

Helpline

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In the last couple of issues I've looked at transferring files in and out of emulator environments using serial cable links and the tools software used by the Qlay / Qlay 2 / QL2K emulators.

In this issue I'd like to take a look at using floppy disks to transfer files between a QL and an emulator, some DOS/Windows file transfer software and the DOS device of QPC2.

QPC

This is the simplest one to use when it comes to floppy disks. Files on floppy disk are accessed just like using a QL with a floppy disk interface. The device name is FLP1_ like most QL disk systems and files can be saved, loaded, copied etc from disk just like a QL. There might be a bit of a difference in speed, but the biggest difference is that QPC lets you read and write to a DOS-formatted disk pretty much as if it were a QDOS disk, except that executable jobs (programs you start with EXEC or EXEC_W) can't be stored on a DOS format floppy or they lose their file headers and you can no longer execute them. There may also be a limit on the length of the filename you can use from QPC2 with a DOS-format floppy disk, and there may be a few characters you can't use in filenames.

But for transferring text files and other data files, this is extremely useful. Just make sure you give filenames an extension starting with a '.' character instead of the usual QDOS '_' character and you'll be all right:

On a QL disk: SAVE FLP1_AFILE.TXT

With a DOS floppy disk: SAVE FLP1_AFILE.TXT

On more recent versions of QPC2, you don't even need to put a filename ending with '.' in quotes!

On most PC's, QPC's floppy drive 1 (FLP1_) corresponds to drive A: on the PC, while FLP2_ will correspond to PC drive B: but are still referred to as FLP1_ and FLP2_ irrespective of whether a DOS or QDOS floppy disk is being used.

DO bear in mind that while QPC2 lets you save/load to either type of floppy disk, the format of the data is NOT converted by QPC. The QL uses a linefeed character (CHR\$ 10) to end a line of text, while PC programs might expect either a carriage return (CHR\$ 13) or both, for example. If you save such a QL text file to a DOS format floppy disk and try to load it into Windows Notepad for example, you might get offset lines like this:

```
Line 1
      Line 2
          Line 3
```

This happens because as far as some PC programs are concerned, a linefeed or CHR\$(10) is just that - go down one line. The Carriage return makes it go back to the start of the line, so ideally the file needs to contain both Carriage return and linefeed for the PC program to display the text file correctly, although some programs such as Word and Wordpad will sometimes just about cope with just the QL-style single linefeed at the end of the lines.

To transfer QL text files to the PC, either save them as a plain text file with the two end of line characters, or use a program such as Geoff Wicks's QL2PC which can also convert QL text files such as Quill DOCs into RTF (or Rich Text Format) which will import easily into most modern PC word processors. Programs such as Dave Walker's Textidy can also be useful.

To transfer text files to a QL from a PC, it is probably easiest to make the PC word processor save the text as a plain text file. This will lose formatting but will at least strip out all the difficult to handle control codes modern word processors tend to insert. Jonathan Hudson has a program called CATDOC

which can let you transfer Word 6 documents to QDOS, although I've never used it to know exactly what it can do. Find it at www.daria.co.uk/qdos/

Similarly, when trying to exchange spreadsheets or databases between the two systems, it is generally safest to use Export files. The file format of QL and Windows programs are generally too different to ever hope that Windows Excel could ever hope to load Abacus _aba files (and vice versa). The Export command of the Psion Archive and Abacus programs are not too dissimilar to the CSV (or Comma Separated Value) format widely used to transfer data between Windows programs. For spreadsheets, you can only transfer data in this way, the formulae will usually be lost, but at least you can get the data from one machine to another. The Export and CSV formats are not quite the same - Export tends to make more use of quote symbols than CSV, although it is not too difficult to tidy files up by hand where this is an issue.

QemuLator

For the most part, QemuLator's floppy disk is very similar to QPC's, although the drive assignments are not fixed. You can have up to 8 drives in QemuLator and any of these can be MDV slots, FLP drives or WIN drives if using the Native File Access on the PC's hard disk.



The picture above shows QemuLator as it starts. The drive slots are the ones in the bottom block, the grey strips with numbers to the left. If only two drives are shown, drag the baseline down to reveal all eight. When blank like this, no drives are attached to them, so click on one of the drives and a little window pops up asking what type of drive to use - this may be a QXL.WIN (registered versions of QemuLator only), a native (Windows) hard disk, or a floppy disk drive.



There is a fourth option - Empty. This just removes an existing definition. When you click on "QDOS Floppy Disk" it asks if this should be the PC's drive A: or drive B:. On a PC with just a single floppy disk this will usually be A:.

But the strange thing is that this drive can be assigned to any of the 8 slots, so the PC drive A: can be FLP1_ or FLP4_ or FLP8_ are whatever, depending on which slot you connect it to. Even worse, all eight drive slots respond to MDV, FLP and WIN! On QemuLator, MDV1_ FLP1_ and WIN1_ are normally the same drive! This makes it easy to run software originally configured to run from MDV1_ for example, just by copying it from a QL microdrive onto a QL floppy disk which is then run from the PC floppy drive with the above drive slot 1 attached to QDOS Floppy Disk on PC drive A:

Sounds horrendously complex, in fact it's far easier than it sounds and something you quickly get used to. In fact, it's tremendously versatile. You could even copy the floppy disk content to a QemuLator directory on the hard disk by Attaching a Directory to slot 2, the floppy disk to slot 1, then copying from FLP1_ to WIN2_, then swapping the two over so that the hard disk directory is now drive 1 and because the MDV, FLP and WIN drives are notionally the same, you can run the program from there without reconfiguring the QL program.

Do remember that on QemuLator you can store QL executables on the hard disk if you put them there using QL commands like COPY - the file headers are added to the programs when copying to the hard disk directories in a way special and unique to QemuLator.

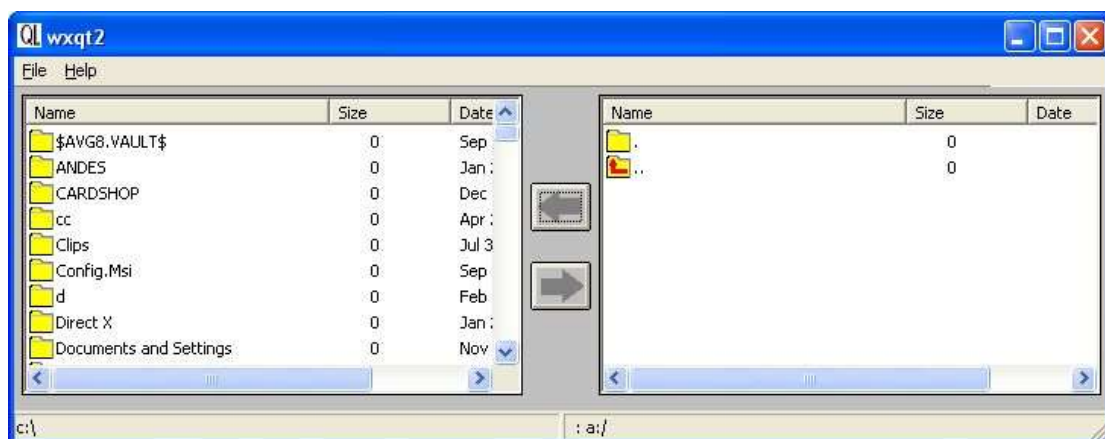
Floppy Disk Readers

There are quite a few QL disk reader programs out there, some designed to run as a DOS program and a few as Windows programs. You can generally get them from the usual sources of PD software such as websites which let you download QL software.

We have already mentioned the QLTools program. There are other QL disk reader programs and they all have one thing in common - they let you list the files on a QL floppy disk and copy them one by one to a PC hard disk. Some of these programs are quite old and many will only handle level 1 disks, i.e. they don't know about QL directories.

Probably the most versatile of these QL disk reader programs running in Windows is Jonathan Hudson's WXQT2 program. Once fully set up (and I'd be the first to admit it's not easy) you can transfer files between QL floppy disks, PC directories and QXL.WIN directories. You need the qltools program (make sure you choose the correct version - there's one for older FAT PC disk formats such as used on Windows 95 and 98 systems, and another for NT-style hard disk formats such as that used by Windows NT, XP and Vista) to read QL floppy disks - make sure it's called QLTOOLS.EXE. You also need the QXLtool program (QXLTOOL.EXE) in the same folder as the main WXQT2.EXE program, as QLTOOLS.EXE and QXLTOOL.EXE are the ones which do the hard work - WXQT2 is just a nice Windows front end onto these two programs.

Once you have all three in the same folder, start WXQT2.EXE in Windows. You should get a program with two main windows, like this:

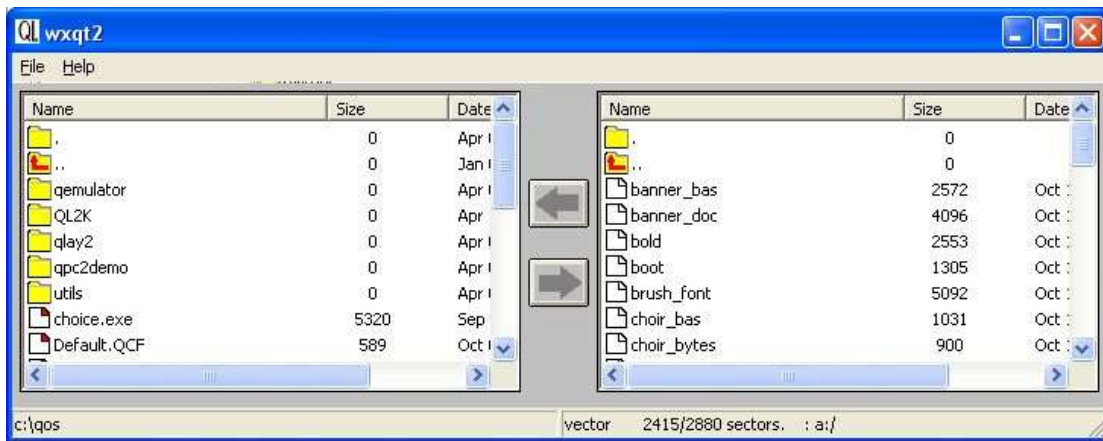


Where you see the File command at the top left, click on Options in the little menu which appears and this menu appears.



The tick boxes in the top right select which type of media is read in the left and right windows. Here, the left column has a tick against the native directory C:\ (i.e. Windows drive C - hitting the Browse button between them lets you select which drive/folder to use) and the right column has a tick against QL Floppy. Practise copying files between a spare QL floppy disk and a PC hard disk folder first, before trying the QXL.WIN Disk File option, it is all too easy to wreck a QXL.WIN when you are not sure what you are doing!

Once the drives are set up, it can then read the respective drives:



Here, the left window shows files in the QOS folder on my PC's drive C:, while the right hand window shows files on a QL floppy disk in PC's drive A:. Now, just click on the files you want to transfer, then click on one of the arrows in the centre to indicate which way to copy (e.g. click on the upper arrow to transfer from the QL floppy disk to the PC hard disk).

You can get Qtools, QXLtool, and WXQT2 from Jonathan Hudson's QDOS website at

<http://www.daria.co.uk/qdos/>

From there you can also get a program called mtools, which is a program for doing the opposite - read PC format floppy disks on a QDOS system.

The DOS Device

This is a special device name built into QPC2. It lets QPC2 read and write to folders on the Windows hard disk. It is used just like a WIN device. You can have up to 8 drives (DOS1_ to DOS8_) and each of those can be defined either in the startup configuration alongside the WIN drive definitions, or by using the DOS_DRIVE keyword to define the DOS drives like you would use WIN_DRIVE to define the WIN drives, e.g.

```
DOS_DRIVE 1, "C:\"
```

So, after that you can do DIR DOS1_ to give a list of files on the PC's C:\ drive. And not just the drive itself, you can include a folder to. So, if you normally transfer QL files to a folder called C:\MYQLFILES\ on the PC, you could define DOS1_ as:

```
DOS_DRIVE 1, "C:\MYQLFILES\"
```

If your PC has more than one hard disk, or a CD drive, you could define up to 8 separate DOS drives. Do bear in mind that QL filenames are limited to 36 characters plus the drive name, so long paths can trip up even the DOS device. So, saving this filename into the folder called My_QL_Documents on the PC:

```
DOS_DRIVE 1, "C:\"  
SAVE "DOS1_My_QL_Documents_a_very_long_filename_indeed_bas"
```

Might fail, because of the length of the name. If, however, you incorporate the folder name into the DOS device name it allows you to use the full 36 characters after the DOS name, potentially doubling the length of name, nested folders etc you can handle from QPC:

```
DOS_DRIVE 1, "C:\My_QL_Documents_"  
SAVE "DOS1_a very long filename indeed_bas"
```

This comes in handy when you are accessing nested PC folders from QPC!

Please note that the WIN device accesses QL files held in a single massive Windows file called QXL.WIN (you can use a different name). If you have never come across QXL.WIN files before, this is a sort of "container", one large Windows file which holds all your QL files in a form which preserves QL file headers and so on - in effect a second filing system inside a single Windows file. Want to back up the QL files in your QPC2? Go to Windows and just record the file called QXL.WIN onto a CD or Flash Memory Pen Drive. As far as the PC is concerned, all of your QL files in the QXL.WIN are just one massive Windows file!