

dBackup® for dRecipe®

Background

One of the most expensive items used by businesses on a daily basis is data.

This data may be about accounts, customers, suppliers or manufacturing. It is the hardest item in the business to replace should it be lost, yet it appears to be taken for granted and few special precautions are taken to ensure it's continuity of availability.

We at AppSoft believe that at least one copy of all computer data being used by a business should be made on a daily basis, and stored off site in a safe location. From time to time (say monthly) a "Milestone" copy should be made, and stored in a third location (a Bank for instance).

Not only must the daily working data be retrievable, but it must be rapidly retrievable, as time taken to replace damaged data is also expensive.

Since we have little control over data, we have limited ourselves to making sure that the data used by **dRecipe®** may be easily backed up to the local machine CD writer or Zip drive.

dBackup® is a stand-alone application which is called by **dRecipe®** when required. The two applications "Talk to one another" to maintain simple backups.

What does dBackup® do?

When **dRecipe®** asks **dBackup®** to run a new backup, a status indicator is displayed in the middle of the main **dRecipe®** screen while **dBackup®** searches each of the data folders, below **dRecipe®**, beginning with the **dRecipe®** folder itself, looking for all database files (the main databases), bitmap files (the graphic output from the panel generation screens) and Jpeg files (pictures of the end products). It will also look in the location specified in the DataPath setting.

As soon as it is finished analysing, it will proceed to make a compressed copy of each file found, storing each one in a single file, complete with information on where the file was located. The status indicator will show what file is being compressed, and how far through the process it has progressed. The minimum size of each backup will be in the order of 1.5Mb including custom graphics, update databases and the **dRecipe®** database.

dBackup® will maintain the most recent 5 backups. Each backup is given a name that relates to the time of day that it was started. The file name is written as 200302181715.zip when created at 15 minutes past 5 on the afternoon of the 18th of February 2003. If another backup were to be requested a minute later, it's name would be 200302181716.zip.

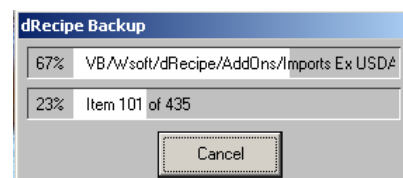
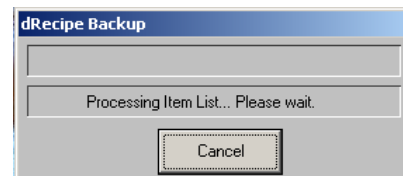
When 5 backups have been generated, before it creates another, **dBackup®** deletes the oldest one. This prevents the backup target location from being filled with old data. If the target is a Zip drive with a maximum space of either 100 or 250Mb, then quite a few backups can be maintained on a disk (more about this later). Should the disk being used be too small for 5 backups, **dBackup®** will remove the oldest to make room for the latest one, and only leave 4 backups on the disk.

Setting up the backup system

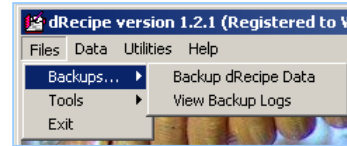
Three requirements must be met before the backup system can be used.

Please note that to run the setup, or to create a backup, the user must be logged on as Administrator.

- The **dRecipe®** installation must be registered to enable **dBackup®** from within **dRecipe®**.



- **dBackup®** must be installed on the computer. It must be installed as a sub-folder of **dRecipe®**. The installation disk will ensure that the program is installed in C:\Program Files\dRecipe\Backup. It will also set the target location for backups to be in a folder under Backup; eg, in C:\Program Files\dRecipe\Backup\Data. If **dBackup®** has not been installed, or is not located in the correct place, the backup selections in the File menu will not be available.
- The preferred target location for the backups must be set by selecting from the Main Menu: Utilities, Pathing, Backup. Navigate to the required location and close the form.



Disk rotation

It is not good policy to write all backups on the one disk. (assuming that the disk is large enough to fit 5 or more backups). If the disk was to be lost, or corrupt, then all backups might be lost.

To ensure that the possibility of this happening is reduced, a different disk should be used for each day of the week. If a 5 day week is being worked, then 5 disks are required. If the business is a 7 day per week operation, then 7 disks will be required. Clearly label each disk, and guard them against dust, heat, droppage, loss etc. Some businesses write a special disk each weekend, and another at month-end, and then archive these as a method of maintaining complete traceability of all transactions.

(Remember that what is being suggested here for **dRecipe®**, equally applies to the accounting system etc.)

Although we have suggested the use of 100Mb or 250Mb Zip disks in our discussions above, the same could apply to burning CDs. Multi-session CD burning is simple, however the cost of Read-Write CDs is now so low, that it is a better proposition to burn only one backup to each disk (even though there is plenty of space for more). Some users might be tempted to only burn a CD once a week, and storing the 5 backups that were written each night all at the same time. This can be seen to be a dangerous move, because if there is a hard drive failure during the week, all copies will be lost.

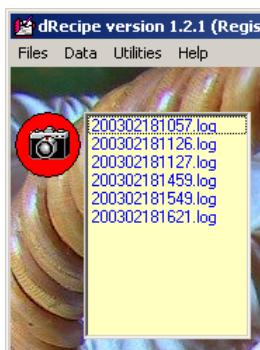
To keep the cost of purchasing RW-CDs as low as possible, we suggest purchasing them in stacks of 25 or 50 (with no crystal cases). The plastic (crystal) cases actually cost more than the CD itself, and are bulky to store. Special windowed paper envelopes (like the one in which **dRecipe®** was supplied) are available from Wigg & Sons Pty Ltd¹ (for around \$60.00 per 1000. (0.6c each instead of 55c for a crystal case).

We at AppSoft are not in the habit of running down equipment, however in our experience, the Iomega Zip drive is far more rugged than the LS120 drive. We and our clients have all had drive and disk failures when using LS120s, but never with the Iomega Zip products.

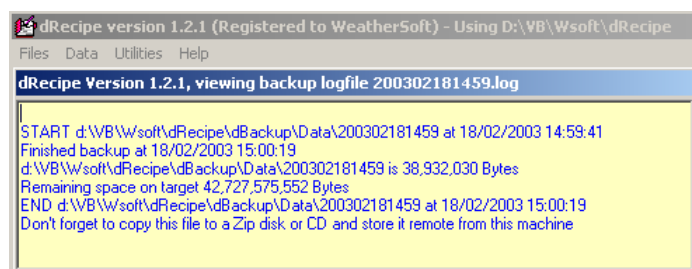
Checking Backup Logs

After a backup has completed, the log file that was generated during the action is viewable by selecting from the Main Menu, Files, Backups, View Backup Logs. (See part screen shot at the top of this page).

A list of all of the log files that have been generated in the current folder will be displayed. As indicated earlier in this document, the file name will indicate the date and time of the backup to which it refers. Double-click on the file name for the log file to be displayed.



The log text will be displayed.



To close either of these two screens, simply hit the Esc key.

Uninterruptable Power Supplies (UPS)

With the increasing number of power cuts during peak demand, and the likelihood of either surges or momentary dropouts, the chance of data corruption is always present.

One of the best insurance policies that any business administrator can purchase is a piece of hardware called a UPS.

Basically the UPS is mini-power station. The UPS is connected to the power mains, and the office computer is plugged in to the UPS. The UPS carefully monitors the power supply, looking for signs that the supply voltage is moving either above or below the specified limits. If it detects an out of tolerance voltage, within 0.02 of a second (one half of a mains cycle), it switches over the supply for the connected computer from mains to its internal generator.

The UPS converts the output from its internal batteries to deliver mains via a solid state converter. The size of the UPS will dictate how much power it can supply, and for how long.

A 650VA UPS will supply a standard PC and screen for 15 minutes or so, plenty long enough to finish any immediate processing, and then shut down until normal power supplies are resumed. Short “outages” are easily handled by the UPS, and about 2 seconds after the mains settles down again, the UPS will re-connect to the normal power mains.

The important thing is that while the mains is chopping and changing, the supply to the office computer remains constant, and damage to important files is minimised.

A UPS is normally intended to allow short mains outages to be ignored, and for connected computers to be shut down “gracefully”. Unless a very big UPS is installed, it should not be used as a substitute for the normal mains supply. The batteries will flatten eventually, and the connected computer or computers will suddenly shut down, with the possibility of corrupting data.



A 650VA UPS will cost in the order of \$500 or less. Your data is priceless!

Restoring data

Since there is already a very comprehensive shareware application available (WinZip), to keep development and subsequent purchase costs down, we have elected not to include restore facilities in **dBackup®**

A trial copy of Winzip may be obtained from the internet, or from a cover CD with one of the Australian computer magazines. A registered copy may be purchased at very reasonable cost (US\$29.00) direct from Winzip at <http://www.winzip.com/>.



After installing WinZip, to restore data, simply double-click on the backup file, and select the database, or graphic(s) that needs replacing, then click on the **Extract** button. The browser (opposite) will display so that the location to which the selected file(s) should be extracted can be entered. When the correct location has been set, click on the **Extract** button to restore the selected data files. (If restoring corrupt files, don't forget to check the “Overwrite existing Files” checkbox first).

