QemuLator With SMSQ/E

QemuLator by Daniele Terdina is one of the most widely used emulators of the QL. Get it from
http://www.terdina.net/ql/software.html

Most people use it as a QDOS emulator. Which is no bad thing – it's one of the most successful at using older QL software which may not run on more modern QL-compatible systems. It's able to use a multitude of QDOS ROMs, original Sinclair ones, versions of Minerva and some lesser known official and unofficial ROMs. It can use a variety of filing systems, be they floppy disks, floppy images, ramdisks, microdrive images, QXL.WIN, Zip/QLPAK archives and native Windows or Mac file systems. It even goes as far as to implement QL sampled sound systems, TCP/IP, parallel and serial ports, 8-bit (Aurora-style) and 16-bit (Q40/Q60-style) graphics and even a printer emulation system. Some of these features only work in the registered version, not the free version.

As if all that wasn't enough, QemuLator can even run a few versions of SMSQ/E:

1. A dedicated QemuLator version of SMSQ/E
2. Aurora version to use the 256-colour 8-bit graphics system
3. Standard Gold Card version.

SMSQ/E comes with SBASIC, a much enhanced BASIC for QL-compatibles, with extra commands, many bug fixes and so on.

What isn't explained too well is how to set up and implement these versions on the emulator and where to get them from. So here goes an attempt at explaining.

The first version, the dedicated QemuLator version, is available from the QemuLator website at http://www.terdina.net/ql/software.html . On that QL Software page, scroll down to the SMSQ/E section near the bottom of the page and click on the 'Q-emuLator version' link and it will download a file called SMSQ-QEM.zip . A little further down is the QemuLator version of the Gold Card (version 3.38 at the time of writing) and Aurora version (v3.13 at the time of writing) of SMSQ/E.

The official versions of SMSQ/E are usually obtained from the SMSQ/E Registrar's website at https://www.wlenerz.com/smsqe/ . Just scroll down to the line which says "*BINARIES : you can download the compiled versions of SMSQ/E here*" and click on the link at "here". This will download a large zip file containing pre-made versions for all systems (including the Gold Card and Aurora versions) except for the dedicated QemuLator version.
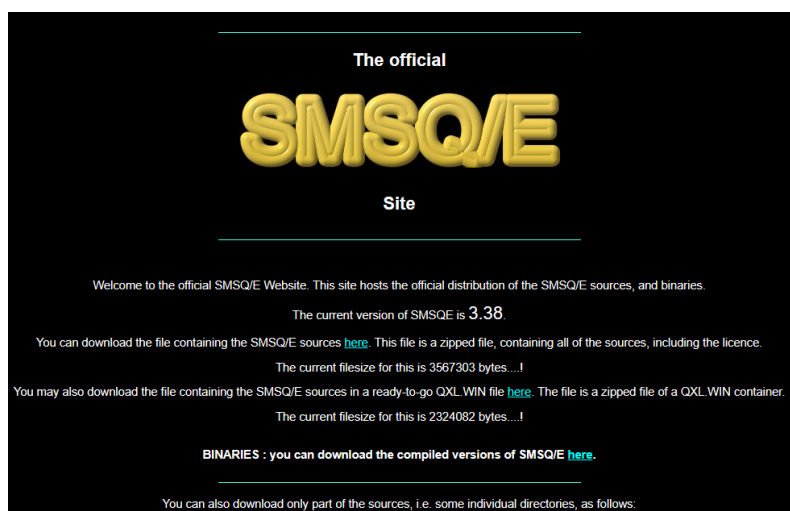
Which version you choose to use is down to you. It's perfectly possible to put all versions in the same folder and write a short BOOT program to choose which to run depending on what you want to do at the time.

I suggest you start with the dedicated QemuLator version, which goes by the filename SMSQ_QEM. If nothing else, you can use high resolution screens and 16-bit colour displays (known as MODE 33) as well as the traditional QL screen modes. Remember that this version does not support the 8-bit Aurora-style colour modes – you will need the Aurora version if you specifically want to test software on that, for example.

Unzip the file to a folder of your choice on one of QemuLator's drives, e.g. to WIN1_

QemuLator will normally start in whatever QDOS ROM you have installed in the emulator's configuration. To start SMSQ/E you will need to use an LRESPR command from Toolkit 2 to install and start it. This can usefully be put in your BOOT program if you want., ideally with something to ask whether you want to start in QDOS or SMSQ/E:

```
100 CLS : CLS #0
110 INPUT #0,"1=QDOS, 2=SMSQ/E";os
120 IF os = 2 THEN LRESPR win1_SMSQ_QEMU
```
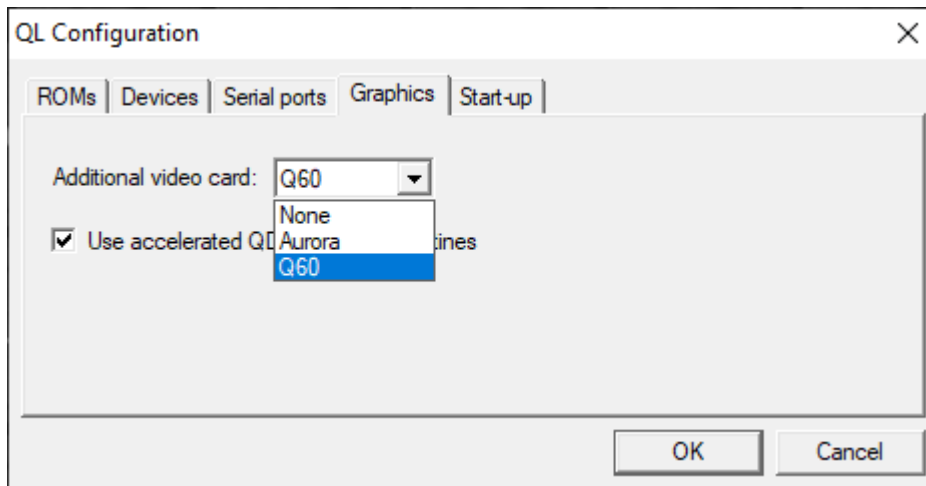
It's that simple!

Or, almost that simple.

To enable the higher colour modes you need to enter the QL Configuration menu of the emulator (click on 'QL' at the top, then click on QL Configuration in the menu. Then we need to specify the "Additional Video Card" type in the Graphics tab of the menu.
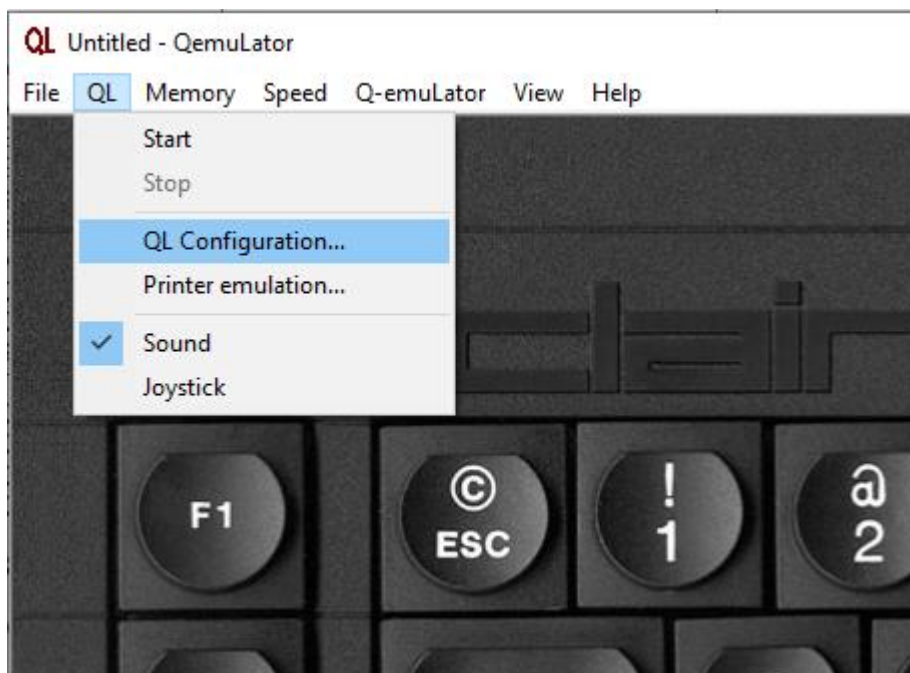
QL Configuration Menu

Setting Additional Video Card

For 16-bit colour mode use, we select the "Q60" Additional Video Card.

If intending to use the Aurora version of SMSQ/E, we would select the "Aurora" option for 8-bit colour modes.

The higher colour modes won't work properly unless you specify the correct Additional Video Card for the mode you intend to use.

It's worth noting that SMSQ_QEM has a level 2 configuration block, where you can choose a lot of preferred startup options such as colours. Use the MenuConfig program if you have it available (it must be MenuConfig, standard Config won't work as it's a level 2 configuration) to choose your preferred startup settings.

Most likely, SMSQ/E will start up in QL colour mode and screen resolution (QL mode 4 512x256 or mode 8 256x256). To change modes you can use the DISP_COLOUR command to specify screen mode and resolution.

```
DISP_COLOUR mode_number,x-resolution,y-resolution
```

To change to 16-bit colour mode with a screen resolution of 1024 pixels across, 768 down, you would use:

```
DISP_COLOUR 3,1024,768
```

Note that this may cause the emulator to enter full-screen mode rather than windowed mode – the "QL" occupies the full screen. There may be some flashing while it changes. You can flick between full-screen mode and windowed mode with the F12 key, although you may not be able to do much in the windowed mode (they are different "Additional Video Cards"), but at least it makes it easier to switch to other programs on the PC. It may also be useful when you wish to stop the emulation to change settings – in this case go to the "QL" menu and select "Stop".

To revert back to traditional QL colours and resolution, type this command into SBASIC:

```
DISP_COLOUR 0,512,256
```

If you need to check what colour mode you're in at the time, use the DISP_TYPE function:

```
PRINT DISP_TYPE
```

which will give a value of 0 for the traditional QL mode 4 display, or 33 for the 16-bit colour mode.

If you just want to change screen resolution (number of pixels) without switching colour modes, you can use the DISP_SIZE command which takes two parameters, the number of pixels across and the number of pixels down, e.g.

```
DISP_SIZE 1024,512
```

will switch to a resolution of 1024 pixels across by 512 pixels down (like a Q40 or Q60). Note that it may stay in full-screen mode. Also, only a limited choice of resolutions are available – on my system at the time of writing you need to choose between 1024 x 768 or 1024 x 512, or revert to 512 x 256.

If unsure of what screen resolution you're working in, use the SCR_XLIM and SCR_YLIM functions.

`PRINT SCR_XLIM` will return the number of pixels across, while `PRINT SCR_YLIM` will return the number of vertical pixels.

AURORA

Using the Aurora version of SMSQ/E is very similar. In place of SMSQ_QEM we use the AURORA_BIN version of SMSQ/E. There is a version of SMSQ/E on QemuLator's website for Gold Card/Aurora, but at the time of writing it appears to be out of date – version 3.13 compared to current version 3.38 of SMSQ/E. The 256-colour or 8-bit colour mode is known as MODE 16.

If you use the current version of AURORA_BIN from the SMSQ/E site, you need to be aware of what resolutions are supported at what colour depth. You can see what's available by using MenuConfig to set the default startup resolution. In 256 colour mode, you may only be able to get 512 pixel wide displays, for example. Although it can be useful if you wish to work in extended resolutions in the QL colour modes, or for testing software in a "Gold Card" environment. On my PC, I was only able to get 1024 pixel wide resolutions to work in QL colour modes, so I can't write much that's useful about it.

Personally, I find the Gold Card/Aurora SMSQ/E versions of limited value on QemuLator and tend to only use them for software testing, to see if programs I've written will run on it. I tend to stick to either QDOS or the QemuLator specific version of SMSQ/E, which works well.

MANUAL

The QemuLator manual can be found on the emulator's Help menu. If you need to refer to it when in full-screen mode, press F12 to leave full-screen mode temporarily so that you gan go to the Help menu to access the manual, then press F12 again to return to where you were before.