vDrive^{ZX} Firmware Update 001

Before updating the firmware, check the existing version by executing the toolkit `.VINFO` command. If the existing version of VDRV is 2.01 or lower, or TKZX is v1.27 or lower, then this update applies. After the update `.VINFO` will show:

```
VDRV v2.03
FSYS v2.01
TKZX v1.28
```

To update the firmware please refer to the latest version of the vDrive^{ZX} user manual.

Note: After updating the firmware a restart is required. If this is not carried out then the previous version of the toolkit will still be resident. Starting with this version of the firmware, a restart will be required as part of the update process.

Patch Notes 23/10/17

- Removed the requirement to enter uppercase 'Y' for commands that required confirmation This affects the .SDINIT. .MKCFG, and .RM commands.
- Corrected several errors in the toolkit command parser which lead to unexpected results for incorrect command entry (properly formatted commands worked fine). The question mark cursor is now positioned correctly after the last correct character in a known toolkit command.
- Have changed the error message wording from 'File in use' to 'Image currently assigned' to provide a clearer reason as to why a command cannot be completed. This affects the .LD, .MV and .RM commands.
- Some Spectrums have a faulty Z80 CPU with the M1 line held permanently low. In normal operation, without any interfaces attached, there is no symptom of this fault as M1 is not used internally. Some external interfaces, such as the Multiface, and the DivMMC (and variants) will not work and require the Z80 to be replaced.
  The Interface 1 will appear to work with a Spectrum even if the Z80 CPU has the M1 line held low (if M1 is held high then the Interface 1 will not work). Reading files seems to work fine but for those Interfaces with a version 2 ROM, the save and format performance is extremely poor (with real Microdrives, the reported format capacity is much reduced. For the vDrive, format will probably fail). The v1 ROM has problems, but they are more subtle.

  To check which version Interface 1 ROM you have, enter:

  ```
  CLOSE#:PRINT PEEK 23729
  ```

  If you get 0 then you have a version 1 ROM, if 80 then a version 2.

  When used with a Spectrum with a faulty CPU, the vDrive would appear to operate as a virtual Microdrive perfectly OK, especially when reading files. The toolkit, however, depends on detection of the Interface 1 and Spectrum ROM versions and determines these when it installs. With M1 held permanently low, the Interface 1 paging mechanism interferes with reading from either ROM and this leads to incorrect detection results and inevitably an unresponsive Spectrum with a blank screen during installation.
  This has now been corrected with the paging addresses (0x008, 0x0700, and 0x1708) now avoided during ROM detection and the correct hardware environment now determined consistently. The hardware problems caused by a faulty M1 are not fixed, but the toolkit

now gives the message '`M1 fault detected!`' if it detects there is a faulty Z80. If you get this message then best to replace the faulty Z80.

- Some SD Cards take longer to format than the 30 seconds that was originally allowed for. This seems to affect cards with 2GB or less capacity. This is likely related to the speed (and age) of the card rather than capacity as newer 32GB cards format in about 12 seconds. The timeout has been doubled to over 60 seconds which should cover most cards.
- At the end of a successful firmware update, instead of the '`Update complete`' message and a return to BASIC after a key press, the message '`Press any key to restart...`' is provided. Pressing any key will restart the Spectrum and the updated toolkit can then be executed by entering '`RUN`' as the first command (after first removing the SD Card).