QCopy for Windows

QCopy for Windows is an easy to use program to copy and format diskettes. *QCopy for Windows* works not only with disks, but also with DSK-files (which can be created with *QCopy for Windows).* DSK-files created by *QCopy for Windows* appear externally just like diskettes, however, internally the functions for diskette access are replaced by functions of file access.

From where to where the copy is made, the number of copies to be prepared from a diskette, what diskette format the copy will have, whether the copy will be verified etc. are all user determined settings, which can be selected from the dialog box.

Settings

When the program is launched, the main menu window of *QCopy for Windows* will appear within which you can set up the copying or formatting process.

In the section marked **Source**, you determine the source for the copying operation. You can choose drives **A:** to **Z:** as the source (as far as they are available), or a **File** (DSK-File). DSK-files can only be used as a source if they have been previously created with *QCopy for Windows* (or QCopy v4.0 or higher). DSK-files can be stored in any convenient directory on your system. The file extension **.DSK** is mandatory.

To set the source, click on one of the **Drive** check boxes, or **DSK-File.** If you choose the **DSK-File**, you will be subsequently requested to enter a file name. This occurs if the program has not stored a valid DSK-file name as a source. The file name may be altered by selecting **Change Filename.**

A dialog box is used in *QCopy for Windows* to enter or choose a file name. The dialog box contains a text box in the upper left hand corner for the filename and beneath it the actual directory. At the bottom left corner you will find a list of the available file names in current directory and to the right a list of available directories and drives. Either enter the file name directly into the Filename text box, or choose one from the list. To set the desired directory: double click on a drive letter to change to a desired drive: double click on a directory to change directories and double click on [..] to change to the parent directory. You may then choose the file with a double click in the left window.

In the section marked **Target,** you set the parameters for the copy or format operation. You can choose drives **A:** to **Z:** as the source (as far as they are available), a **File** (DSK-file), or a **Directory**. DSK-files may be saved in any convenient directory on your system, which will be created by *QCopy for Windows* if not listed. The file extension **.DSK** is mandatory. Diskettes or DSK-files will be written into a directory (unpacked), if the check box **Directory** in the Target section is marked. If any sub-directories exist on the source, then these will be created by *QCopy for Windows* on the target directory and with the same sub-directory structure as the source. The name of a target DSK-file can be assigned/selected by activating the **Change: Name** button, however, the **Directory** check box must not be marked. If this check box is marked, then you can change the directory with the **Change: Name** button. It is recommended that you enter the complete path and name (including drive letter). The specified directory need not exist (i.e. will be created). You cannot, however, specify directories which cannot be created (e.g. in non-existing drives).

It is recommended that when specifying both file names as well as directories, that the complete path names are entered. Should default directories be used, then the file names will appear under the directory listed in the directory text box. If another drive letter is specified other than the default, then the directory will be that which is indicated in the directory text box.

In the **Options** section you can specify how many copies of the contents of the source, or formatted diskettes you intend to make (**To do:**), if you want to activate the verification of written data (**Verify**), or if the diskettes are formatted only when required or always formatted (**Force formatting**). **New label**

signifies that the copy or formatted diskette will receive a label as entered in the text box, otherwise the label will be that of the source or (when formatting) none.

The **Format:** bar lets you set or change the format of the target. *QCopy for Windows* permits you to determine the format of the target diskette when you make a copy. *QCopy for Windows* makes a true format conversion. If for example, you make a copy of a 360K diskette onto a 1.4M diskette, you can then make full use of the 1.4M formatted diskette. The following format definitions are possible:

> The **Target is a Disk drive.** You can activate the standard formats which have been assigned for the target drive, for a 3½" HD it is 720K and 1.4M. In addition, it is possible to select **Source** (where possible, the format of the source) and **Target** (the format of the target - especially useful for already formatted diskettes).

> **Target is a DSK-file.** You can choose between 1.4M and 2.8M. You do not necessarily have to have a disk drive of the 2.8M format.

You can specify how many copies of the source should be produced (without the need to read the source again). If the target is set for **DSK** or **Directory**, then the selected number of disks will be ignored. The number of disks to be copied (**To Do**), or formatted, can also be modified while a copying process is going on.

The program will test the suitability of the format of a disk before starting any write activity. If this is the case, then no formatting will take place, except if you have selected **Force formatting** as an option. If the diskette does not contain a suitable format, then it will be formatted anew during the writing process. If a diskette is formatted (the format button), then the diskette will be physically formatted with the option **Force formatting** active,. Otherwise, if it is already formatted suitably, then only the root directory information is erased.

From the option menu bar under **Disk change,** you can set up whether *QCopy for Windows* will temporarily store the contents of the diskette in a Windows allocated memory, or use a file (**Buffer**). Also under option, you can set how frequently you are reminded to insert a diskette (**Disk change**).

> **Buffer:** You can choose either the virtual memory of Windows or a file when *QCopy for Windows* temporarily stores data.

> Windows manages more RAM memory than actually is available. This is accomplished by dumping some of the excess memory contents onto the hard drive when more memory is required. It is possible to observe that, if the available free memory in RAM is minimal, a substantial disk activity will occur during the transfer of data contained in memory. If this is the case, it would be advisable to set **File** as the transfer option.

> **Change disk**. When *QCopy for Windows* requires a diskette to be read or written, a dialog box will appear requesting you to confirm with an **OK** the insertion of a diskette into a specified drive. You will have two options for this condition:

> **If necessary** ensures that a diskette is specified in the following conditions:
> > before a target diskette is written, when both source and target drives are the same
> > after the second diskette is written, when the number is greater than 1

> **Always** ensures that you are requested to insert a diskette prior to any reading or writing of a diskette

The button marked **Copy** will initiate the copying process, the **Format** button will start the formatting process. A **Format** can only be initiated when the target is a disk drive and a Kilobytes setting has been specified as a **Format:** The buttons marked **Copy** and **Format** are not active during a copying or formatting process.

The **Cancel** button exits the program.

During Copying

Firstly, the boot sector of the source is read.   If any errors are encountered, the following message will appear:

The format of the source diskette cannot be processed by QCopy.

This error can arise when you try to read a diskette which has been formatted with a special non standard format.

The boot sector of the source diskette is probably damaged.   The diskette cannot be read.

If such an error is reported, it may be technically possible to read the diskette, however, the relevant diskette format descriptors will not be recoverable and an assessment of the format will not be plausible. If you receive this message, you should preferably verify the integrity of the diskette boot sector with an antivirus program.

If the boot sector cannot be technically read. then you will receive a normal error message (see below, **Error Messages**)

If the boot sector of the source has been read successfully, then a progress window will appear during the copying or formatting process.   It is possible to change the **Verify**, **Force formatting** and **To Do** (number) setting while the copying process is in progress.

Two indicators bars display the progress of the read or write/format operation.   The upper bar displays the progress ratio in terms of the amount of data contained on the diskette/DSK-file, the lower bar as a ratio of the total capacity.

Cancel will terminate the copy/formatting process.   If this is activated during writing of the target, then you will be prompted to confirm with **OK**.

In the event of an error, an error message dialog box will open.

If the error is recoverable, (e.g. a write protected diskette) then you can either choose **OK** or **Cancel**.   If the error is not recoverable, then you can only choose **Cancel**.

In the event that you have selected a target format which cannot be used, say because the contents of the source exceeds the capacity of the target, or you have set format=target and the diskette is not formatted, you will be asked to specify a new format whenever possible.   You can choose any of the listed formats the capacity of which will hold the contents of the source.   You will receive an error message if it is not possible to create a specified format which will hold the contents of the source.

If you copy into a directory, then an additional information window will be opened to list the names of the copied files.   If numerous small files are copied to the hard drive, then their names will scroll through the window at a pace too high to be readable.

As soon as the main menu window is active again, you can set up the next copy while the prior one is in process.

Error Messages

If an error is encountered when working with *QCopy for Windows*, an error message dialog box will appear and remain active until you confirm with **OK** or abort with **Cancel**.   The ability to confirm with an OK is only relevant if the error is a recoverable error.   The errors which may occur are listed below:

Messages for recoverable errors

The diskette in Drive [drive letter]: is write-protected.   This indicates that the target diskette is write-protected and that the tab must be removed (for 3½" diskettes slide tab, for 5¼" diskettes remove stick-on tab).   Place the disk back into the drive and confirm with **OK**.

The diskette in Drive [drive letter]: has been changed.   This message should actually never occur.

Try to click on **OK**.   It is recommended that you terminate *QCopy for Windows* and restart the counter.

Drive [drive letter]: is not ready. There is no diskette in the designated drive.   Place a diskette in the drive and click **OK** .

Ignoreable error messages

Diskette in Drive [drive letter]: - CRC error (Sector allocated).   This data error indicates that the stored check sum does not tally with the read check sum.   The data being read is erroneous.   When such a disk is read, you can either **IGNORE**, **RETRY** or **CANCEL**.   If you activate **RETRY**, another attempt will be made to read the data, **IGNORE** will use the erroneous data which was previously read.

Messages involving unrecoverable errors

Diskette in Drive [drive letter]: - Wrong media density.   You have used a HD format for a DD diskette or vice versa.

Diskette in Drive [drive letter]: - Sector not found.   This usually occurs when a sector is encountered which was not formatted (e.g. for diskettes, where formatting was aborted)

Diskette in Drive [drive letter]: - CRC error. This data error indicates that the sector stored check sum does not tally with the written/read check sum of the data. The data being read is erroneous.   When reading this type of data, the choices of ignore, retry and cancel will not be available if the sector being read involves the Boot sector, or the sector containing the root directory, or when both copies of the File Allocation Table (FAT) contain errors.

Diskette in Drive [drive letter]: - **Track not found**

Diskette in Drive [drive letter]: - **No valid Boot sector**

Diskette in Drive [drive letter]:   - General failure, data medium can not be processed!   It is most likely that this involves an intern DOS table error for the drive.   It is recommended that you reboot the system.

Diskette in Drive [drive letter]: - **Unknown media type**

Diskette in Drive [drive letter]: - Other error.   This error message is generated by DOS.   Errors other than those listed above are so unlikely that no specific message is intended in   order to differentiate them.

DSK-file related errors
DSK-file error - Access denied
DSK-file error - Network error No. xxx
DSK-file error - File not found The specified file does not exist
DSK-file error - Path not found The specified path does not exist
DSK-file error - Too many files opened
DSK-file error - Access denied The file is write-protected
DSK-file error - Invalid drive
DSK-file error - CRC error
DSK-file error - Seek error The file is not correctly assembled
DSK-file error - Sector not found

DSK-file error - Write fault The drive is full
DSK-file error - Read fault The file is not correctly assembled
DSK-file error - General Failure
DSK-file error - Sharing violation

Program Characteristics and Error Prompts

QCopy for Windows has the ability to copy diskettes of differing formats.   This is achieved as follows: The boot sector (the first sector on a diskette which contains information on the format structure of the diskette) is read.   The format of the source is determined from the information contained in the boot sector.   The file allocation table (FAT) and the root directory are then read.   From the information registered in these sections, it is possible to determine which tracks of the source occupy data.   Only these tracks are read into memory.   After reading, the data is prepared for memory access to the target format (as an additional feature, the files are defragmented), even if the source and target format are the same.   It is now determined on the target diskette, which tracks are available.   The format of the target diskette is analyzed.   An attempt is made to read the boot sector of the target diskette.   Thereafter, the target diskette is formatted and written.

Due to the process used by *QCopy for Windows,* it could even be possible to copy diskettes of the same format, yet rebuild the data physically in different locations.   If you would therefore test whether the copy is correct, a file comparison is effective.   Programs like DISKCOMP will report deviations.   For the same reason, *QCopy for Windows* is not suitable for copying diskettes containing hardware copy protection schemes.   Such copy protection schemes hidden identification codes on the diskette, which *QCopy for Windows* generally does not copy.

Some installation programs use absolute address techniques on the diskettes to be installed.   Copies of such programs made with *QCopy for Windows* may also not function properly.

If reading and/or writing with *QCopy for Windows* takes an excessive amount of time, then most likely the cause of this is in the setting of the hard disk space compression utility **Doublespace**.   From the DOS prompt, you can alter   the setting for doublespace by typing the command:

DBLSPACE /AUTOMOUNT=0   (no automount for disk drives)

If you are using DBLSPACE compressed diskettes, these must be manually loaded.

Alternatively,   the following can be set:

DBLSPACE /AUTOMOUNT=B   (B: is the disk drive for compressed diskettes)

Then the *QCopy for Windows* access will continue on B: as it was before.

The problem arises because, upon every write access, DBLSPACE examines the diskette in the drive to see if it is   compressed.   Because the diskette has to be accessed for this operation, the time is extended many fold.

QCopy for Windows only ascertains the drive data once at the start of the program.   By using diskettes which have been compressed with DBLSPACE, the following problem can arise: If, at the start of the program, a DBLSPACE diskette is located in   a drive, only the host drive is accepted (e.g. Say, in drive B: is a compressed diskette, host drive is M: - *QCopy for Windows* recognizes B: not as a disk drive, it recognizes M: instead);   If, after the program has been launched an uncompressed diskette (*QCopy for Windows*   recognizes B:) is inserted, reading and writing will be in error.   The results are incalculable.