

Video Backup System

AMIGA™

User's Manual

Congratulations!

You have purchased one of the most convenient, powerful and cost effective backup systems available for the Commodore Amiga™ computer. Since the Amiga has strong multimedia capabilities, it is often used in conjunction with video equipment. The Video Backup System adds an extra dimension to the use of video with the Amiga.

While working with the Video Backup System, you will find that it is a powerful and versatile backup tool. To provide maximum security, a new and advanced error-correction mechanism was incorporated. Besides security, it gives a factor 2 increase in backup speed on faster CPUs (68020 and up). In addition to this, the data compression algorithm incorporated in VBS further speeds up the backup process.

The Video Backups System will work with any Amiga configuration, equipped with 1 Megabyte of memory and Release 2.0/3.0 of the operating system and up. It is useful for both hard disk and floppy disk users. The connection to your existing home VCR is easily made, as all necessary cables are provided.

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The Netherlands

1. Installation

In this chapter, you will find the basics of the Video Backup System. Both the installation procedures for hardware and software are described.

1.1. Before you get started

First of all, make a backup of the original Video Backup System disk. Floppy disks are sensitive to heat and radiation, so it is necessary to make a safety backup and store the original disk in a safe place. The Amiga user's manual provides instructions on how to copy a disk. Never write to or make changes to the original disk!

1.2. What you should have

Check the contents of the Video Backup System to make sure that nothing is missing. The package should contain the following items:

- Video Interface: the small grey unit which has a 25-pin connector to connect to the internal Amiga RS232 serial port, and a cable with a PHONO plug.
- Amiga-to-VCR cable: this is an ordinary phono-to-phono cable to connect the Amiga's video output to the VCR input.

If your VBS has a SCART connector for the VCR, the above cables are combined into one, with a SCART plug instead of the PHONO plugs.

- one 3.5" disk.
- This manual.
- Product Registration Card: When you send it in, Lypkens Software Productions will keep you informed of bug fixes, upgrades and related products. You can write your comments on the product on the blank side.

1.3. Hardware installation

Figure 1.1 shows the hardware setup necessary for connection of the Video Backup System to a VCR with PHONO video in/out sockets.

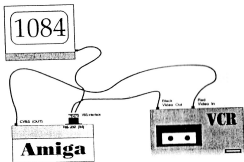


Figure 1.1 VBS Hardware Setup (PHONO connections)

Figure 1.2 shows you how to connect the VBS to a SCART VCR.

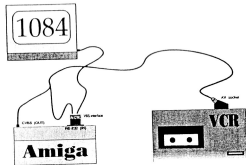


Figure 1.2 VBS Hardware Setup (SCART connection)

Before you start connecting anything, first make sure that both your computer and the VCR are turned off.

After you have taken these precautions, plug the video interface into the serial port. It is located on the back of your Amiga.

Next, connect its black plug to your VCR's video output. When you use a 1084 or equivalent monitor, you can optionally connect the red plug to the composite video input at the back of the monitor. You then have the facility to use the 1084 as a control monitor for the video signal. Use the CVBS/RGB switch on the front panel to either choose the CVBS source (the video signal) or the RGB signal (the Amiga).

Use the other cable to connect the Amiga's composite output to the VCR input jack. Via this connection, data flows from the Amiga to the VCR.

1.4. Installing the software on a hard disk

If you have a hard disk, you probably want to install the Video Backup System on it, so that you can start it from there. On the disk, there is an installation icon labeled 'VBS3.0-Install', which does the job for you.

To install the software, boot your system for the hard disk. The installation software will refuse to work if you booted from the VBS program disk. The reason for this precaution, is that the installation utility needs the correct path to your system's FONTS: directory.

When you double-click on the icon, a window will appear on the Workbench screen, as shown in figure 1.3.

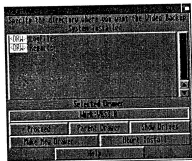


Figure 1.3 Installation utility

The installation utility is the standard Commodore Installer. You may have used this program when installing other applications. The first thing the program asks you, is whether you are an intermediate user or an expert user. An intermediate user must confirm important actions, the rest will be done automatically. An expert user must confirm all actions. The installation utility will ask several questions, about where you want to put the VBS (default: 'work:VBS3.0'), what files you want copied and whether you want the 'S:User-Startup' changed to accommodate VBS. You can always safely choose the default option by clicking 'Proceed'.

After you have finished the installation utility, the Video Backup System 3.0 is ready to be used. The logical device 'VBS3.0:' points to the drawer selected for installation.

1.5. Copyright notice

The Video Backup System software is not copy protected. This means that you can duplicate the original disk without difficulties. However, remember that copying this software for any use other than for backup purposes is a violation of copyright laws. It is illegal to make a copy to give to another person, as it is illegal to use a copy of this program on any two computers simultaneously.

2. Using the Video Backup System

This chapter describes in detail how to use the Video Backup System software. If you have not yet connected the hardware and your VCR to the Amiga, please do this first. This procedure is described in chapter 1.3.

The VBS software has been designed according to the guidelines in the Amiga User Interface Style Guide. This means that you have a consistent, predictable and easy to learn user interface. You will notice that the VBS works in a way similar to other applications that were designed with these guidelines in mind.

The main means of issuing commands is the mouse, as all functions are accessible through gadgets. Furthermore, all functions have keyboard shortcuts.

2.1. The main menu

Start the Video Backup System by going to the directory where you put it with the installation utility. Then, double-click on the icon labeled 'VBS'.

You can also start the VBS from the Shell by going to the directory, and then typing 'VBS' <Return>.

When the program comes up, you will see the main menu (Figure 2.1).

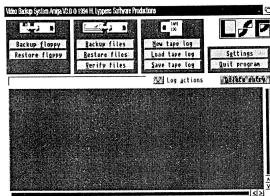


Figure 2.1 VBS main screen

On the top of the screen, there are ten buttons, grouped in four categories. Below that, on the left side of the screen, a text display box indicates the name of the log file. The 'Delete entry' button to the right of it used to remove an entry from the log file. The scrolling list on the bottom shows the contents of the log file.

2.2. Concepts behind the VBS

For a better understanding, it is important to be familiar with some of the basic ideas behind the VBS.

2.2.1. Floppy versus file backup

Within the Video Backup System, there are two kinds of backups. A floppy backup is a track-by-track image of an 880K AmigaDOS disk, written to video.

A file backup is intended to save the contents of a hard disk, but you can make a backup of any disk filesystem like RAM: or even a floppy disk (although the floppy backup is suited better for this). With file backups, you can include or exclude individual files and directories.

2.2.2. The log file

To keep track of backups made, the Video Backup System uses log files. A log file represents a video tape. For practical reasons, they are not stored onto the tape. Instead, they are kept as a file on a floppy or a hard disk.

You should use a separate log file for each tape that you use. It is a good idea to write the name you chose for the log file on the tape.

Log files contain lines that look like this:

```
START TIME-END TIME BACKUP TYPE NAME DATE  
or, when you use a numerical counter:  
COUNTER BACKUP TYPE NAME DATE
```

Each of these entries represents a backup.

START TIME

This indicates the starting position of this backup on the video tape. You specified this value when the backup was made, as there is no way for the Amiga to determine the counter value of the VCR automatically.

END TIME

This indicates where the backup ends. This value was computed from the starting time and the amount of time elapsed while making the backup.

TYPE

This tells you the type of backup that was made. 'ADF' stands for AmigaDOS floppy. 'FS' means for 'Files', the result of a file backup.

NAME

The name of the backup. In case of a floppy backup, this is the name of the floppy disk. With a file backup, you have entered the name yourself.

DATE

If this is a floppy backup, the date is the creation date of the floppy disk. In case of a file backup, it is the date on which the backup was made.

COUNTER

If you have an older VCR, without a time counter, this is the numeric position that the tape counter on the VCR indicates. With a numeric counter, there is no end position, as there is no way of telling what the

position will be after the backup. It is for informational purposes only, to make it easier to locate a backup on tape.

Each time you make a backup, such a line is added to the log file.

NOTE: The software doesn't care if two log file entries overlap in time.

If you have conflicting entries in the log file table, you should remove obsolete entries by using the 'Delete entry' button.

The log files are stored in plain ASCII format. This means that you can modify the file by hand if necessary, and that you can print it.

2.2.3. The tape counter

The tape counter is necessary for you to be able to find locations on the video tape easily. You have the choice between two kinds of counters: a real-time one and a numeric one. Most modern VCRs have a time counter, but older models may still use the numeric one. You can select which type you want to use in the settings requester (see chapter 5 for more details).

The format of the real-time counter is 'H:MM:SS' (hours, minutes, and seconds), the format of the numeric counter is 'NNNN' (four digits).

When you insert a new video tape, make sure that counter value 0:00:00 or 0000 corresponds with the beginning of the tape. You can achieve this by rewinding the tape and pressing the 'counter reset' button on the VCR.

Many VCRs have a Goto function, with which you can easily skip to a specified point on the tape by simply entering the desired position.

2.2.4. Visual headers

A visual header is an image that is recorded on the VCR for about five seconds, just before the actual backup starts. In a large font, which you can select in the settings requester, the name of the backup and other data are shown. See figure 2.2 for an example.



Disk Utilities
Backup Date: 4-Jun-91
From: DHO:Utilities

Figure 2.2 A visual header

With visual headers, it is easy to locate backups. Look at your control monitor (in case you connected the 1084 as described in section 1.2, press the CVBS/RGB button to select the VCR signal), and use the search forward/backward controls on your VCR until you see the desired visual header.

2.2.5. Video connection check

To make sure that the connection to the VCR is correct, the Video Backup System checks it before starting a backup operation. This makes sure that your backup gets recorded on video tape, because the check fails when:

- your VCR is not turned on,
- the connections are not OK,
- the VCR is not tuned to the AUX or AV channel (external source).
The channel display on the VCR should show '0' or 'AU'. Refer to your VCR's instruction manual for details.

When the check fails, a requester appears which tells you that something is wrong. You can either correct the situation and click on the 'Retry' button or click on 'Abort' to cancel the operation.

2.3. Floppy functions

The floppy functions are for storing and retrieving 880K AmigaDOS disks. Chapter 3 describes the floppy functions.

2.4. File functions

The file functions can store and retrieve data on a file-by-file basis. In practice, they are used save the contents of hard disks on video tape. Chapter 4 covers a description of these functions.

2.5. Log file functions

Log files are used to keep track of the backups made on a video tape. With the log file functions, you can load, save and create log files.

2.5.1. New tape log

With the 'New tape log' button, you can create a new log file. The keyboard shortcut is 'N'. When you select this function, a standard ASL save requester will appear. A save requester is different from a load requester: the file selection part is in a reversed color.

The requester displays the directory you can specify in the settings requester, but you select another directory with the buttons on the bottom part and the directories displayed in the file selection part.

You can select an existing file or type a name from the keyboard. A new file with the name you specified will be created. If you chose an existing file, the contents of that file will be lost. If you started the VBS from the Workbench, an icon for the file will be created as well.

The backups you make will be recorded to this log file from now on. The name of the log file will be displayed in the text display box below the buttons.

2.5.2. Load tape log

When you click on the 'Load tape log' button or press the 'L' key, an ASL load requester appears. The initial directory displayed is the one specified in the settings requester, but you can select another if you want to. To load the desired file, double-click on its name or click once and then select 'Load'.

The VBS will leave out all lines that do not have the correct format, so if you load a file that is not a log file, the result will be an empty log file.

In addition, the Video Backup System automatically detects what kind of counter you have, based on the first line in the log file. It overrides the counter type specified in the settings requester.

An alternate way of starting the VBS is to double-click on a log file icon. This way, the log file is automatically loaded after startup.

When you have loaded a log file, information on backups you make is saved to this file. Its name is displayed in the text display box below the buttons.

2.5.3. Save tape log

When you click on this button or press the 'S' key, the the log file will be saved to disk. As a result of making backups, the contents of the log file may have changed. This function saves those changes.

2.5.4. Delete entry

If you want to remove an entry from the current log file, for instance because you want to overwrite the corresponding backup from the tape, select the line from the scrolling list that represents the current log file by clicking on it and then click on 'Delete entry' or press 'D' on the keyboard.

Normally, the 'Delete entry' button is ghosted, which means that you can't select it. When you use the mouse to select an entry from the log file, the button becomes active.

2.5.5. Directly restoring a backup

If the log file is too long to fit on the screen, you can scroll through it with the scroll bar and the arrows on the right side of the log file display. The same horizontally, if the entries are too wide you can use scroll bar at the bottom.

If you double-click on a line, the Video Backup System tries to restore the backup you select. The VBS automatically detects whether it is a floppy or a file backup. Read chapters 3 and 4 for a detailed description of floppy and file backups.

2.6. Settings requester

Much of the behaviour of the Video Backup System, and the way it presents itself to you, can be set with the settings requester. In this way, you can adjust the program to your personal taste, and store these settings so that they will be used every time you use the VBS. Chapter 5 covers a description of the settings requester.

2.7. Quitting the program

When you're done making backups, select 'Quit program' or press 'Q' to finish your session.

If you are working with a log file and there were unsaved changes to it, a requester will appear and inform you that you have unsaved changes. You can choose to save the changes with 'Save first', discard the changes by selecting 'Continue' or to abort the operation by clicking on 'Cancel'.

3 Floppy functions

The floppy functions control the backups and restores of entire AmigaDOS floppies. You could use the file functions for this purpose also, but because of the slow nature of floppy drives, a special floppy backup was developed to be able to use the video tape as efficiently as possible. A floppy disk is stored to video in only one minute.

3.1. Floppy backups

This function deals with the storage of AmigaDOS floppies on video tape.

3.1.1. Floppy requester

When you either click 'Backup floppy' or press 'F', the floppy requester comes up (see figure 3.1).



Figure 3.1 The floppy requester

Drive selection

On the top part, you see the drive selection checkboxes. Only the drives that you have connected can be selected, the rest is ghosted (overlaid with a pattern of dots). Initially, the checkboxes are mutually exclusive: allowing you to select only one drive at a time. '0', '1', '2' or '3' can be as used as a keyboard shortcuts.

Entering Start position

This text entry box only appears when you log your actions to a log file. In this case you are expected to enter the starting tape position here.

It is a good idea to enter a position a few seconds ahead of the current counter reading. This allows some time for the VCR to get going after you press 'RECORD'. At the very moment it reaches the position entered, you click the left mouse button to start the backup. This gives a perfect synchronization.

Multiple disks

The Video Backup System also allows you to store multiple floppies directly after one another on the tape. This is useful to store large games or public domain collections.

If you want to store multiple disks, select the 'Multiple' checkbox, with a click on it or with a press of the 'M' key. When 'Multiple' is enabled, you may select more than one drive.

For instance, when you select both DF0: and DF1:, the software will alternate between these two drives. This means that the first disk comes from DF0:, the next from DF1:, again, and so on until you stop the series.

Ending the requester

To end the requester, select 'Start backup' to begin the backup or select 'Cancel' to cancel the operation.

3.1.2. Backup operation

Making a backup involves the following steps:

- First, the video connection is checked (see 2.2.5). If this is OK, the screen becomes black.
- Make sure the disk to be backed up is in the selected drive.

- Make sure the right video tape is loaded and that it is at the desired position.
- Press 'RECORD' on the VCR.
- Press the left mouse button to start. In case you use a log file, click when the video counter matches the value you typed in.

Now, the backup starts. You will see the visual header for about five seconds. Then, the actual backup takes place. You can always abort the operation by clicking the left mouse button.

When 'Multiple' is not enabled, you get back to the VBS main screen when the operation finishes. Press 'STOP' on the VCR at this moment.

If it is enabled, the VBS will make a backup of the next disk. If you selected more than one drive, the next disk will be read from another drive (the next in line). Insert this next disk while the first is being written to tape.

After the last disk of the series, click the left mouse button to get back to the main screen. Actually, you can do this at any time you wish to abort.

3.2. Floppy restore

This feature enables you to retrieve the contents of a floppy disk from video tape. The disk you restore to does not need to be a formatted one: the VBS can directly write onto blank disks.

3.2.1. Restore floppy

When you click on the 'Restore floppy' button or press 'O', the floppy requester pops up. You are asked for the name of the floppy disk you would like to restore. It is sufficient that the string you type matches the first few characters of the real name. Note that the name is case sensitive. If you do not type in a string, the first backup encountered will be used..

The drive and 'Multiple' checkboxes behave the same way as with a backup. Read section 3.1.1 for a full description.

In case you enabled 'Multiple' to restore a series of floppies, the name entered in the floppy requester only applies to the first disk. For any subsequent disks, this name is not required to match: the next floppy backup found on video is restored.

3.2.2. Restore operation

After completing the floppy requester, the screen gets cleared and the text 'Searching for AmigaDOS floppy: <name>' appears. You can abort at any time by pressing the left mouse button.

You should follow this procedure:

- Wind the tape to the location of the disk to be restored. Use the 'Go-To' function of your VCR if it has one.
- Make sure there is a write-enabled disk in the selected drive and that it does not contain valuable data. WARNING: all data on the disk will be overwritten during a restore!
- Press 'PLAY' on the VCR.
- If the VBS encounters a backup that does not have a matching name or is of a different type (e.g. FS), the message 'Encountered <name>' is printed.
- When the desired backup is found, a message saying so is printed and the data are transferred from video to the floppy disk.

When 'Multiple' is disabled, you get back to the VBS main screen when the restore operation finishes. Press 'STOP' on the VCR at this moment.

In the other case, the Video Backup System will restore the next disk it encounters on the video tape. If you selected more than one drive, the next disk will be written to another drive (the next in line). This gives you the chance to change disks in one drive while the other is involved in a restore operation. The VBS monitors disk changes, to prevent that you accidentally restore to the same disk twice. It asks you to remove the disk before continuing. This feature can be turned off in the Settings requester.

When you have restored the last disk of the series, press the left mouse button to go back to the main screen.

4. File functions

A file backup is used to store files and directories on video tape. In practice, you will use the file functions to secure your hard disk's contents. If you ever had the unfortunate experience of losing data, you know the value of making backups regularly.

The Video Backup System allows you to individually select the files and directories to be included in the backup. The directory tree allows you to view and select the directories and files you want to backup. With the mouse, you need only point and click on the files or directories you want. The directory tree structure is preserved on the video backup.

4.1. File and directory selection

This section explains how to use the file & directory selection requester. Figure 4.1 shows its layout.

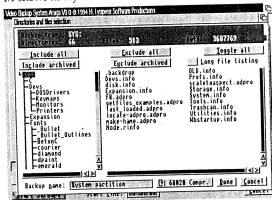


Figure 4.1 File & directory selection requester

The selection requester contains the following parts:

- **Backup status box:** This box at the top of the requester displays the currently selected directory tree to be backed up. Furthermore, it shows you how many subdirectories you have selected, how many files across all subdirectories and how many bytes the files occupy.
- **Inclusion & exclusion buttons:** They are used to include, exclude or toggle the files in the currently highlighted directory. It is also possible to exclude and include archived files (across all subdirectories).
- **Directory tree list:** This is the scrolling list on the left side of the requester. It lets you see and select the subdirectories you wish to back up. You can use the mouse to position the highlight bar in the window. The highlighted directory is indicated by a bar. Using the scroll bars at the right and the bottom, you can reveal more of the tree in case it doesn't fit entirely in the window.
- **File list:** This is the scrolling list on the right side of the requester. It lists all files in the highlighted directory. These files are shown in columns by default; the software determines how many columns will fit given the file name lengths. When the file list is bigger than the scrolling list permits, you can use the scroll bars to see more.
- **Control gadgets:** With these gadgets at the bottom of the requester, you can enter a name for this backup and select the backup type to be used.

4.1.1. Selecting files

You can select and unselect files by clicking over them. Selected files are shown in black, unselected files in grey. Initially, all files and directories are selected automatically, except for unreadable files (files that do not have the r protection bit set).

There will probably be occasions when you want to backup only certain directories or files instead of the entire tree. Mouse clicks and inclusion/exclusion buttons give you flexible options to specify these directories or files.

By clicking on a different directory entry with the left mouse button, you can make the highlight bar jump to that directory. The file list will reflect the contents of this directory immediately.

Clicking again on the highlighted directory toggles its selection state. This means that its color changes from black to grey or vice-versa. When you select or unselect a subdirectory this way, all its descendants (subdirectories and files) also get selected or unselected.

This implies that all of the directories and files can be unselected by moving the mouse to the root directory and clicking on it once or twice, depending on whether the highlight bar was already at the root directory or not.

If you then want to select your 'System' directory and all of its files, click twice on the 'System' entry in the directory tree list.

If you only want to select certain files of your 'System' directory, click on it once to make it the highlighted directory. Then go to the file list, and click once on each file you want to include. Note that when you select a file in a previously unselected directory, it automatically gets selected as well.

Clicking again on a selected file brings it back to the unselected state again.

Note: you can also select and backup empty directories.

4.1.2. Inclusion and exclusion functions

With the inclusion and exclusion buttons, you can select and unselect groups of files.

- Include all:** When you select this function, all files in the highlighted directory are included.
- Exclude all:** When you select this function, all files in the highlight directory are excluded.
- Toggle all:** This function toggles the selection state of all files in the highlighted directory.
- Include archived:** This item influences the whole directory tree. It includes all files that have their archive bit set. The archive bit is used to identify files that are unchanged since the last backup operation. When you create or modify a file, its archive bit is cleared.
- Exclude archived:** This is the opposite of the item above. All files that have their archive bit set are excluded.

Long file listing: This is a checkbox which toggles the state between a long and a short file list. If it is unselected, you get a short file list: only file names, arranged in as many columns as will fit in the file list. When it is selected, the VBS will show more information about the files. They are listed in a similar way as the 'List' command of AmigaDOS would do: name, filesize, protection bits, modification date and modification time. For instance, this allows you to see whether a file's archive bit is set or not. The drawback is that less files will be visible at the same time, since each one of them occupies a whole line.

4.1.3. Other gadgets

You can backup several directory trees in one run. Each of these backups has its own name, which makes it easy to restore one tree at the time. You can enter a name for this backup in the text entry box at the bottom of the screen.

You can also select the backup method. If you have CPU below 68020, it will be '68000 Std.'. This backup method is fully compatible with version 1.5 of the VBS. For 68020 or higher CPUs, version 3.0 offers two new backup methods, '68020 Fast' and '68020 Compr.'. The 'Fast' method is about twice as fast as 68000 Std and has improved error correction. The 'Compr.' method adds data compression to this.

Finally, there are the 'Done' and the 'Cancel' buttons. 'Done' confirms your actions, 'Cancel' takes you back to where you came from.

Note: some of these gadgets may not be present, depending on the type of operation you are performing. For instance, you cannot select the compression method when restoring a backup.

4.2. File backup

This feature lets you make a backup of a directory structure and its contents.

4.2.1. Choosing the directory trees

When you select the 'Backup files' function in the main menu, you will see the next screen, shown in figure 4.2.

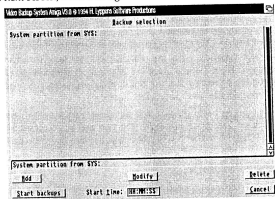


Figure 4.2 Directory tree batch screen

On the top, there is a scrolling list. This list displays the directory trees you selected to be backup up. On the bottom part, there are six gadgets. With the top three, you can add, modify and delete tree selections. The bottom three are for starting and cancelling a backup, and for a backup at a specified time.

To add a directory tree to be backed up, click on the 'Add' button or press 'A'. A ASL directory will appear. Now you can select the directory you want to backup. An ASL directory requester is the same as an ASL file requester, only now it shows only directories.

In the directory requester, you can select the drive and directory path you want to backup. If you want to backup an entire drive, you would normally choose its name here (e.g. 'Work:', 'SYS:').

You might not want to backup everything however. For example, if you just want to backup your music directory, choose the name for that directory (e.g. 'Work:Music'). This will select all files in this directory and its subdirectories. The file & directory selection requester will only show the contents of the subtree 'Work:Music'.

After you've chosen the right drive and path, click on 'Select'. This will bring up the file & directory selection requester.

Now, choose the files you want to backup. After that, click on 'Done' or press 'D' to start the backup, or select 'Cancel' or 'C' to return to the directory tree selection screen.

You can add new directory trees that are to be backed up, modify trees you added earlier or remove a tree from the directory tree list.

If you are not satisfied with the selected entries in a directory tree, choose this tree from the scrolling list. After this, click on 'Modify' or press 'M', which brings up the file & directory requester. Now you can select and unselect files and directories again.

If you don't want to backup a selected directory tree anymore, select the tree and click on 'Delete' or press 'D'. The tree will be removed from the backup batch list. Note that it will not delete the tree from the disk!

4.2.2. Backup requester

When you start the backup, you will see the backup requester, shown in figure 4.3.

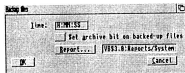


Figure 4.3 The backup requester

Entering the start time

When you are logging your actions to a log file, you must enter the starting tape location in the text entry box after the 'Time:' text. Click on the box or press 'T' to do this. This time value will be used to create a log file entry for this file backup. It is a good idea to enter a time which is a few seconds ahead of the current counter reading. This allows some time for the VCR to get going after pressing 'RECORD', and it allows a good synchronization as well. If you do not log your actions, you will not see this text entry box.

Archive bits

When this checkbox is in the selected state, it causes the VBS to set the archive bit on each backed up file. The archive bit is used to identify files that are unchanged since the last backup operation. When you create or modify a file, its archive bit is cleared.

Reporting

At your option, the VBS can generate a report after the backup is finished. By default, no report will be generated.

If you do want a report, click on the 'Report...' button or press 'R' on the keyboard. An ASL save file requester shows up, in which you can select or enter a name. If your batch consists of multiple backups, a report will be generated for each of them. The report for the first backup will have the name you entered, the second one 'name.1', the third 'name.2' and so on.

The following example report shows what is included in the report:

```
Video Backup System Filesystem backup report 71.0
Copyright 1994 by Hugo Uppens. All rights reserved.
Backup date: 4-Sep-94
```

```
Backup name: VES1.0
Backup from: VES_Arjgs_V1.0_PAS
Total number of directories: 7
Total number of files: 13
Total bytes: 322597
```

Name	Size	Protection	Date	Time
*** DIRECTORY VES_Arjgs_V1.0_PAS ***				
Dirk.info	344	----r-w-	2-Sep-94	21:35:45
Installer	133144	----r-w-	1-Sep-94	21:48:14
Tranexam.info	1732	----r-w-	2-Sep-94	21:35:44
VES1.0-Install	1176	----r-w-	2-Sep-94	21:35:44
VES1.0-Install.info	743	----r-w-	2-Sep-94	21:35:44
VES1.0.info	426	----r-w-	1-Sep-94	19:20:09

```

>>> DIRECTORY VBS_Amiga.V3.0.PAL:fonts
melba.font          524 ----rwed 1-Sep-94 21:49:42

>>> DIRECTORY VBS_Amiga.V3.0.PAL:fonts/melba
23                  524 ----rwed 1-Sep-94 21:49:39
61                  2044 ----rwed 1-Sep-94 21:49:41

>>> DIRECTORY VBS_Amiga.V3.0.PAL:Trashcan

>>> DIRECTORY VBS_Amiga.V3.0.PAL:VBS3.0
LogFiles.info      628 ----rw-d 3-Sep-94 09:20:12
Reports.info       151816 ----rwed 3-Sep-94 18:36:06
VBS.info           1527 ----rw-d 4-Sep-94 12:08:27

>>> DIRECTORY VBS_Amiga.V3.0.PAL:VBS3.0/LogFiles

>>> DIRECTORY VBS_Amiga.V3.0.PAL:VBS3.0/Reports

```

To start the actual backup operation, select 'OK' or press 'O'. To cancel the backup operation, select 'Cancel' or press 'C'.

4.2.3. Timed backups

It is not always desired to have to wait for a backup to complete, especially when you are making a very large backup. For this reason, the timed backup was devised.

When you enter a correct time in the 'Start time' text entry box, the normal backup requester appears first. When you select 'OK', the VBS screen or window disappears and a small requester is placed on the default public screen. Mostly, this will be the Workbench screen.

You can make the requester small with the zoom gadget. In that case, it will only occupy the space of the title bar. If you leave the requester alone, the backup starts at the time displayed in it. If you click on 'Cancel' or press 'C' before that, you will return to the directory tree selection screen.

Because every VCR can be programmed to start recording at a specified time, you can automatically make a backup when you are away from home or during the night. Make sure that the Amiga and the VCR clock have the same time, and assure that the VCR will record from the right channel, the AV channel.

4.2.4. File backup operation

Making the backup involves the following steps:

- First, the video connection is checked (see 2.2.5). If this is OK, the screens becomes black.
- Make sure the right video tape is loaded and that it is at the desired position.
- Press 'RECORD' on the VCR.
- Press the left mouse button to start. In case you use a log file, click when the video counter matches the value you typed in. In this way, you realize the best synchronisation.

Now, the backup starts. For five seconds, you will see the visual header. This header shows the name you gave this backup, the path from which the backup is being made and the current date.

Note: especially with large hard disk backups, make sure that there is enough room left on the tape. Expect a typical rate of 85 Megabyte per hour when you use no compression (68020 Fast).

You can abort the backup operation by pressing the left mouse button. As a safety feature, the button is only sampled once every few seconds, so you might need to hold the button down for several seconds before the VBS actually aborts the operation.

When the backup finishes, you get back to the main menu. Press 'STOP' on the VCR at this time.

4.3. File restore

This feature enables you to retrieve part or whole of a file backup. On restore, the original tree structure is reconstructed. You can use this to restore files lost after a disk crash, restore files to a previous state, transfer files to a different machine, etc.

4.3.1. Name of the backup to restore

On selecting the 'Restore files' button the name requester pops up.

Now, you are asked to enter the name of the file backup you would like to restore in the text entry box. You can activate the box by clicking over it or by pressing 'N'. It is sufficient that the string you type matches the

first few characters of the actual name. If you don't specify a name, the first backup encountered will be restored. Click on 'OK' to continue, select 'Cancel' to return to the main menu.

4.3.2. Restore operation

After you completed the name requester, the screen gets cleared and the text 'Searching for: <name>' appears. Remember, you can abort at any time by pressing the left mouse button. Follow this procedure:

- Wind the tape to the location of the disk to be restored. Use the 'Go-To' function of your VCR if it has one.
- Press 'PLAY' on the VCR.
- If the VBS encounters a backup that doesn't have a matching name or is of a different type (e.g. ADF), the message 'Encountered <name>' is printed.
- When the desired backup is found, a message saying so is printed.
- The VBS then reads information that describes the tree structure. This takes a few seconds.
- After this, you will see the file & directory selection requester. Within five seconds, you must press 'PAUSE' (or 'STOP') on your VCR.
- If you want to do a full restore, simply select 'Done'. Otherwise, first select those files you wish to restore (see section 4.1).
- At this stage, a directory requester pops up. Select the drive and directory to restore to. When you are doing a full restore of a hard disk, this would be something like 'DH0:' or 'Work:'. In any case, this entry must refer to an existing directory, so if you need to restore a path which does not exist, first use the AmigaDOS command 'Makedir', or the Workbench's 'Window/New drawer' menu item to create it.
- After finishing the requester, press 'PLAY' again on the VCR to continue the operation.
- At this time, the actual files are transferred from video tape. If errors occur during the operation, they will be listed on the screen. The VBS is able to continue to restore after an error occurred. As with making a

backup, you can abort the operation by holding the left mouse button for a while

Note: existing files will never be overwritten. The VBS will create all directories necessary to reconstruct the backup's tree structure.

- When the restore operation finishes, press 'STOP' on the VCR. Use the left mouse button to get back to the main menu.

4.4. File verify

This function, accessible with the 'Verify files' button or the 'V' key, is used to compare a backup to the original data on disk. It will not affect your disk, it will merely check whether the backup is OK.

As the VBS uses an advanced and effective error-correction scheme, it is very unlikely that the backup is bad. However, if you want to absolutely sure that your backup is good, you should use the verify function.

The user interface of this function is equal to that of the restore files feature (section 4.3), so it is not repeated here.

The only difference is that data isn't written to disk, but instead, disk data and video data are compared. For '68020 Compr.' backups, no files will be compared, but backup integrity and consistency are checked.

Each file that is affected by a verify error will be reported on-screen.

5. The settings requester

The Video Backup System provides a versatile settings requester, in which you can adjust the program to your personal preferences. The settings can be stored, so that the VBS will always work with these properties.

The settings requester will appear after clicking on the 'Settings' button or after pressing 'E' in the main menu. You will see the window, shown in figure 5.1.

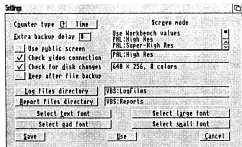


Figure 5.1 The settings requester

5.1. Counter type

Most modern VCRs have a real-time counter, that indicates the tape position in hours, minutes and seconds. However, older VCRs use a numeric counter, with the tape position in four digits. You can select either 'Time' for a clock-like counter or 'Number' for the numeric counter by clicking on the 'Counter type' button or by pressing 'O'. The default setting is 'Time'.

5.2. Extra backup delay

This setting affects only backup operations: when doing a backup, VBS will slow it down by adding an extra delay of this value (times one-tenth of a second) to make sure that the hard drive will be able to keep up when doing a restore. Normally when a backup will be restored to the same hard disk it came from, a value of 0 is recommended. When using VBS to transfer files from a fast disk to a slower disk on another computer, use a value of, say, 5 to avoid data overruns.

5.3. Use public screen

The Video Backup System normally uses its own screen. If you want the VBS to run on a public screen, turn this on by clicking on the 'Use public screen' checkbox or by pressing 'b'. The name of the default screen can be specified on the command line or with the tool types mechanism. Refer to chapter 6, 'Additional features', for information on this subject. The default setting is to use a private screen.

5.4. Check video connection

Normally, the Video Backup System checks the connection to the VCR before it starts a backup operation. You may turn this feature off by clicking on the 'Check video connection' checkbox or by pressing 'V'. The default setting is to check the connection.

5.5. Check for disk changes

When you use the 'Multiple' feature with floppy backups and restores, the VBS checks whether you changed the disks properly. This serves to make sure that you don't backup the same disk twice or restore twice on the same disk.

In the rare case that you have non-standard disk drives, that have trouble with the disk change signal, this feature can be turned off by clicking on the 'Check for disk changes' checkbox or by pressing 'D'.

5.6. Selecting the screen mode

With Release 2 of the operating system, there is a variety of screen modes to choose from. You can run the Video Backup System with your

favorite screen mode. You can select this with the screen mode list, that works the same way as the Workbench's ScreenMode preference editor.

You can scroll through the list with the scroll bar and arrows on the right side, or by pressing 'E' to scroll forward and 'Shift-E' to scroll backward. To select a specific screen mode, click on it with the mouse. If you have Release 2 of the operating system, the selected screen mode will be placed directly below the scrolling list. With Release 3, the screen mode is highlighted.

A text box below the scrolling list, gives some information about the selected screen mode, like resolution, number of colors.

You can also use the correct Workbench values.

5.7. Selecting the log file directory

To keep track of your backups, the Video Backup System uses log files. You can select the directory you want the log files to be written to by clicking on the 'Log files directory' button or by pressing 'L'. A directory requester will appear, with which you can select the directory. The default setting is 'VBS3.0:LogFiles'.

5.8. Selecting the report file directory

Similar to selecting the log file directory, you can select the place where the report files should be written, either by clicking on the 'Report files directory' or by pressing 'R'. The default setting is 'VBS3.0:Reports'.

5.9. Selecting fonts

You can select which fonts you want to use with the Video Backup System. Clicking on the 'Select text font' or pressing 'T' will pop up a font requester for the font used in text and buttons. Click 'Select pad font' or press 'P' for the font used in pads (the log file and directory scrolling lists).

To select the fonts used in Visual Headers, you can click 'Select large font' or press 'A' for the larger font and click 'Select small font' or press 'M' for the smaller font.

All requesters used in the Video Backup System are the standard ASL requester from the operating system. They work the same way as in other programs.

5.10. Save, Use and Cancel

If you want to back out of the settings requester without the changes having effect, click on the 'Cancel' button or press 'C'. The VBS will use the same settings as before you called the settings requester.

If you want to use the changes but not permanently, click on 'Use'. This way, the new settings will be used but they will not be saved to the settings file.

If you want the settings stored, so that they will be used when starting the Video Backup System, click on 'Save'. The settings will then be written to the settings file 'vbs.prefs' and will take effect immediately.

6. Some hints

This chapter gives some additional information and hints to get the most out of Video Backup System Amiga 3.0.

6.1. New tool types

You can view/modify tool types by the 'Icons/Information' WB menu.

SETTINGS=filename

This lets you use a specific settings file. Also possible as argument on VBS command line.

PUBSCREEN=name

If you want to Video Backup System system to run on a public screen, you can specify its name with 'PUBSCREEN=name' on the command line or in the tool types. If the VBS cannot find or use the public screen you specified, the default public screen (mostly the Workbench screen) will be used.

6.2. V1.5 tool types

The following tool types are inherited from V1.5 of the VBS. They have effect on V1.5 backups (68000 Std.) only.

WRITEFACTOR=percentage

This indicates the delay factor for backing up. If it says 150, it indicated that VBS will assume that writing back to hard disk takes 1.5 times as much time as reading from it. Increase this value when you are making an '68000 Std.' backup from a fast disk that is going to be restored onto a slower disk.

PERFILE=t

A delay per file for backing up. Measured in 1/50th of a second.

PERDIR=t

A delay per directory for backing up. Also in 1/50th of a second.

6.2. Using the right tapes

To achieve maximum security, it is recommended that you use High Grade tape for video backup purposes. To avoid losing data, do not store tapes near a magnetic field (from loudspeakers, TV-sets, etc.).

6.3. Trouble shooting

- When experiencing problems, vary the picture sharpness or similar controls, if your VCR has them. Usually, a sharper picture improves the backup reliability.
- During a backup operation, it is important to turn off screen blankers or other utilities that might affect the screen while it is being recorded.
- For ECS and AGA chipset-equipped Amigas it has to be made sure that the Video Backup System can work in a 15 kHz line frequency mode. This can be achieved by not using Mode Promotion and VGAOnly, or similar setting.
- On a very small minority of Amiga 2000s, one of the legs of the capacitor inside the computer at the serial port (from the receive pin 3 to Ground) might need to be cut if VBS won't work reliably! If you have problems on an Amiga 2000 (the Video Connection Check fails all the time despite correct connections) first test the VBS on an A500 to make sure it isn't faulty before doing this modification! This modification is easy to reverse and will not affect the operation of computer or serial port at all: the capacitor really is superfluous.
- The intended capacitor is one of a row of about 10 capacitors, about 2" away from the serial port (near the internal serial port). On the A2000s I have seen the cap was marked 'C313', however as this may vary with motherboard revisions, please double-check using a meter to ensure that the capacitor really is connected to pin 3 of the serial.
- If your VCR has On-Screen Display of counter and time information, you should obviously turn it off, so that nothing interferes with the signal coming from the VCR.
- Utilities that access the floppy drives every time a disk is inserted (like virus checkers such as VirusX or VirusZ) should be disabled before doing a "Multiple Floppy Disk" backup or restore operation.