 weeks (you know, snail mail can be so sloooooow...). Remember that we could be on holiday or otherwise unable to process your registration quickly: wait at least 8 weeks before you start to be seriously worried that your registration didn't get to us.

You are not allowed to distribute your personal keyfile to others. The authors reserve the right to take any action they may find necessary to stop such distribution, including, but not limited to, making future releases of the software not functional with your keyfile.

The authors are aware that illegal keyfiles are being produced. The authors don't guarantee that using such keyfiles will be harmless for your data.

## 1.6 BackMan\_ENG.guide/Requirements

### Requirements

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You need the following items to run BackMan:

- \* All versions of BackMan require AmigaOS Release 2.04 or later. If you haven't upgraded yet, then it's definitely time to do it: you are missing a lot of new features and good software and, what's worse, you're holding Amiga technology behind.

Also, if you want to take advantage of the localization feature of BackMan, you must have Workbench 2.1 or later.

- \* BackManMUI, as its name implies, requires the wonderful MagicUserInterface by Stefan Stuntz, version 2.3 or later. See MUI, for copyright and registration information.

MUI has many advantages over other user interfaces, in primis over the system-supplied GadTools library, especially from a programmer's point of view: the supposed slowness and space requirements of MUI aren't definitely an excuse for those who don't like it. If you didn't try it out yet, please do: you will be impressed.

MUI is not distributed with BackMan: you can get it through various public domain, freeware or shareware collections, through electronic networks, or directly from the author. We will assume that MUI is already installed and working on your system.

- \* BackMan supports the MultiUser File System by Geert Uytterhoeven; to the knowledge of the authors it is the only backup program with MultiUser support.

MultiUser support requires multiuser.library V39 or later and dos.library V39 or later.

- \* BackMan supports data compression through the XPK libraries, created by Urban Dominik Müller, Bryan Ford and others. The XPK master library, along with some compression and encryption sublibraries, is included in the BackMan distribution. See `Data_Compression_and_Encryption`.

For the hardware side, you will need 1 Mb of memory (for an in-depth discussion on this item, see `Memory_requirements`) and two mass-storage devices (two floppy drives, a floppy drive and an hard disk, an hard disk and a tape streamer, etc.). An hard disk is not strictly required, but then BackMan is pretty useless if you don't have one.

## 1.7 BackMan\_ENG.guide/Memory\_requirements

### Memory requirements

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You will need no less than 500 kbytes of free memory to use BackManMUI: this figure includes about 250 kbytes for MUI, about 100 kbytes for BackManMUI's code and data, and space for various I/O buffers (please read on for further details). However, you will not be able to backup many files with so little memory. If you use other MUI applications regularly, then you will probably have MUI already in memory, so you will only need about 300 kbytes.

BackMan, the shell version, should get away with 250 kbytes of free memory. Please note that you lose only the graphical user interface, not features. Using BackMan from the shell might be very helpful in emergency situations. Some very particular individuals do even prefer the shell version at all times.

BackMan stores in memory the complete list of the files being backed up. This requires about 120 bytes per file (the exact amount depends on the length of the file name and comment).

The asynchronous I/O routines used by BackMan use 64 kbytes of I/O buffers for each open file. There will be a maximum of two files open at once: one is the file being read or written, the other is the file that holds the backup (only for file backups).

The amount of memory used by the disk I/O routines (only for disk backups) depends on several parameters that we won't explain here. The minimum is about 40 kbytes or 3 times the size of a whole cylinder of the backup medium, whichever is bigger.

Compression will require 64 kbytes for internal buffers, plus any memory required by the XPK library being used.

## 1.8 BackMan\_ENG.guide/Data\_Compression\_and\_Encryption

### Data Compression and Encryption

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In order to take advantage of data compression and encryption you need the XPK package, a set of freely distributable shared libraries created by Urban Dominik Müller, Bryan Ford and others. XPK libraries offer many features, among which there are several different compression and encryption algorithms and an easy programming interface. XPK libraries have become a standard for compression in the Amiga world.

Data compression can greatly reduce the amount of space needed for a backup. The effective compression rate depends on the chosen compression algorithm: the XPK libraries offer a wide range of compressors, and most of them will give you an average compression of 30% or better, provided that the files being backed up are not already compressed with commonly used file compressors such as PowerPacker or archivers such as LhA.

On slow backup media, such as floppy disks, data compression can also increase the backup and restore speed, because in such situations the performance bottleneck is the slowness of the backup device: the time gain obtained by reading or writing less data can overcome the time waste required by data compression, especially on faster processors.

To create a compressed backup, simply check the appropriate button in the Backup configuration group: as already mentioned, a gauge in the Status window will show the achieved compression ratio as the backup proceeds.

To restore a compressed backup, you have to do nothing particular: BackMan will recognize by itself a compressed backup and will automatically perform all the appropriate operations. There is only one point to mention: if you backed up your data on floppy disks, you should take care of inserting the last backup disk instead of the first, as suggested by the requester that asks you for a disk. This is because the file list on the first disk does not contain full informations on the compressed files (for more information, see

Internals).

## 1.9 BackMan\_ENG.guide/MUI

MUI

===

Parts of this package use

MUI - MagicUserInterface

Copyright (C) 1993/94 by Stefan Stuntz

MUI is a system to generate and maintain graphical user interfaces. With the aid of a preferences program, the user of an application has the ability to customize the outfit according to his personal taste.

MUI is distributed as shareware. To obtain a complete package containing lots of examples and more information about registration please look for a file called muiXXusr.lha (XX means the latest version number) on your local bulletin boards or on public domain disks.

If you want to register directly, feel free to send DM 30.- or US\$ 20.- to

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## 1.10 BackMan\_ENG.guide/BackMan

BackMan

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BackMan is a stand-alone shell program, which was developed in order to give you a small command that is able to backup and restore your data even in emergency situations.

BackMan has few options (see Command\_Line\_Arguments) when compared to the MUI/GUI version, but think it this way: the shell version is intended mainly for emergency restore actions, normally you should use BackManMUI (see BackManMUI), which has lots of options and facilities. The shell version can also be useful for unattended operations.

BackMan does also listen to a couple of keypresses when it is running:

\* Press CTRL+C to abort BackMan.

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- \* Press CTRL+F to stop (pause) BackMan; press CTRL+F again to restart.

## 1.11 BackMan\_ENG.guide/Command\_Line\_Arguments

### Command Line Arguments

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You can choose which operation to perform with the RESTORE, COMPARE, DIFF or LIST switches. By default BackMan will backup the directory specified by the DIR argument (or the current directory if none is specified).

You must specify one of SCSI\_DEVICE, DRIVE and FILE to indicate which medium you want to use for the backup.

Here is a description of all the command line arguments:

#### DIR/M

specify directory to backup or restore.

You can specify more than one directory:

- if you are creating a new backup, each directory will be backed up on a separate catalog;
- if you are restoring a backup, each directory name you specify will become the destination of a catalog on the backup: if catalogs exceed specified directories, the original directory names (saved on the backup) will be used; if directories exceed catalogs, they will simply be ignored.

#### PAT=PATTERN

select files to backup or restore.

This is a standard AmigaDOS wildcard pattern for selecting which files you want to backup or restore.

#### SCSI\_DEVICE/K

#### SCSI\_ID/K/N

#### SCSI\_LUN/K/N

specify SCSI tape streamer's device, ID and LUN.

SCSI\_DEVICE indicates the name of the Exec-level SCSI device the streamer is connected to: typical choices are scsi.device for most Commodore SCSI controllers, gvpscsi.device for GVP SCSI cards, etc.

SCSI\_ID and SCSI\_LUN indicate the SCSI ID and logical unit of your tape streamer: they default to 5 and 0, respectively. The SCSI ID is typically configured by jumpers or switches on the peripheral: please refer to the peripheral's manual for more details. The SCSI logical unit (LUN) is almost always 0, so you shouldn't need to explicitly set it: again, see the peripheral's manual.

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**DRIVE/K**

drive name(s) (such as DF0:, PC0:, etc.).

Doesn't need trailing colon, but will be truncated at the first colon if present (i.e. you could say DF0:foo if you really wanted to).

**FILE/K**

name of the file to read/write.

**RES=RESTORE/S**

instructs BackMan to restore your data.

See Restore, in the chapter regarding BackManMUI.

**CMP=COMPARE/S**

instructs BackMan to compare the data on the backup with those on your hard disk.

See Compare, in the chapter regarding BackManMUI.

**DIFF/S**

instructs BackMan to compare the data on the backup with those on your hard disk, in a way faster than the above.

See Diff, in the chapter regarding BackManMUI.

**LIST/S**

reads file catalogs from the backup and prints them, without restoring data.

The LIST switch automatically enables SHOW (see below) and does nothing else. Only selected entries will be shown.

**LINKS/S**

backup/restore hard links too.

**EMPTY=EMPTYDRAWERS/S**

backup/restore empty drawers too.

**SHOW/S**

print file catalogs before the operation starts.

The LIST option (see above) automatically enables SHOW and does nothing else. Only selected entries will be shown.

**OWNER/S**

backup/restore file owner information.

**ARC=ARCHIVEBIT/S**

set the archived bit of backed up files.

**NV=NOVERIFY/S**

don't verify floppy disks as they are written.

**NF=NOFORMAT/S**

don't format floppy disks.

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NFA=NOFMTALL/S

don't format the empty part of the last floppy disk.

NC=NOCOMMENT/S

don't backup or restore file comment.

See General\_Options, in the chapter regarding BackManMUI.

Please note that this option refers to files' comments, while the next refers to the global backup comment. Don't confuse the two things.

COM=COMMENT/K

specify backup comment.

This comment will be shown every time the backup is read. By default, the comment will be set to the name of the drawer being backed up.

CRE=CREATOR/K

specify backup creator's name.

XPB=PACKER/S

specify XPK packer to use.

You must specify a string of the form FAST.42, where FAST is the packer's name and 42 is the desired efficiency.

CRYPTER/S

specify XPK crypter to use.

## 1.12 BackMan\_ENG.guide/BackManMUI

BackManMUI

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BackManMUI is the main program of this package. Once you start it, by doubleclicking its icon, you will see some informations and some buttons which enable you to do all the magic... You can do the same things by using the pull-down menus.

Apart from the About... and Quit buttons, which have obvious meanings, here are the buttons and the relative actions:

|           |                              |
|-----------|------------------------------|
| Config... | Set up some things first!    |
| Backup    | Backup your data...          |
| Restore   | ...restore it...             |
| Compare   | ...or see what's changed...  |
| Diff      | ...in two different manners! |



## 1.13 BackMan\_ENG.guide/Configuration

### Configuration

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You should configure BackManMUI before proceeding further.

After you have selected the Configure... button, you will be presented a window containing two register groups:

- \* the one at the top enables you to set up various options, described in General\_Options, Backup\_Options, and Restore\_Options;
- \* the one at the bottom, described in Backup\_Device, enables you to set up the backup device that BackManMUI will use.

At the bottom of the window, you can see the usual Save, Use and Cancel buttons, which have obvious meanings.

Using the pull-down menus, you can save the current options with another name (Save As...), and load a previously saved set of options (Load...). These functions are available only from the menu.

## 1.14 BackMan\_ENG.guide/General\_Options

### General Options

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Select the appropriate checkboxes to activate the following options:

#### Show extended protection bits

Displays also protection bits for Group and Others, in addition to the usual bits, in the file selection window (see File\_Selection). This option is useful only if you are working with muFS or networking software such as Envoy, because the standard Amiga file systems don't make use of the extended protection bits.

#### Handle file comment

Instructs BackMan to backup/restore file comments.

Turning file comments off is especially useful when restoring files to a disk or partition handled by CrossDOS (or similar), since the CrossDOS file system doesn't support comments, so you would get a Can't set comment error for every file that has a comment. Can also save some memory and disk space if you don't need to backup comments and your files have them.

#### Handle file owner

Instructs BackMan to backup/restore file owner information. This option is selectable only if you have muFS installed; if you don't have muFS, this option isn't of much interest for you, anyway.

#### Start with folded drawers

Instructs BackMan to fold all the subdirectories (except those at the first level) in the file selection window (see File\_Selection) when you open it for the first time.

#### Maximum log lines

This slider sets the maximum number of log lines that will be displayed in the progress window. Setting this to a lower number speeds up MUI especially when you do backups of very large partitions with lots of directories.

## 1.15 BackMan\_ENG.guide/Backup\_Options

### Backup Options

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Select the appropriate checkboxes to activate the following options:

#### Set 'archived' bit

Instructs BackMan to set the archived bit on the backed up files. The bit will be set only if the backup finished successfully (this is a sort of security check).

#### Backup hard links

If checked, BackMan will backup hard links as they are. If not selected, hard links will be backed up just like a normal file (i.e. the backup will take more space, especially if the link is a directory).

A link is stored as the full path of the linked file, relative to the root of the volume it is on; the path is shown in the Comment field in the file selection window (see File\_Selection).

PLEASE NOTE: BackMan does not support soft links, because they are rarely used and even the operating system lacks full support for them.

#### Backup empty drawers

Instructs BackMan to backup all the drawers, even if they are empty.

#### XPB Data Compression

If checked, BackMan will compress the data using the configured XPB sublibrary in order to save space. To select the XPB library, press the popup button on the right (see XPB\_Packer).

#### XPB Data Encryption

If checked, BackMan will encrypt the data using the configured XPB sublibrary in order to add some security to your backup. To select the XPB library, press the popup button on the right (see XPB\_Crypter).

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## 1.16 BackMan\_ENG.guide/XPK\_Packer

XPK Packer

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You will access the XPK sublibrary selection window by pressing the appropriate popup button in the configuration window.

In this window, you have a listview to the left, where all the available XPK libraries are listed. To the right, a short text shows you some infos on the currently selected library.

You can set the packer efficiency with the available slider. When you move this slider, the two gadgets below (which display the (de)compression speed and the average compression ratio) will be updated.

We suggest you to use the RAKE XPK library, which has a very good compression ratio, and an acceptable speed (at least on my Amiga 1200 -- Sandro).

## 1.17 BackMan\_ENG.guide/XPK\_Crypter

XPK Crypter

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You will access the XPK sublibrary selection window by pressing the appropriate popup button in the configuration window.

This window is quite similar to the XPK Packer window, with some changes: there is no compression ratio gauge, the listview lists only XPK crypters, and the (de)crypt speed is usually very low (consider this if you are running BackMan on a slow system).

The provided slider sets the security of the encrypted data: if you encrypt your data with IDEA and a security of 100, you may sleep between two pillows...

If you enable crypting, you will be asked for a password everytime you start a backup or a restore. REMEMBER: there is no way to restore an encrypted backup if you have forgotten the password!

## 1.18 BackMan\_ENG.guide/Restore\_Options

Restore Options

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Select the appropriate checkboxes to activate the following options:

Restore 'archived' bit

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Instructs BackMan to restore also the archived bit, along with the other flags.

#### Restore hard links

If checked, BackMan will create hard links for files that were backed up as links. If not checked, such files will not be restored.

#### Restore empty drawers

Instructs BackMan to restore also empty directories. If not checked, empty directories will not be created.

#### Existing files

Selecting the appropriate action you can replace, rename or skip an existing file during the restore action. If you select Ask, BackMan will ask you what to do for every file that already exists.

If you chose to rename an already existing file, you will be asked for a new file name by a requester entitled Enter new name: you can skip the file by selecting the Cancel button of the requester.

## 1.19 BackMan\_ENG.guide/Backup\_Device

### Backup Device

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You can set the backup medium that BackMan will use by selecting one of the register group entries. You have three choices: tape streamer (see Tape), disks (see Disk), and AmigaDOS file (see File).

## 1.20 BackMan\_ENG.guide/Tape

### Tape

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To use a SCSI tape streamer with BackMan, you simply have to enter the name of the SCSI device (usually scsi.device for Commodore controllers like the A590, the A2091, and A3000's built-in controller) and the SCSI ID and LUN of the tape drive. BackMan will print the vendor and product information of the given SCSI peripheral at the bottom of the configuration window, so you can immediately see if you chose the correct device, ID and LUN.

BackMan's tape handling has been tested with the following hardware:

- Commodore A3000's built-in controller (scsi.device 40.4)
- Tandberg TDC 3660 tape streamer (DC6150 and DC6250 cartridges)
- Commodore A2091 SCSI controller

- Commodore A3070 Tape drive (Caliper)

You can also use your streamer through a tape device handler (like BTNTape, on Aminet), and use AmigaDOS file media (see File). Tapes written using Tape mode are compatible with tapes written using File mode through BTNTape, but only if the backup stands in a single tape.

## 1.21 BackMan\_ENG.guide/Disk

Disk  
....

You can choose which disk device BackMan will use by clicking on the popup button near the textfield on the left. Then, simply select the drive and press the Ok button.

WARNING: don't select your hard disk as the backup device unless you know very well what you're doing, or you might get really upset by the results!

There are also some options you can set via the usual checkboxes:

Verify

If checked, BackMan verifies each write, to assure that the backup media is reliable. If you don't want bad surprises, keep this checkbox always selected!!!

Use format command

Instruct BackMan to use the TD\_FORMAT command instead of the usual TD\_WRITE command when talking to the device. Floppy disk writes are faster with TD\_FORMAT, but some devices may not like being formatted, so here is this switch.

Format all tracks

This is available only if the previous checkbox is active, and will force BackMan to format the remaining tracks on the last disk of the backup.

All disk devices that have a valid DOS device entry are supported: this includes CrossDOS disks, DiskSpare disks, hard disks (of which removable cartridges like SyQuest drives are a subset), most recoverable RAM drives (we wouldn't recommend them as backup devices, however). High density floppies are supported, but you should insert an high density disk before you start the backup.

The drive list supports more than one device (they appear separated by commas, as in DF0,DF1), but the internal routines don't, so restrict yourself to one device. This will be fixed in future versions.

## 1.22 BackMan\_ENG.guide/File

File

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You can even do a backup on a single AmigaDOS file. The string gadget to the left holds the default directory where backup files will be stored and, optionally, the name of a default backup file (this depends on the Ask filename checkbox, see below).

There are also some options you can set via the usual checkboxes:

Delete file on error

If checked, BackMan will delete incomplete backup files if you abort the backup operation.

Ask filename

If checked, BackMan will pop up a file request when you start the backup/restore operation, to enable you to select a backup file name. If not checked, the filename present in the string gadget to the left will be used: in this case, the string gadget must contain a valid file name!

To use BTNTape with BackMan, you should set the string gadget to TAPE:, and deselect the two checkboxes. This configuration has been tested with an Amiga 4000, an A2091 SCSI card and an A3070 tape streamer, and it works!

## 1.23 BackMan\_ENG.guide/Backup

Backup

=====

When you select Backup from the main window, a file request will pop up, asking you the directory you want to backup. Next, the file catalog will be read, and the backup window will appear.

Here you have a catalogs list and some buttons, along with some informations on the total/selected files and dimension of the backup you are going to start.

As in other windows, actions can be chosen by using buttons or pull-down menus. Some actions are available only from menus. The actions are:

Add...

BackMan can backup more than one catalog in a single backup set. With this button, you can add another catalog to the current backup. A file request will pop up, asking you for the directory to read the catalog from.

Remove

This button will remove the currently selected catalog from the

backup. You will be asked for confirmation before proceeding.

#### Select files...

Selecting this button will open the file selection window for the currently selected catalog (see File\_Selection). You can open the file selection window also by double-clicking on one of the first three columns of the catalogs list.

#### Comment...

You can change the comment associated with the current catalog by pressing this button. The same action can be obtained by double-clicking on the last column of the catalogs list.

#### Print...

This option, available only from pull-down menus, will print the currently selected catalogs to the printer or to a file. A file request will pop up, asking for a file name: if you select Ok without changing anything, the list will be printed, otherwise saved to the selected file (if you are using ReqChange or other tools that patch asl.library to use reqtools.library, direct printing will not work -- you are warned!).

#### Configure...

Only available from pull-down menus, this option will open the configuration window, to let you make last-moment changes to the configuration (see Configuration).

#### Creator

Here you can write the name of the backup creator: it will be saved in the backup. This field is used only for your reference. For registered users, this string gadget will default to the name written in the registration key.

At last, when you have finished with initializations, you can select the Start button to start the backup, or the Cancel button to go back to the main window.

## 1.24 BackMan\_ENG.guide/Restore

### Restore

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When you select Restore from the main window, a request will pop up (depending on the backup medium you set via the configuration window) asking you to do the appropriate things to make BackMan read the backup catalogs. Next, the restore window will appear.

Here you have a catalogs list and some buttons, along with some informations on the total/selected files and dimension of the backup you are going to restore.

As in other windows, actions can be chosen by using buttons or pull-down menus. Some actions are available only from menus. The actions are:

#### Include

This button will include all the files in the currently selected catalog for restoration.

#### Exclude

This button will exclude all the files in the currently selected catalog, thus they will be not restored.

#### Select files...

Selecting this button will open the file selection window for the currently selected catalog (see File\_Selection). You can open the file selection window also by double-clicking on one of the last three columns of the catalogs list.

#### Destination

This option will let you select the destination path for the currently selected catalog. A file requester will pop up to allow you to select the new path. You can obtain the same action by double-clicking on the first column of the catalogs list.

#### Print...

This option, only available from pull-down menus, will print the currently selected catalogs to the printer or to a file. A file request will pop up, asking for a file name: if you select Ok without changing anything, the list will be printed, otherwise saved to the selected file (if you are using ReqChange or other tools that patch asl.library to use reqtools.library, direct printing will not work -- you are warned!).

#### Configure...

Only available from pull-down menus, this option will open the configuration window, to let you make last-moment changes to the configuration (see Configuration). The backup device register group will be ghosted, because you cannot change the backup medium at this point.

At last, when you have finished with initializations, you can select the Start button to start the restore, or the Cancel button to go back to the main window.

## 1.25 BackMan\_ENG.guide/Compare

#### Compare

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This window and the related buttons and menus are identical to those of the restore window. The only difference is that files will not be restored, but instead compared to their matching files on your hard disk: this is very useful to discover which files have been changed since your last backup.

First, file attributes (date, comment, etc.) are compared; then, if the file size was not changed, file contents are compared too. Any file

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which differs in one or more attributes or in file contents, or which has been deleted, will be reported.

Refer to Restore for more information.

## 1.26 BackMan\_ENG.guide/Diff

Diff  
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This window and the related buttons and menus are identical to those of the restore window. The only difference is that files will not be restored, but instead compared to their matching files on your hard disk in a manner similar (faster, but less precise) to that of compare: files will not be compared based on their contents, but only on their attributes. Thus, there is no need for BackMan to read the whole backup, but only the file catalog.

Refer to Restore and Compare for more information.

## 1.27 BackMan\_ENG.guide/File\_Selection

File Selection  
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At the top of the file selection window, you can find some useful informations about the number of file and the size of the whole catalog and of the included entries. Below, you can find two listviews.

The topmost list displays the directory tree of the catalog. For each directory, you can see some useful informations like the number of files in that directory, and how much of them are selected for backup or restore. Under the listview, there are some buttons which performs the following actions:

Include Dirs  
include all the files in the current directory and in all its subdirectories.

Exclude Dirs  
exclude all the files in the current directory and in all its subdirectories.

Fold/Unfold  
fold/unfold the currently selected directory: all its subdirectories will be hidden/revealed.

This is expecially useful if you have a very deep hard disk tree. A folded directory is indicated by a small + sign to the left of its name, an unfolded directory is indicated by a small - sign,

and leaf directories have no sign at all.

You can also fold/unfold directories by double-clicking on the first column of the directory entry.

Filter...

open the filter window, that allows you to (de)select files using some filter fields. See Filter.

The list at the bottom displays the files contained in the currently selected directory. You can (de)select each file by clicking on it. Multiple selection is also possible. Under the listview there are some buttons which perform the following actions:

All

select all files, for successive inclusion or exclusion.

None

deselect all files.

Include

include all the selected files.

You can do the same thing by double-clicking on an excluded file.

Exclude

exclude all the selected files.

You can do the same thing by double-clicking on an included file.

## 1.28 BackMan\_ENG.guide/Filter

Filter

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Using the gadgets in the Filter window, you can do some important filtering actions on the current catalog. There are some checkmarks, often followed by a string gadget where you can enter parameters for the filter. At the bottom of the window there are the Include and Exclude gadgets, which will do the corresponding action on the files of the currently selected directory. Here is a complete description of each filter item:

'Archive' bit set/unset

exclude/include files with the archived bit set/unset. Very useful for incremental backups.

Modified on or after

operate on files modified on or after the date specified in the string gadget on the right.

Date must be in the same format used by the List command.

Modified on or before

---

operate on files modified on or before the date specified in the string gadget on the right.

Date must be in the same format used by the List command.

Matching pattern

operate on files matching the pattern specified in the string gadget on the right. You can use the normal AmigaDOS wildcards.

Apply to current drawer only

By default, the filter acts on the files of current directory and of all his subdirectories. If you check this option, inclusion/exclusion will be limited to the files of the current directory.

The filter window is asynchronous, so you can hold it opened while working on the file selection window. The window will be automatically closed when you close the file selection window.

## 1.29 BackMan\_ENG.guide/Suggestions

Suggestions

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An interesting way to speed up BackManMUI is to iconify it after you start an operation: the speed gain is significant and noticeable by sight on fast media (such as HD-to-HD backups on a file). BackManMUI will automatically uniconify itself if it needs to show some requester and when the operation finishes.

## 1.30 BackMan\_ENG.guide/Internals

Internals

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The backup is organized in this way:

1. Primary file list
2. Data, subdivided in blocks
3. Secondary file list

Writing the file list twice will give you an added security, should the first file list be corrupted by chance or by mistake.

Entries are written in alphabetical order, files first, then each directory with all its subentries. Data is written in fixed-size blocks, eventually compressed.

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If you do a compressed backup on floppy disks, the primary list will not contain informations on the compressed size of data, so a partial restore operation will need to read all the files in order to find out where the needed files are located. This will not slow down the restore operation too much, because there is no need to really decompress data: we only need to read the block headers.

However, if you plan to do a partial restore, insert the last disk of a backup: BackMan will read in the secondary list, which contains all the informations needed to skip exactly to the beginning of selected files. If you insert the first disk, BackMan will remind you that this might not be what you intended to do: you will need to insert the first disk only if the last got corrupted and the file list on it is unreadable.

Please note that all operations are permitted even if BackMan has read the first (incomplete) list: they will only be slower and less comfortable because you will need to insert all the disks.

Non-compressed backups aren't affected by which list has been read.

Please note that the secondary file list could actually start on the last but one disk: in this case BackMan will request the correct disk. This can happen because there could be just a little bit of space left on the last but one disk, but not enough to contain the whole file list, so it will be split between the last two disks.

The secondary file list could actually start on even earlier disks if your backup contained an extremely large number of files (slightly more than 3000 files in the worst case, usually over ten thousands). In this case it will span more than two disks.

## 1.31 BackMan\_ENG.guide/Caveats

### Caveats

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It is the user's responsibility to prevent any changes to the files being backed up in the time interval from when the directory is read to when the file is effectively backed up on disk, tape, or whatever. Any changes would result in more or less inconsistent data being written to the backup, particularly if the file size is changed. BackMan will notice changes in file size and abort the backup (no recovery would be possible, except rewriting most of the backup from the beginning), but other, although less relevant, changes to the file attributes will deliberately go unnoticed.

If you are really really paranoid, I'd suggest to make a backup copy of the first and/or last backup disks, because these two disks contain the main and secondary file lists: in this way you will be more protected against corruption of said lists, without whom it is impossible to restore the backup.

BackMan can't handle backups of more than about 2 gigabytes of data.

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But then, is there anybody out there who backs up 2 gigabytes in a single shot? ;) (If you're curious, it would take over 2383 DD disks...)

## 1.32 BackMan\_ENG.guide/Bug\_Report

### Bug Report

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If you find something wrong in BackMan, or if you have some suggestions for future releases, please write to one of the authors (see The\_Authors), preferably via e-mail.

If you are reporting a bug, please provide the following information:

- \* The version of BackMan which shows the bug.
- \* Your full Amiga configuration (model, CPU, peripherals, etc.).
- \* A detailed explanation on how to reproduce the bug. If we can't reproduce the bug, we'll have lots of troubles locating it, and we will probably end up thinking it is your fault. Bug reports like "it doesn't work sometimes" are definitely not what we need.
- \* If you use a tool like The Enforcer and the bug involves an Enforcer hit, please add the output of this tool to the bug report.

Try to be clear, and we'll try and correct the bug as soon as we can!

## 1.33 BackMan\_ENG.guide/The\_Authors

### The Authors

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BackMan was written and copyrighted by Sandro Tolaini and Flavio Stanchina. You can reach us at these addresses, either via standard or electronic mail. If you want a reply, please use e-mail!

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Please notice that Flavio's FidoNet address has changed. The old address (2:333/408.9) should still work for some time, but please use the new one.

## 1.34 BackMan\_ENG.guide/Thanks

Thanks

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We would like to thanks the following people:

- \* The Amiga engineers, who created Amiga!
- \* Our betatesters Gianmarco Giovannelli, Ugo Paternostro, Riccardo Torrini and Marco Amadori (maintainer of the italian localization).
- \* Debora, for her revision work on this document, and for her moral support.
- \* All our registered users, for their material support to the development of BackMan!

## 1.35 BackMan\_ENG.guide/Concept\_Index

Concept Index

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|                        |                                 |
|------------------------|---------------------------------|
| Authors                | The_Authors                     |
| BackMan                | Introduction                    |
| BackMan                | BackMan                         |
| BackManMUI             | BackManMUI                      |
| Backup                 | Backup                          |
| Backup Device          | Backup_Device                   |
| Backup Options         | Backup_Options                  |
| Bug Report             | Bug_Report                      |
| Caveats                | Caveats                         |
| Command Line Arguments | Command_Line_Arguments          |
| Compare                | Compare                         |
| Compression            | Data_Compression_and_Encryption |
| Configuration          | Configuration                   |
| Crypting               | XPK_Crypter                     |
| Diff                   | Diff                            |

---

---

|                    |                                 |
|--------------------|---------------------------------|
| Disk               | Disk                            |
| Distribution       | License                         |
| Encryption         | Data_Compression_and_Encryption |
| File               | File                            |
| File Selection     | File_Selection                  |
| Filter             | Filter                          |
| General Options    | General_Options                 |
| Internals          | Internals                       |
| Introduction       | Introduction                    |
| Legal Issues       | Disclaimer                      |
| License            | License                         |
| MagicUserInterface | MUI                             |
| Memory             | Memory_requirements             |
| MUI                | MUI                             |
| Packing            | XPK_Packer                      |
| Registration       | Registering                     |
| Requirements       | Requirements                    |
| Restore            | Restore                         |
| Restore Options    | Restore_Options                 |
| Suggestions        | Suggestions                     |
| Tape               | Tape                            |
| Thanks             | Thanks                          |
| Warranty           | Disclaimer                      |
| XPK Crypter        | XPK_Crypter                     |
| XPK Packer         | XPK_Packer                      |

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