
Backup Magic

User's Manual

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Introduction

Description

Warning: *Backup Magic* is a powerful tool, but if used improperly, it can overwrite or delete your important files. It is not designed for newbies as fully automated backup solution, it is power tool for advanced users who know what they are doing.

Backup Magic is a simple, fast and compact backup/file copy utility for power users and system administrators. It is **not** meant for full system backup and does not have loads of options, but it includes all of the tools required to get your daily backup jobs done fast and easy. *Backup Magic* copies new or modified files (you can specify include/exclude masks) from selected folders to another location that can be another folder, network drive, zip disk or whatever writeable device you see in *Windows Explorer*. Even making a backup to a CD-R(W) or DVD-R(W) disk is not a problem if you have packet-writing software like *Adaptec DirectCD* running. You can make multiple groups and specify several file filtering options, request log file generation, use incremental or mirror copy mode and much more. Additionally, you can use variables in destination folder names, so you can automatically generate folder names with current date/time/day (like *Backup of Monday AM*) - useful for keeping version history by date.

Backup Magic is useful for both personal users and corporate users in a networking environment:

Key features for single/home users:

- Fast and easy to use daily backup solution
- Use either *Mirror* or *Incremental* mode with include/exclude files/folders masks
- Allows variables in destination folder name to create a destination folder name that includes current data/time
- Uses simple file copy, does not use any proprietary file formats so you can restore your data without *Backup Magic*, simply by copying files back to the source location
- Works with most standard writeable media (local and network hard disks, floppy disks, Zip drives, CD/DVD-R(W) etc)
- Can detect file changes by timestamp or archive bit

Additional value for corporate users/administrators:

- Contains a unique, separate, lightweight 32-bit console-mode executable that can be used on *Windows NT/2000/XP Server* to make automated, scheduled (using AT or Scheduled Tasks) backups in the background. That allows you to copy/backup data from workstations to a server automatically, so you save employees from making backup themselves.
- An administrator can create a backup set file for each user, so they only need to double-click this file to make a backup to a file server. They don't see the backup set editor and they don't need to know how to make a backup set themselves.
- Very affordable pricing for companies with many computers.

What *Backup Magic* can't do:

- Perform full system backup (operating system) – it is not possible to copy several key files that are in use by operating system. In addition *Backup Magic* does not perform low level copying like boot sectors etc. It is designed to copy your data files like documents, images, databases, music etc.
- It does not support compression and disk spanning. That means when your target disk becomes full, you'll get an error and *Backup Magic* does not prompt you to insert next disk to continue. That is because *Backup Magic* uses plain file copy, not proprietary backup data files.

Overview

Backup Magic editor lets you make a file that contains groups of folders that you want to back up. This file is called backup set and has file extension BMS. A group contains source and destination folder and file masks (file filters) that specify what files from that folder *Backup Magic* should copy. If you run backup, only new or changed files will be copied from source to destination, using the masks you specify. You don't need to make more than 1 group but you can do so if you have need. You can also set additional options like log file generation, auto-close, play sound when done, ask for right disk on start etc.

If you have finished building your backup set then you will save it into a disk file. And from this point, each time you want to backup/copy your stuff, you need only to open (double-click) this file (or its shortcut). For easiest access, you can make a shortcut to your Desktop, so you can run it just by double-clicking on the icon. You can also schedule your backup processes with *Scheduled Tasks* program or any other scheduling program. *Backup Magic* doesn't include it's own scheduler since *Windows* has a built-in one and that way you don't need to keep *Backup Magic* always running, thus saving valuable system resources.

Tutorial

Creating a new backup set

To create a new backup set, you must first run *Backup Magic*, then.

1. Choose **File | New** menu command

This creates a new, empty backup set. Now you should add a new group that tells *Backup Magic* what files from what folder it should copy.

2. Choose **Group | Add** menu command

A little window pops up and asks name for this new group. You may want to give it name *My Documents* for example (we use here *My Documents* as example, you may call it whatever you like). After pressing OK, you'll see a new group called *My Documents* created and listed on the left pane. You can use the same routine to add more groups and all they will be listed on the left pane where you can select one to see it's properties on the right pane.

If you now click on the *My Documents* group you just created in the list box, it's properties will be displayed on right side. That's where you need to enter your data about the group.

See "Files tab" for more information about fields on the Files tab.

Saving backup set

Once you have created at least one group in your backup set, you can save the file to disk.

1. To save backup set, just choose **File | Save** command

Note: *Backup Magic* will automatically validate the data you entered (source and destination folders, file masks) and if it will find something is wrong or some information is missing, it will prompt you to correct this before you can save the file. That is to prevent saving non-functional backup sets.

Tip: Once you have saved your backup set to a disk you can make shortcut to it on the Desktop for easy access. *Backup Magic* will create that for you if you choose **File | Place Shortcut on Desktop**.

Starting backup

You can start backup several ways.

Through editor

If you have finished creating new backup set, you may want to test how it works and if it will include/exclude right files/folders.

1. To run backup from the editor, choose **Tools | Start Backup** command

That starts the backup process with the options you have selected. This is meant by testing generally, since you don't actually need to run *Backup Magic* editor to start backup.

Through file/shortcut

You just need to execute the backup set file. You can do this by double-clicking on it in *Windows Explorer*. Also, you may want to make a shortcut to this file on your *Desktop*, so your backup is really a click away. Use **File | Place Shortcut on Desktop** command for this.

Through scheduler

If you would like to schedule your backups, please see "Scheduling backups".

Interface

Backup Magic has very simple interface. You see 4 tabs on screen.

Files tab

Copy from folder (variables allowed) – a source folder that contains data files that you want to backup. If you want to backup your *C:\My Documents* folder, then this is source folder. You can use variables in this field.

Copy to folder (variables allowed) - a destination folder where the backup copy of your data will be stored. That is usually on another disk/drive. For example if you have ZIP drive and it's drive letter is Z: then you may want to use *Z:\My Documents* as backup destination, or *Z:\Backup\My Documents*. The name can be different from source. You can use variables in this field to automatically generate folder name from current date for example.

Include Subfolders - that option tells *Backup Magic* it should also copy files that are in subfolders under your source folder. So, all your subfolders under the *My Documents* folder will be copied as well.

Include folders mask (optional) – folder mask that specifies what subfolders to copy if you only want to copy a few of them. That is usually "*" meaning all subfolders.

Exclude folders mask (optional) – mask that specifies what folder should NOT to be included. You can leave it blank to tell that you don't want to exclude any folders. But you can use for example "Copy *" that tells *Backup Magic* not to include any folders that start with the words "Copy of".

Include files mask (optional)– mask that specifies what files should be included in backup. Default value is "*" that means all files. You may want to backup only DOC files for example, then you can write "*.doc" here. To backup only Excel tables and Word documents, write "*.doc;*.xls". That means no other files than DOC or XLS will be copied. If you want to copy all files, use the "*" value as explained earlier.

Exclude files mask (optional)– mask that tells what files *Backup Magic* should NOT copy. You may leave it blank but if you have some files in your source folder that you don't want to backup, you may write them here. For example your text editor maybe creates BAK files for each file if the file is saved. You never use BAK files, but they'll take disk space, so you may want not to backup them. Then you write here "*.bak".

Backup type – the type of backup for this group. This can be either *incremental* or *mirror*. Backup types are explained in topic "Backup types: incremental vs mirror" on page 7. **Please be aware that when *mirror* backup type is used improperly, it is possible to erase all files on your target drive.**

Keep old changed files - if file in destination folder is overwritten with new one, old one will be renamed to OLD. For example, if a file named is *Document.doc* is updated, then there will be a previous version of this file available with the name *Document.OLD.doc* if this option is set.

Disable this group temporarily – disables the selected group so it will not be included in your backup. That is useful if you test different masks or when you temporarily don't want to include this group in backup.

Note: Please note one important thing. If you use include files/folders mask and have *Include Subfolders* checked, then only those files/folders specified by the mask will be included. That applies to all subfolders recursively. That means if you use "a*" as include folder mask, then only folders starting with A will be included. If that folder includes subfolders, then only subfolders starting with A will be included etc. You can create multiple groups if you want to create very complicated file/folder mask schemas.

Settings tab

Default target folder for new groups - you can specify default destination (copy to) folder for new groups. By setting this value, each time you create a new group, *Copy to Folder* field of the group will get this value as default.

Confirm start - if this option is set, you'll see a confirmation dialog asking "*Copy 'Your backup Set' now?*" if you run backup.

Run minimized - runs backup in minimized state.

Close automatically - closes the program if backup is done and no errors were found during the backup.

Inaccessible source folder raises error - If this option is selected and a source folder is not accessible *Backup Magic* logs error. For example if you copy files from remote network drive and that drive is not accessible this is logged as error. Sometimes you may not want such events raise error, so you can then disable this.

Copy only to the disk labeled - asks disk with specified name at backup start. For example, you make your backup to ZIP disk labeled PROJECTS. Then if you run your backup, it will check if the disk labeled PROJECTS is inserted. If not, it will ask you to insert the right disk.

Note: This works only if the destination disk is a removable disk, not hard disk. The destination drive of the first group in the backup set will be checked for the disk. You can have multiple destinations in one backup set, so the disk is asked only once at start-up, not once for each different destination.

Play sound file if finished - allows you to select a sound file to play if backup is done.

Use archive attributes (incremental mode only) – This option will instruct *Backup Magic* to use archive attribute to detect if a file is changed, not its last modification time. This option should be used with caution and by expert users only. See “Using archive attributes” topic for more info.

Update last modification time of destination files – This option will instruct *Backup Magic* to update last modification times on destination folder after copying files. It has added because some packet-writing drivers improperly change file dates to current date during copying to CD-RW disk and that will result *Backup Magic* to copy all files every time, not only modified files. Use this option only when necessary, it will otherwise degrade performance slightly.

External programs tab

You can define some external programs that will be called by *Backup Magic* on certain cases. For all command lines you can use variables listed at the end of the topic.

Run this program before backup - you can execute another program before copying files. For example we have a free utility called *Registry Key Backup* that will save specified keys from the registry to disk files. You can call it or similar programs, so you have up to date output from these programs before copying results. To select multiple programs you can make a BAT file. Please note *Backup Magic* will continue with backup only when the program is finished running.

Run this program after backup – allows you to specify a program that will be launched when backup is finished. *Backup Magic* does not wait until this program will terminate, it will close itself as soon the program is launched.

Run this command after backup only if errors found- This can be useful if you want to get a notice by e-mail that backup failed, along with attached log file (useful for system admins) for automated, scheduled backups. If this option is not set, you will be prompted when finished if errors were found during backup and you can also see log file with built-in viewer.

Variables that can be used on all these command lines:

%FILENAME_LOG% - will be replaced with the actual log file name

%FILENAME_BACKUPSET% - will be replaced with the actual file name of the backup set.

Log tab

Make log file – this will tell *Backup Magic* to generate log file or not.

Include file names – will include names of all copied files in the log, otherwise file names are only listed if there was an error during copying.

Max size (KB) – allows you to specify maximum size of log file, in kilobytes. Log files can grow quite large, especially of the *Include file names option* is set, so here is a way to keep their size under control.

View log button – will display current log file with built-in log viewer. If the button is disabled, there is no log file available.

Backup types: incremental vs mirror

There are 2 different types of backup – *incremental* and *mirror*.

Incremental (add/update) – only new and updated files will be added/copied to target folder each time you run the backup. If you have deleted some files from your source folder, they will not be deleted from target, so if you have accidentally deleted an important file from your working folder and ran backup after that, *Backup Magic* only copies/updates files that are new or changed. Files that are already copied to the backup location and don't exist any more in your source directory will remain on your target location. This is the safest mode, but your folders on backup device may grow quickly if you don't delete files you don't need any more.

Mirror (add/update/delete) – only the files that currently exist in your working directory will be copied/updated. If you have deleted some files from your working directory that were there last time when you did backup, these files will be deleted from target folder as well. This mode maintains exact copy of source directory (using your specified filters, of course). Please note you cannot use the *Keep old changed files* option if this mode is set. Also, keep in mind that this mode uses your folder/file masks as well, so if you want to get full mirror of all files and subfolders, you should have *Include subfolders* checked, and folder/file include-masks set to * (all files). And, this mode is slower than *Incremental* since it must check and delete files that don't exist any more in source folder.

Warning! In mirror mode all files and folders in target that do not exist in source will be deleted. It is possible to create backup set that can potentially delete your data. For example, if you specify an empty folder as source and a drive root as target, all files and folders on your target drive will be erased!

Note: Backup Magic does not copy empty folders.

Examples

We assume you want to make backup to a removable drive with the letter Z: All masks are written here within double quotes, but must be written into the program **without** quotes. Note also trailing or leading spaces on some sample masks. Fields that are not specified in the samples must be empty.

To copy all files (including all subfolders with files) from C:\My Documents to Z:

```
From: "C:\My Documents"  
To: "Z:\My Documents"  
Include subfolders: checked  
Include folders: "*"   
Include files: "*" 
```

To copy all files (including all subfolders with files) from C:\My Documents to Z:\ except all MS Office backup files (files like "backup of yoursheet.xls" etc).

```
From: "C:\My Documents"  
To: "Z:\My Documents"
```

Include subdirectories: checked

Include folders: "*"

Include files: "*"

Exclude files: "backup *;*.bak"

To copy only certain files, for example Windows registry files, to Z:\Registry Backup

From: "C:\Windows"

To: "Z:\Registry Backup"

Include subdirectories: unchecked

Include files: "system.dat;user.dat"

To backup your Delphi project source code, excluding all garbage files from C:\My Project to Z:\My Project

From: "C:\My Project"

To: "Z:\My Project"

Include subdirectories: checked

Include folder: "*"

Exclude folder: "Copy *"

Include files: "*"

Exclude files: "copy *;*.dcu;*.exe;*.dsm;*.~*"

Tip: You can make a backup set that has four groups, each group is like one of the examples above, so you can backup all the stuff at once.

These are simple examples that do not use variables. See also "Using variables" topic on how you can generate folder names automatically.

Advanced features

Log file

Log files can be useful for checking errors. You can also have names of each file copied and summary in log files. Log file will be generated by *Backup Magic* in the same folder where your backup set file resides, only it will have extension LOG.

Example log file

```
<---- Started R 04.10.2002 @ 19:45:25 ---->
E> Create folder failed (The system cannot find the path
specified) Source: "C:\Backup\" Dest: "T:\Backup\"
E> Copy failed (The system cannot find the path
specified) Source: "C:\Backup\Isik.mdb" Dest:
"T:\Backup\Isik.mdb"
U> Source: "C:\Backup\Isik2.mdb" Dest:
"E:\Backup\Isik2.mdb"
U> Source: "C:\Backup\Isik3.mdb" Dest:
"E:\Backup\Isik3.mdb"
N> Source: " C:\Backup\Isik4.mdb " Dest:
"E:\Backup\Isik4.mdb"
Status: all done
New files: 1
Updated files: 2
Deleted files: 0
Errors: 2
Copied: 7,33MB of 8,87MB
Interface: graphical
<---- Finished R 04.10.2002 @ 19:47:22 ---->
```

The E>, N> and U> symbols mean “error”, “new file” and “updated file” respectively.

See “Log tab” for log file settings.

Command line interface

Backup Magic has also command line interface, so you can run it from other programs or from schedulers. Command line switches always override options set in backup set file.

Command line syntax for GUI

bmagic.exe ["filename.bms"] [switches]

If no filename specified on command line, backup set editor will be launched where you can open or create new file. If you pass long filename, you must include it between double quotes.

If only filename is passed, then backup will be started.

Available switches (both “-“ and “/” prefixes are valid, so both “-EDIT” and “/EDIT” will give the same result):

-EDIT

Opens editor and loads specified file, so you can edit backup set. File must be valid.

-START

Will not prompt to start, starts backup immediately.

-CLOSE

Closes program if done (it's closed only if no errors)

-MINIMIZE

Minimizes backup program

-ERRORCMD

Tells that the command must be executed if errors found (see settings)

-SILENT

Doesn't prompt to see the error log if errors were found. Useful if used together with -CLOSE.

Examples

Runs Backup Magic editor and loads file:

```
bmagic.exe "C:\My Documents\Backup Stuff.bms" -EDIT
```

Starts backup of specified file:

```
bmagic.exe "C:\My Documents\Backup Stuff.bms"
```

Runs backup of specified file, starts backup immediately even if there is option *Confirm Start* set in the backup set file and closes Backup Magic if backup is done:

```
bmagic.exe "C:\My Documents\Backup Stuff.bms" -START -  
CLOSE
```

Console module

Backup Magic includes separate lightweight console mode executable **bmagicc.exe**. This little program works like *Backup Magic* GUI (graphical user interface) version but it has no interface as such. It's much smaller and a bit faster too.

Main purpose of that module is to allow use of *Backup Magic* on *Windows NT/2000/XP* file server and batch files. One can schedule then backups to run automatically on background, on given time. Since the console module doesn't prompt for information it's safe to use it as invisible background process. It also consumes much less system resources and runs faster than GUI version.

See the *Tools* menu for some special commands for console module. Run the executable to see allowed command line switches. You can use the `-PAUSE` switch to force the console window not to close automatically so you can see backup results when testing.

Use of the console module is very simple. You need to make a backup set as always, with GUI version, and then pass the backup set filename as first parameter to the program.

Examples:

Just start backup of selected backup set:

```
bmagicc.exe "c:\my documents\backup data.bms"
```

The same, but does not close console window if finished, you must press a key to close it. That way you can see program output when testing. Don't use this when you run it as a service or with a scheduler! :

```
bmagicc.exe "c:\my documents\backup data.bms" -PAUSE
```

If you run the program from scheduler you probably need to supply full path to `bmagicc.exe`. See commands in the *Tools* menu in backup set editor. Those help you to test console module and copy it's command line to clipboard.

Tip: If you run console module as *Windows NT/2000/XP* service and want to access network drives, be sure to use UNC paths in backup set file since drives may not be mapped at system level. See end notes of "Scheduling backups" for more information.

Scheduling backups

This topic discusses how you can set up Windows' *Scheduled Tasks* program to start your backup automatically on pre-defined days/times. You can also use 3rd party scheduler programs if you wish, but on that case you'll need to follow their instructions.

Please note that different instructions are provided for *Windows 95/98/Me* and *Windows 2000/XP*, so be sure you follow right instructions depending your operating system.

Windows 95/98/Me

1. Open *Scheduled Tasks* folder (usually under **Start Menu | Programs | Accessories | System Tools**, but accessible also from *Windows Explorer*, listed after *Control Panel* on left pane)
2. Double-click on **Add Scheduled Task** item to launch *Scheduled Task Wizard*
3. Click **Next** and select *Backup Magic* from the list (if you don't see Backup Magic entry in the list click Browse button, then browse `BMAGIC.EXE` (not `BMAGICC.EXE`), its default location is `C:\Program Files\Backup Magic\BMagic.exe`). Actually it is possible to use also the console module `BMAGICC.EXE` but for general use under Windows 9x we will use GUI version in this sample.
4. On next page name your task as you wish, then select how often you would like to run it (you can modify later). Then press **Next**.
5. On next page you can set starting time for your backup and few more settings (you can modify later). If done, press **Next**.
6. On final page there is check box called "*Open advanced properties for this task if I press Finish*" - check this and press the **Finish** button. (If you already pressed Finish without checking the check box, you can double-click on your newly added entry in the *Scheduled Tasks* window to display advanced properties).
7. Now *Properties* sheet of your entry is displayed. You need to change command line that will be used to run *Backup Magic* and specify what backup set it should use when started.

In the *Run* field you see full path name to `bmagic.exe`. You should modify this field to look like this:

```
"KeepYourFullPathHere\BMagic.exe"  
"YourBackupSetFileWithFullPath.bms" -START -  
MINIMIZE
```

That instructs *Backup Magic* to load your backup set file, start without prompting and in minimized state. If you want it to close its windows when done, you can also use additional `-CLOSE` switch.

In real life, the *Run* line may look like this (all on one line):

```
"C:\Program Files\Backup Magic\BMagic.exe"  
"C:\My Documents\Backup Documents.bms" -START -  
MINIMIZE -CLOSE
```

If full path to `bmagic.exe` or to your BMS file contain spaces you need to put them between double quotes as shown above.

Note: To check if the command line you provided is OK, you can test it by choosing **Start Menu | Run** and pasting it to the displayed *Run* prompt.

8. Press **OK** to save changes and close the *Properties* window.

Note: You can test if the new task is working by choosing **Run** command from its context menu.

Windows 2000/XP

1. Open *Scheduled Tasks* folder (usually under **Start Menu | Programs | Accessories | System Tools**, but accessible also from *Control Panel* and *Windows Explorer*).
2. Double-click on **Add Scheduled Task** item to launch *Scheduled Task Wizard*
3. Click **Next** and then click **Browse** button (don't choose a program from the list provided). Browse `BMAGICC.EXE` (not `BMAGIC.EXE`), its default location is `C:\Program Files\Backup Magic\BMagicc.exe`.
4. On next page name your task as you wish, then select how often you would like to run it (you can modify later). Then press **Next**.
5. On next page you can set starting time for your backup and few more settings (you can modify later). If done, press **Next**.
6. Now write your user account password (twice) and don't modify the provided user name. Please note your user name is automatically inserted. It is very important that you fill this page correctly, otherwise the task will not run later. You can also modify this information later. If done, press **Next**.
7. On final page there is check box called "*Open advanced properties for this task if I press Finish*" - check this and press the **Finish** button. (If you already pressed **Finish** without checking the check box, you can double-click on your newly added entry in the *Scheduled Tasks* window to display advanced properties).
8. Now *Properties* sheet of your entry is displayed. You will need to change command line that will be used to run *Backup Magic* and specify what backup set it should use when started.

In the *Run* field you see full path name to `bmagicc.exe` (you provided it in step 3). You should modify this field to look like this:

```
"KeepYourFullPathHere\BMagicc.exe"  
"YourBackupSetFileWithFullPath.bms"
```

That instructs *Backup Magic* console module to load your backup set file when it starts.

In real life, the Run line may look like this (all on one line):

```
"C:\Program Files\Backup Magic\BMagicc.exe"  
"C:\My Documents\Backup Documents.bms"
```

If full path to bmagicc.exe or to your BMS file contain spaces you need to put them between double quotes as shown above.

Note: To check if the command line you provided is OK, you can test it by choosing Start Menu | Run and pasting it to the displayed Run prompt.

Note: If either the program itself or the backup set file reside on a network file server, you'll need to refer them using full UNC path (\\server\share), not via mapped drive letters. Drive mappings may not be available if the user is not logged in.

9. Press **OK** to save changes and close the *Properties* window. You will be once again prompted for password. Enter your user account password twice (you'll be prompted for password each time you'll change the task).

Note: You can test if the new task is working by choosing Run command from it's context menu.

Note: You specified your user account when you set up the task. If this user is logged in at the time the task runs, it will be run interactively, i.e. you'll see Backup Magic window (similar to when you invoke Backup Magic manually from desktop shortcut etc). But if another user is logged in, the task will run invisible (on background) to him. That also means if the program has to ask for user input (like continue with backup prompt on startup), the user will not see this and the program may stop working because it can't continue until user has provided feedback. That means it is strongly advised to schedule BMAGICC.EXE console module, not BMAGIC.EXE GUI (graphical user interface) version on *Windows 2000/XP*. The BMAGICC.EXE console module is designed to run on the background and it will not interact with the user (enable log file and check it to see if the task ran OK).

Note: In *Windows 2000/XP* environment you'll also need to consider mapped network drives the user under whose account the task runs can access. If the user has no access to network folders you want to copy files to, the copy process will fail. So run the task under right user account. Also, avoid using mapped drives and use full UNC paths (\\server\share) to server resources in backup set, because driver may have not mapped when user is not logged in.

Using variables

One powerful feature of *Backup Magic* is that you can use variables in **folder names**. For example you may want to copy your backup into a folder that contains current date as part of the folder name. If you make backup every day and want to store all backups then you may want to use the folder name like "Backup of 2003-03-25". Now you can use date and month variables in the destination folder name and *Backup Magic* will replace them with the actual date/time and other information.

Note: If you would like to use date variables in destination folder name, there is an important issue you need to know. Since the folder does not probably exist it will be created by *Backup Magic*. That means there are not files in that folder, so *Backup Magic* will copy all files from source, not only modified files. It can't detect which

files are modified since there are no files in the target folder. The only solution to this problem is to use archive attributes to detect changed files. This is discussed in “Using archive attributes” topic.

Variables must be written in all uppercase letters between % symbols, like %SOURCEDIR%

You can test how resolved directory looks like by invoking the *Display Resolved Folder* command from little popup menu that appears when you click little down arrow above folder name text box.

“Copy from folder” variables

%MYDOCUMENTS% Inserts full path of My Documents folder. Useful in network environment when one backup set can be used by different clients (see above below USERNAME).

%DESKTOP% Inserts full path of the Desktop folder.

“Copy to folder” variables

%DD% Inserts the day as a number with a leading zero (01-31).

%DDD% Inserts the day as an abbreviation (Sun-Sat).

%DDDD% Inserts the day as a full name (Sunday-Saturday).

%DDDDD% Inserts the date using the short date format.

%DDDDDD% Inserts the date using the long date format.

%MM% Inserts the month as a number with a leading zero (01-12).

%MMM% Inserts the month as an abbreviation (Jan-Dec).

%MMMM% Inserts the month as a full name (January-December).

%YY% Inserts the year as a two-digit number (00-99).

%YYYY% Inserts the year as a four-digit number (0000-9999).

%H% Inserts the hour without a leading zero (0-23).

%HH% Inserts the hour with a leading zero (00-23).

%NN% Inserts the minute with a leading zero (00-59).

%SS% Inserts the second with a leading zero (00-59).

%T% Inserts the time using the short time format.

%TT% Inserts the time using the long time format.

%AMPM% Inserts the AM/PM symbol.

%WM% Inserts the week of the month as a number (1-6)

%WY% Inserts the week of the year as a number (1-53)

%SOURCEDIR% Inserts the source directory name. You can use this in the *Default Target Folder* field of the *Settings* page for example. If you write Z:\Backup\%SOURCEDIR% for example, and the name of the source directory is D:\My Documents\Excel then your resolved destination folder name will be Z:\Backup\Excel. See also SOURCEPATH variable.

%SOURCEPATH% Inserts full source path, without drive part. If you write Z:\Backup\%SOURCEPATH% for example, and the name of the source directory is D:\My Documents\Excel then your resolved destination folder name will be Z:\Backup\My Documents\Excel.

%USERNAME% Inserts current network user name. That way you can create one backup set file on server and many users from different workstations can use it to copy their files to server. Then you don't need to create backup set file for each user separately. If you specify X:\Backup\%USERNAME% then Backup folder on server will contain files from all users, under personal subfolders.

Note: Some localized date variables may contains symbols not valid in folder names. *Backup Magic* will remove these symbols automatically.

Example of variables

If you use the string “Z:\Backup\%YYYY%-%MM%-%DD%” in *Copy to folder*, then if date of the backup is May 22, 2002, your destination directory will be Z:\Backup\2002-05-22.

Using CD/DVD recorder

It is possible to copy files to a CD-R(W) or DVD-R(W) disk directly from *Backup Magic*. But to make this work, you need to have proper 3rd party packet-writing software/driver properly installed.

One example of such software is *DirectCD* that comes with *Easy CD Creator*, another is *InCD* that comes with *Nero*. It makes it possible to use your CD/DVD recorder pretty much the same way as usual floppy drive, i.e. you can save to these disks from any application and copy files to them in *Windows Explorer*, without using special CD/DVD mastering programs. Basically they give your recorder device drive-letter write access.

See documentation of your CD/DVD-writing software for more details.

Note: Some mentioned packet-writing drivers will change file modification time when file is copied to CD/DVD-RW. If you encounter problem when *Backup Magic* always copies all files, not only modified files, see the “Problem: files are copied even they are not changed” topic.

Note: Please also remember that *Backup Magic* does not support disk spanning. You'll need to take care yourself that all files from your backup set fit to a single disc if you are copying to removable media.

Using archive attributes

Backup Magic, by default, will detect if a source file is modified by comparing its last modification time with file in destination folder. There are several occasions when this method will not give desired results, so *Backup Magic* allows you to optionally use archive attributes to detect if a file is modified.

To activate archive attribute option, see the “Settings tab”.

Note: You can only use the *Use archive attribute* option in *Incremental* mode, not *Mirror* mode. That's because in *Mirror* mode we need to copy only files that actually do not exist in destination folder, but this can't be detected by source file attributes.

Any groups in your backup set that have backup mode specified as *Mirror* will use usual time stamp compare mode, not archive attribute mode, automatically.

Note: By default *Backup Magic* does not clear archive attributes after copying files. It does so only when “Use archive attributes” option is set, in *incremental* mode. If you want *Backup Magic* to clear archive attributes of source files in any mode, see “Expert settings” on page 18.

Background

Every file has several file system attributes (yes/no flags): read-only, archive, hidden and system. These can be usually edited by *Properties* window of a file. Archive attribute works the following way:

1. When a data file is saved by a program, archive attribute is set.
2. If you run backup software (that makes use of archive attributes), it will copy all the files that have archive attribute set, no other files. Then, backup software will clear the archive attribute from source files that were copied.

So if you run your backup software now again, no files are copied because their archive attributes are not set any more. If you then modify any of the source files, this is like step 1 in our example and the files are marked for archiving.

When to use

There are a few situations when you need to use archive attributes to detect changed files:

1. When you want to use date variables in destination folder name.
Backup Magic can create destination folder on the fly, so you can automatically have your files copied to a folder named like “Files modified on 2002-12-25” – the folder name is generated automatically from current date/time.

The problem with such dynamically created folders is that since they don’t contain any files, *Backup Magic* will copy all files because they don’t exist in the destination (they appear as new files to *Backup Magic*). Remember, *Backup Magic* needs to compare date of source and target file to make sure it is modified, but if the destination file does not exist, it will be treated as new file and will be copied. To solve this problem, you’ll need to use the archive attributes option – then files copied yesterday will not be included in today’s backup if not changed, because their archive attribute is still clear. And since only archive attribute from source file is checked, destination file is not required for detecting if file is modified.

2. When you want to copy only files modified since last backup to an empty disk/folder.
3. When your source and destination folders are on different drives that have different file systems and you have problem that *Backup Magic* will continuously copy more files than are modified. See “FAT vs. NTFS” topic for more information about this problem.

Side effects

1. Side effect when using archive attribute option is that when you change media where you copy your files (want to use another disk etc), you'll not get full backup until you manually set archive attributes for all source files (using *Windows Explorer* or other file manager) you want to copy or you disable the archive attribute option in *Backup Magic* for one backup session. On that case the program will make full backup first time, then will only copy changed files on next run.

Keep this in mind when using archive attribute option, otherwise you'll end up with incomplete backup.

Tools menu

Most *Backup Magic* menu commands are self-explaining, but there are few of them in the **Tools** menu that may need some more explanation.

Validate – will validate source and destination folders of all groups that are not disabled and will display error message problems are found. It is most useful to test folder names that include variables. This function is automatically called each time before file is saved, to prevent saving non-functional backup sets.

Start Backup – will start backup using GUI. This is most useful when testing a new backup set. If you have finished with testing, there are easier ways to run your daily backup.

Start Backup Using Console Module – will start backup using console module. Meant mostly for testing your backup set with console module.

Copy Console Module Command Line - will copy to the clipboard command line that can be used to run current backup set using console module. Then can paste it to a scheduler or batch file.

Replace – can be used to replace a string in source or destination folder fields with another one. For example using this command you can replace drive/folder “D:” with “E:\New” in all groups at once.

Restore Warning Messages – will restore all message dialogs that may have been disabled by selecting “*Don't show this message again*” checkbox.

License file

Starting from version 1.4 users can create license files themselves. License file is a little text file that contains your name and key code. It is mainly useful in networking environment, when you share *Backup Magic* on file server to multiple users. That way every user will have automatically fully working copy of *Backup Magic*, you don't need to manually enter key code in each workstation accessing *Backup Magic* from the server.

To make a license file, use Notepad to create plain text file named `bmagic.lic` in the *Backup Magic* folder (on file server). The file must contain the following text (write it exactly as it appears here, but use your own key code and name after "=").

```
[Backup Magic]
Key=
LicensedTo=
```

Note: You must purchase license for each workstation if you share *Backup Magic* on file server.

FAT vs. NTFS

By default *Backup Magic* uses last modification time of source and destination file to detect if the file is changed. But there is a potential problem with this if your source and destination drives use different file systems (like NTFS and FAT32).

Typical result from this compatibility issue is that every time you run your backup set, many or all files are copied, even you have not changed them.

The problem is that different file systems may store file times with different resolution. That means if you copy a file to a different file system, its last modification time may change slightly. For example, sometimes if you copy a file from NTFS partition to a network drive that has FAT32 file system, its last modification time will be about 1-2 seconds more than it was on source partition. To solve this problem *Backup Magic* has built-in function (starting from version 1.6.1) to detect such time changes, and by default it will treat files as not modified if their size is the same and last modification time difference is up to 2 seconds.

It may be possible that there are still different file systems/drivers that change modification dates even more than 2 seconds. For example some CD-writing programs change last modification time to current date/time even the file is only copied, not modified etc. The “Problem: files are copied even they are not changed” topic discusses these issues.

Expert settings

Warning: These settings are for advanced users only. Inproperly changing expert settings may render your backup set unusable.

There are some settings that can be changed only in backup set file, not through user interface. You’ll need to use plain text editor like *Notepad* to open your BMS file, then add/modify lines under [Options] section of the file. If the settings listed below do not exist, re-save your backup set file or add them by hand.

FileTimeMaxDifference – this setting will change default file time difference that is used to find modified files. Useful to work around problems with different file systems (see “FAT vs. NTFS” for background). By default *Backup Magic* will treat files as not modified if their size is the same and last modification time difference of source and destination file is up to 2 seconds. To change it to 5 seconds, add line `FileTimeMaxDifference=5` to the [Options] section.

RemoveArchiveAttribFromSource – by default *Backup Magic* does not modify archive attributes of source files when “*Use archive attributes*” option is not selected. By specifying `RemoveArchiveAttribFromSource=1` you can enable this function.

Tips & Tricks

If you right-click on a backup set file (*.BMS) in a *Windows Explorer*, then you’ll see 2 new commands in a context-menu: *Edit* and *Backup*.

Solving Problems

Problem: files are copied even they are not changed

If you are copying to a hard disk. To work around such problems, *Backup Magic* includes some measures. You can try *Update last modification time of destination files* option on Settings tab. If that solves the problem, you are done. If not, you can try changing the time that *Backup Magic* uses when comparing files, from 2 seconds to something else through *FileTimeMaxDifference* expert setting (see “Expert settings”). If you still encounter this problem, the last solution is to use archive attributes to detect changed files (see “Using archive attributes”).

If you are copying to a CD/DVD disk. This usually happens when the low-level driver that writes files to CD/DVD disk improperly handle file dates. For example *DirectCD* under Windows XP/2000 will change file dates to current date. To work around this problem, *Backup Magic* has *Update last modification time of destination files* option on Settings tab. If that does not resolve the problem, you can try to play with the *FileTimeMaxDifference* expert setting (see “Expert settings”).

Problem: CD/DVD-RW errors

First, copying files to a CD/DVD disk requires properly installed packet-writing software drivers. See “Using CD/DVD recorder” topic for more information.

If you’ll get errors in log file like “*Device not ready*”, “*Invalid instruction*” etc and no files copied, first check you have inserted and mounted a properly formatted disk in your CD/DVD recorder. Then try copying some files to your disk through *Windows Explorer*. If that works, then try again with *Backup Magic*, otherwise there seems to be a problem with your packet-writing software. Please read documentation of your recording software and contact their tech support if you are unable to solve the problem on your own.

Problem: “Use archive attributes” option does not work

The *Use archive attributes* option only works in *Incremental* mode. It does not work in *Mirror* mode by design. See “Using archive attributes” for explanation. Archive attributes can be quite tricky for novice computer users, so don’t use this option if you don’t know exactly how they work.

Knowledge Base

Please visit our online *Knowledge Base* for up to date articles, tips & tricks:

How to Buy

How to Buy

Backup Magic is distributed as free 30-day trial version. If you like the program you can buy usage license through our online store. After your order is processed you'll receive personal key code via e-mail (if paid using credit card, this usually happens within minutes after submitting your order). Then you'll enter this key code into the trial version you already have and the 30-day limit will be removed from the program.

Secure online store is available on our web site at:

<http://www.moonsoftware.com/store.asp>

Get fully functional *Backup Magic* within minutes!

After Getting Key Code

After purchasing *Backup Magic* you will receive a personal key code. You need to enter this key code into *Backup Magic* trial version to convert it into fully function version. To enter your key code, follow these steps:

1. If you have not yet installed the latest trial version of *Backup Magic*, please do so first. You can download the latest version from our web site *Download* section.
2. Run your *Backup Magic* trial version.
3. Choose **Buy | Enter Key Code** menu command. A dialog will open.
4. Type in your name, and key code exactly the way they appear in the e-mail you received. Use the same capitalization, punctuation and spacing as in the e-mail. You can use copy & paste to ensure the information gets entered correctly.
5. After the information is entered, press the **OK** button. You will see a message that tells if the procedure was successful. If your data was entered correctly, the **Buy** menu will be hidden and your name will be displayed in the Help | About box. You are now the registered owner of the program.

Note: It is not possible that a key code you received from us when purchasing the program is not working. If the program is telling you that your key is invalid, then just be sure you enter your name and key code exactly as it appears in the e-mail. Name is case sensitive and must be entered exactly as it appears.

Warning: Print out the entire e-mail that contains your “licensed to” name, key code and order number for future reference. You will need this information again if you reinstall *Windows*, or want to install the program on a different computer. Better safe than sorry. Replacement serial number may cost you extra.

Uninstalling & Contact Info

Uninstalling

Removing *Backup Magic* from your system is very easy. This will remove the program files from your hard disk as well as the settings from the registry:

1. Open the *Add/Remove Programs* applet in *Control Panel* (**Start | Settings | Control Panel**).
2. Find the *Backup Magic* entry in the list and select it.
3. Note step 4 and then close this help file. Otherwise the uninstaller cannot delete it from your system without restarting *Windows* because it is in use.
4. Press the **Remove** button to start removing the application and follow the instructions on the screen.

Contact information

All information about our company, products and services is available on our web site:

<http://www.moonsoftware.com/>

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