Sinclair QL Retro-Computing

Sinclair QL Retro-Computing

QBITS SuperBASIC Progs

The APPS

GAMES One

GAMES Two

Coding verse Creativeness

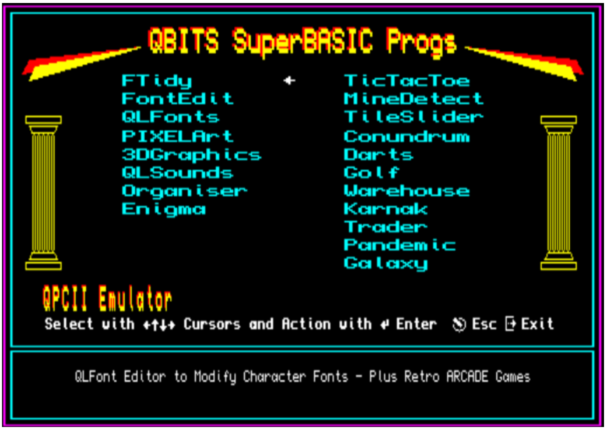
The early QBITS Progs coding was more often than not a trial-by-error. Sometimes aspirations of the time were met, but in most cases if they attained a certain level of accomplishment, they were deemed acceptable. The flaw with such experimentation trends to levels of inconsistency. Be it the use of good or bad coding, there often being more than one way to obtain a result. The natural choice is for concise coding, but at times it can just be down to preference.

For example: (**E**)xit or (**Q**)uit used as Prompt to End a Program.
Actions of (**L**)oad & (**S**)ave uses similar code that could be more consistent.

In that respect a Review from time to time presents the opportunity to acquire more conformity across the different QBITS Progs. In that light and as the QPC2 Emulator has been a major influence on this 2023 Review, changes have been made to the QBITSBoot and generation of QBITSConfig.

The QBITSProgs Menu has being updated to reflect the change of entries and variables that control actions of selected QBITS Prog. The QBITS Programs opening lines have been changed to conform with the new access arrangement for QBITSConfig. This has helped tidy up the structure slightly and corrected misplaced bits of code.

For some Programs coding has been altered to smooth out abnormalities and extended in others to add functionality. In the main most were just niceties improving the appearance and flow of the Program. In doing so as an Artist acquires a certain style, I hope likewise the QBITS Progs have evolved with a certain elegance of their own.



Introduction

Microcomputers released to the home market in the mid nineteen eighties came with a BASIC Interpreter. The **B**eginner's **A**ll-purpose **S**ymbolic **I**nstruction **C**ode constructed in a FORTRAN style of one-to-a-line statements. Variants evolved among home computer manufactures to become quite sophisticated and yet small enough to fit within memory constraints of the day. Computer Magazines published BASIC code lists for Games and Utilities and for a while BASIC became the de-facto standard for introducing beginners to Computer Programming.

In nineteen eighty-four during a College Summer Recess, I managed to get some work experience in the computing department of Aberystwyth University. I spent most of my time etching circuit boards, but it was also to be my first sighting of the Sinclair QL and much talked about multi-tasking operating system. The QL was under reviewed in particular the PSION business programs Quill (Word Processor), Abacus (Spreadsheet), Archive (Intelligent Database) and Easel (for Drawing Charts etc.). It had an external ROM which I believe included a trial release of the SuperBASIC Interpreter.

The Sinclair QL

I bought my first QL (Quantum Leap) computer in 1985 a few months before the price dropped from £399 to £199. My experience of programming at the time was fledgling, an introduction to machine code, a basic knowledge of some Forth commands and a few lessons of BASIC on an BBC micro. In starting a new job, we had just received our first IBM PC (£1200 Plus) with 5 ¼ Floppy's, the display green characters on a black screen.

An early addition to my QL setup was a Trump card increasing RAM to 640kbytes and expanding my storage capacity with dual 3½" Floppy disk drives. It came with a release of Toolkit II which improved and extended the SuperBASIC list of Keywords.

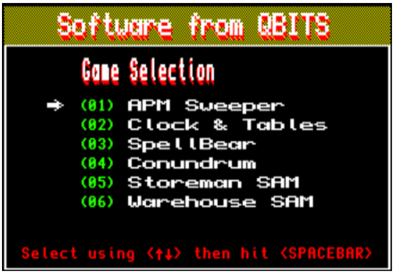
The drawback of those times, computer platforms weren't fast enough to satisfy the growing demands of running BASIC code through the Interpreter. Writing your program in Assembly or Machine code greatly increased the speed of execution. I did try my hand at writing some Assembly Code, then along came SUPERCHARGE and Compiling SuperBASIC was a much easier and less time consuming aspect.

The QBITS Name

My first meeting with Steve Bourne was as members attending a QUANTA club held in the old school hall in a Village called Lolworth near Cambridge (UK). I gained a lot of programming advice and help from the members. Steve had just begun selling QL hardware and encouraged me by suggesting he sold copies of my fledgling Progs. I vaguely recall a conversation discussing QL Bit and Bobs and from which the name QBITS for his Trader's name and my Software ensued. The QBITS Progs became an added contribution to Steve's wares as he trawled around different QL Club venues and shows back in the late eighties and early nineties.

QBITS Software

Late 1980's display of QBITS Software that Steve carried as part of his Trading stock. As I recall some were Compiled with SUPERCHARGE.



Software from QBITS

Game Selection

→ (01) APM Sweeper
(02) Clock & Tables
(03) SpellBear
(04) Conundrum
(05) Storeman SAM
(06) Warehouse SAM

Select using (↑↓) then hit (SPACEBAR)

QL SuperBASIC

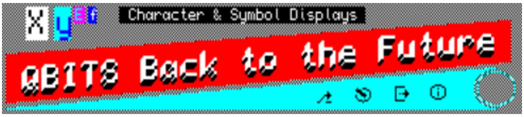
The QL User's Guide introduces SuperBASIC and instructions on programming. Starting with **WINDOW's & BORDER's** I then began exploring the variety of ways in which to display Character fonts. I used **PRINT** with different colours and backgrounds utilising **PAPER**, **STRIP** & **INK**. A bigger impact was dropping the **AT** line/column Keyword for the more versatile **CURSOR**. Used with **CSIZE** and **OVER,** I could create different font sizes and even 3D affects. **CLS** options **FILL$, LEN, SCROLL, PAN** added further to the variants of character displays.

QL SuperBASIC Character Strings

CURSOR x,y **:PRINT** String$& **FILL$**(' ',SL- **LEN** (String$))
Maintains a set string length by filling EOL with 'spaces']

CURSOR x,y:**PRINT FILL$**('0',4-**LEN**(number%)&number%   [0000-9999]
Strings for units, ten, hundreds, thousands etc. where numbering expands from right to left.

CURSOR gx,gy,px,py:**PRINT** String$ (graphic gx,gy coordinates px,py pixel offset)
The **CURSOR** option where **PRINT** is positioned relative to the Graphic coordinate system.



CSIZE 2.1:Str$='QBITS back to the Future': **FOR** i=1 TO **LEN**(Str$):**CURSOR** 20+i*12,60-i:**PRINT** str$(i)
This uses the **FOR** Loop to generate a **CURSOR** offset and **PRINT** a string - character by character.

QBITS QL Symbols use

Navigate **QBITS Progs** using the Cursor keys ← ↑ ↓ → for Actions ▬ Spacebar and ↵ Enter key. BLOCK commands are used to provide Spacebar and Enter tail.

CURSOR24,20:**PRINT**'Select using ← ↑↓ → ▬ ↵   **BLOCK**#0,12,3,130,24,5:**BLOCK**#0,2,4,198,22,5

QBITS Revival - QL Emulators

By the early nineties my QL involvement was in decline. Then in 2004 I downloaded a copy of Jimmy Montesinos **QL2K Emulator** and my interest in SuperBASIC was rekindled. Today there are QL Emulators for Desktops, Laptops, Tablets using MS, Mac or Linux Operating Systems. However, for now my choice is Microsoft Windows 10 and the **QPC11 Emulator**.

(See Page 12 for **QPCII Emulator** Download and Installation**)**

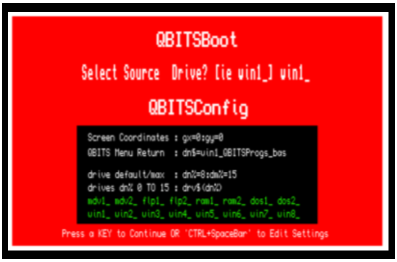
QBITS SuperBASIC Progs
REVIEW 2023

QBITS Boot & Config

At start up the SuperBASIC Interpreter will if found Load and Run a program called '**Boot**' from the allocated default drive. This file is used to Load Extensions to the O/S and Executable Programs to memory.

Bottom left of the **QPC Configuration - Device** page are **Boot** options - **FLP 1** or **2** or any of the **WIN1** to **WIN8** drives. The Default is **WIN1**, where the Boot File will need a link to **LRUN QBITSBoot_bas**.

QBITSBoot_bas file when **LRUN** prompts for a default Source Drive **dev$.** It then displays the generated **QBITSConfig** entires, these are common variables used by the **QBITS Programs**. Settings for **gx, gy** locate the QBITS backward compatible 512x256 screen size to sit within the higher screen resolutions of the QPC11 Emulator. When Exiting from a QBITS Program, **LRUN dn$** [set to 'dev$&'QBITSProgs_bas'] returns to the **QBITSProgs** Menu program.

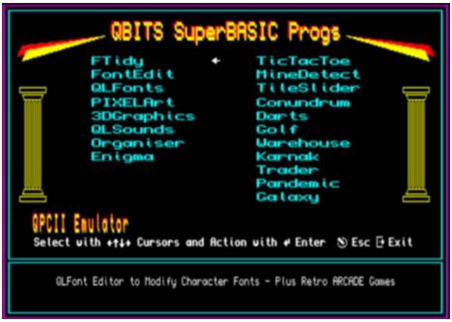


```
QBITSBoot

Select Source  Drive? [ie win1_] win1_

QBITSConfig

Screen Coordinates : gx=0:gy=0
QBITS Menu Return  : dn$=win1_QBITSProgs_bas

drive default/max  : dn%=8:dm%=15
drives dn% 0 TO 15 : drv$(dn%)
mdv1_ mdv2_ flp1_ flp2_ ram1_ ram2_ dos1_ dos2_
win1_ win2_ win3_ win4_ win5_ win6_ win7_ win8_

Press a KEY to Continue OR 'CTRL+SpaceBar' to Edit Settings
```

Pressing a Single KEY - DELETE's old **QBITSConfig** file to create a new one, Overwrites **dev$** to the Progs Menu File **LRUN's dev$&'QBITSProgs_bas'** and displays the QBITS Progs Menu.

For those Progs using **Load**/**Save** Options: Settings for **dn%**, **dm%** and **Drv$(dn%)** are linked with a list of Storage Devices names, 'mdv1_, flp1_, win1_, etc.

Press **CTRL+Spacebar** and type **ED** to Edit the **QBITSConfig** program entries.



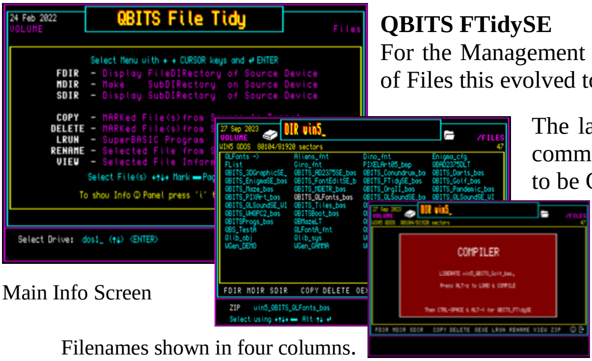
```
Select with ←↑↓→ Cursors and Action with ↵ Enter  Esc  Exit

QLFont Editor to Modify Character Fonts - Plus Retro ARCADE Games
```

QBITS Progs

The present Collection of **QBITS Progs** was assembled with the use of the **QPC11 Emulator**. However, most of the Progs should LRUN on other QL Platforms with expanded memory and relative Toolkits of updated and expanded Keywords. You may need to tweak some of the code. The goal is for QBITS Progs to help in understanding the simple to the more complex use of the **SuperBASIC Environment**.

QBITS FTidySE

For the Management of an ever-growing number of Files this evolved to meet the needs of the day.



```
24 Feb 2022            QBITS File Tidy
VOLUME                                                Files

          Select Menu with ↑ ↓ CURSOR keys and ↵ ENTER
    FDIR   - Display FileDIRectory of Source Device
    MDIR   - Make    SubDIRectory  on Source Device
    SDIR   - Display SubDIRectory  of Source Device

    COPY   - MARKed File(s) from S
    DELETE - MARKed File(s) from S
    LRUN   - SuperBASIC Program
    RENAME - Selected File from S
    VIEW   - Selected File Inform

          Select File(s) ←↑↓→ Mark ▬ Pag

          To show Info ⓘ Panel press 'i'

  Select Drive:  dos1_ (↑↓) <ENTER>
```

```
27 Sep 2023        DIR win5_                             /FILES
VOLUME
WIN5 QDOS  80104/81920 sectors                               47
 QLFonts ->           Aliens_fnt           Dino_fnt             Enigma_cfg
 FList                Giro_fnt             PIXELArt05_bmp       QBAD2375DLT
 QBITS_3DGraphicSE_   QBITS_AD2375SE_bas   QBITS_Conundrum_ba   QBITS_Darts_bas
 QBITS_EnigmaSE_bas   QBITS_FontEditSE_b   QBITS_FTidySE_bas    QBITS_Golf_bas
 QBITS_Maze_bas       QBITS_MDETR_bas      QBITS_OrgII_bas      QBITS_Pandemic_bas
 QBITS_PIXArt_bas     QBITS_QLFonts_bas    QBITS_QLSoundSE_ba   QBITS_QLSoundSE_UI
 QBITS_QLSoundSE_UI   QBITS_Tiles_bas
 QBITS_WHOPC2_bas     QBITSBoot_bas
 QBITSProgs_bas       QBMazeLT
 QBS_TestA            QLFontA_fnt
 Qlib_obj             Qlib_sys
 WGen_DEMO            WGen_GAMMA

 FDIR MDIR SDIR   COPY DELETE QEX

  ZIP    win5_QBITS_QLFonts_bas
  Select using ←↑↓→ ▬ Alt ↑↓ ↵
```

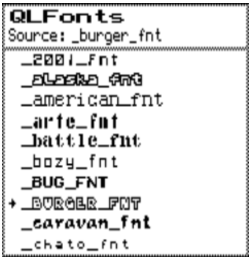
```
                        COMPILER

          LIBERATE win5_QBITS_Golf_bas,
          Press ALT-z to LOAD & COMPILE

          Then CTRL-SPACE & ALT-f for QBITS_FTidySE

 FDIR MDIR SDIR   COPY DELETE QEXE LRUN RENAME VIEW ZIP
```

The latest configuration has ZIP a command which links Selected file to be Compiled by QLiberator.

Main Info Screen

Compiler Screen.

Filenames shown in four columns.

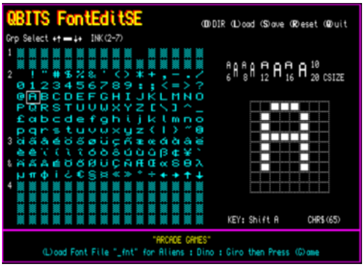


```
QLFonts
Source: _burger_fnt
  _2001_fnt
  _alaska_fnt
  _american_fnt
  _arte_fnt
  _battle_fnt
  _bozy_fnt
  _BUG_FNT
→ _BURGER_FNT
  _caravan_fnt
  _chato_fnt
```

QBITS QLFonts

Source: Type Device/Enter. Shows Character Font Themes. Scroll up/down, Select, Press Enter:
Returns to QBITS Progs Menu: Displayed with selected Font.

To Reset **QLFonts**
Source: Leave Blank/
Press Enter

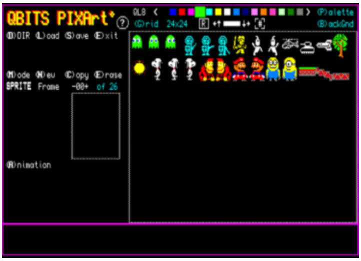


```
QBITS FontEditSE                     ⒹDIR ⓁLoad ⓈSave ⓇReset ⓆQuit
Grp Select ←↑▬↓→  INK(2-7)
2   ! " # $ % & ' ( ) * + , - . /        A A A A A A  10
    0 1 2 3 4 5 6 7 8 9 : ; < = > ?      6 8 12 16    20 CSIZE
    @ A B C D E F G H I J K L M N O
    P Q R S T U V W X Y Z [ \ ] ^ _
    £ a b c d e f g h i j k l m n o
    p q r s t u v w x y z { | } ~ ©
3   ä ã å é ö õ ø ü ç ñ æ œ á à â ë
    è ê ï í ì î ó ò ô ú ù û β ¢ ¥ `
&   Ä Ã Å É Ö Õ Ø Ü Ç Ñ Æ Œ α δ θ λ
    µ π φ ¡ ¿ € § ¤ « » º ÷ ← → ↑ ↓
4
                                         KEY: Shift A      CHR$(65)
                         "ARCADE GAMES"
  (L)oad Font File "_fnt" for Aliens : Dino : Giro then Press (G)ame
```

QBITS FontEditSE

This Prog was written to change, create new Fonts. The default QL Character Fonts use an 8x9 (Eight bits by 9 Bytes) matrix. The Bitmap file has a two-byte header which identifies a start Font and the number of Font Bitmaps that follow-9Bytes added for each Font.

DEMO Fonts to Load and Play Retro Games.

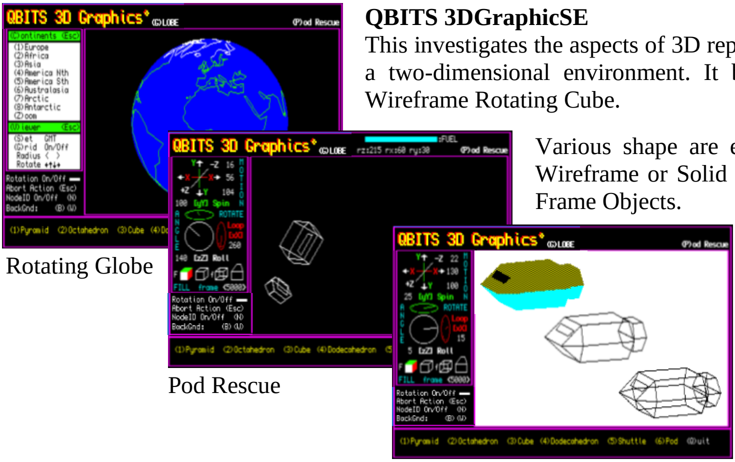


QBITS PIXArtSE

Taking Bitmaps to the next level from single colour Fonts, Bitmaps matrices are scaled up to accommodate larger Sprites as used in Retro Gaming. The aim being to add functions that can be used to create a full Gaming Environment.

This Prog is at present a **Work in Progress**.

QBITS 3DGraphicSE
This investigates the aspects of 3D representation in a two-dimensional environment. It began with a Wireframe Rotating Cube.

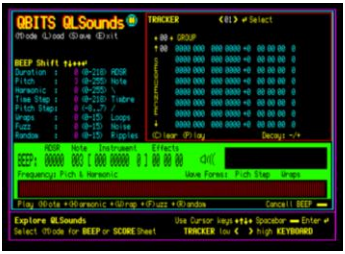


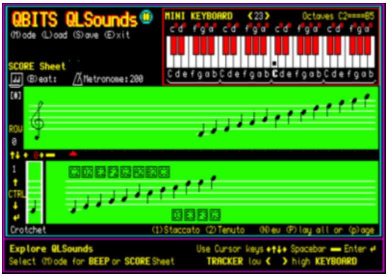
Various shape are explored with Wireframe or Solid and Coloured Frame Objects.

Rotating Globe

Pod Rescue

QBITS QLSoundSE
The Physical aspects of the QL Sounds System were hastily arranged and greatly restricts the potential of the BEEP commands.

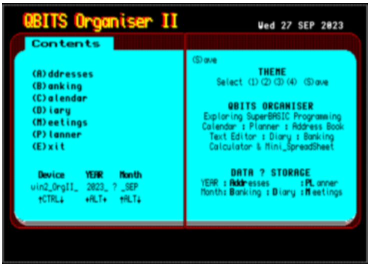

QBITS QLSounds
Mode Load Save Exit
TRACKER
BEEP Shift
Duration
Pitch
Harmonic
Time Step
Pitch Step
Wraps
Fuzz
Random
ADSR Note Instrument Effects
Explore QLSounds
Select Mode for BEEP or SCORE Sheet
Use Cursor keys Spacebar Enter
TRACKER low < > high KEYBOARD

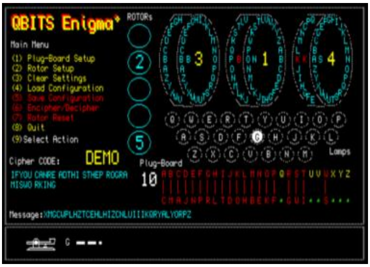


If, however constructing a Musical Score is more with the graphics, QBITS Sound goes someway to meeting this requirement.

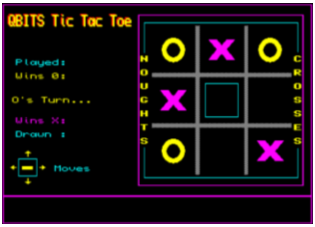
The BEEP Mode has a simple TRACKER and the SCORE Mode a 4 Octave Keyboard. Includes QPC2 implementation of QSound for an alternative audio output.

QBITS OrgII
The ambition was to create an eighties style Organiser. This includes pages for Addresses, Banking plus Money Calculator, Diary, double page Year Calendar and a Forward Planner.



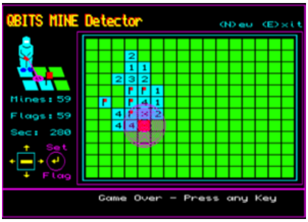


QBITS EnigmaSE
This Simulation of the WWII Enigma code Encryption Machine came about by way of a Family interest and a chance review of a past QL Magazine article. For **DEMO** Press (9).



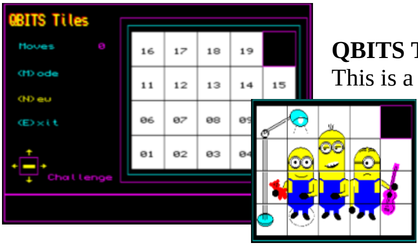
QBITS Tic Tac Toe

The classic coffee break challenge.



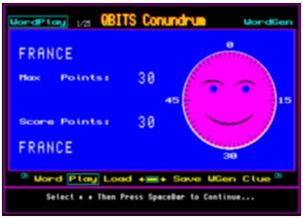
QBITS Mine Detector

Based on the 1980's
Mine Sweeper.

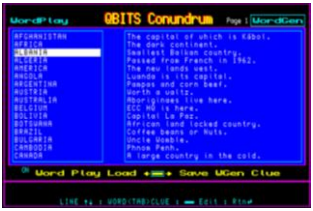


QBITS Tile Slider

This is a take on Sliding Tiles Tablets with alternative Modes Numbers or Minions Image.



Select ◆ ◆ Then Press SpaceBar to Continue...

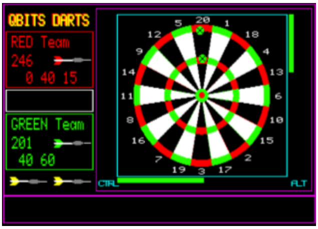


AFGHANISTAN	The capital of which is Kabol.
AFRICA	The dark continent.
ALBANIA	Smallest Balkan country.
ALGERIA	Passed from French in 1962.
AMERICA	The new lands west.
ANGOLA	Luanda is its capital.
ARGENTINA	Pampas and corn beef.
AUSTRIA	Worth a waltz.
AUSTRALIA	Aborigines live here.
BELGIUM	ECC HQ is here.
BOLIVIA	Capital La Paz.
BOTSWANA	African land locked country.
BRAZIL	Coffee beans or Nuts.
BULGARIA	Uncle Womble.
CAMBODIA	Phnom Penh.
CANADA	A large country in the cold.

LINE ↑↓ : WORD(TAB)CLUE : ▬ Edit : Rtn↵

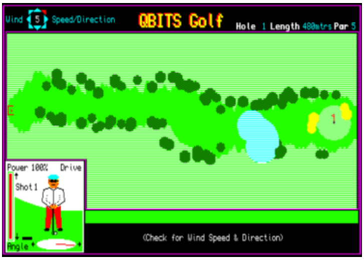
QBITS Conundrum

Victorian Hangman the background to a QBITS prog WordBear bursting balloons, before upgrading to this version of the popular Word Game. It includes a Text Editor WordGen for creating new Word and Clue Files.

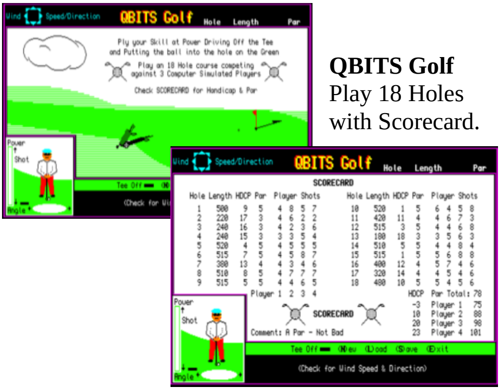


QBITS Darts

Classic 301 501 or Clock Face. Use Sliders to centre the Darts aim. At end of play the Dartboard Scrolls up to show winner and the number of Darts thrown.



(Check for Wind Speed & Direction)



Ply your Skill at Power Driving Off the Tee and Putting the ball into the hole on the Green

Play an 18 Hole course competing against 3 Computer Simulated Players

Check SCORECARD for Handicap & Par

(Check for Wind Speed & Direction)

SCORECARD

Hole	Length	HDCP	Par	Player Shots				Hole	Length	HDCP	Par	Player Shots			
1	500	9	5	4	8	5	7	10	520	1	5	6	4	5	8
2	220	17	3	4	6	2	2	11	420	11	4	4	6	7	3
3	240	16	3	4	2	3	6	12	515	3	5	4	4	6	8
4	240	15	3	3	3	5	4	13	180	18	3	3	5	6	3
5	520	4	5	4	5	5	5	14	510	5	5	4	4	8	4
6	515	7	5	4	5	8	7	15	515	1	5	5	6	8	8
7	380	13	4	4	3	4	6	16	400	12	4	5	7	4	6
8	510	8	5	4	7	7	7	17	320	14	4	4	5	4	6
9	515	5	5	4	4	6	5	18	400	10	5	5	4	5	6
			Player	1	2	3	4								

HDCP	Par Total:	78
-3	Player 1	75
10	Player 2	88
20	Player 3	98
23	Player 4	101

SCORECARD

Comment: A Par - Not Bad

(Check for Wind Speed & Direction)

QBITS Golf

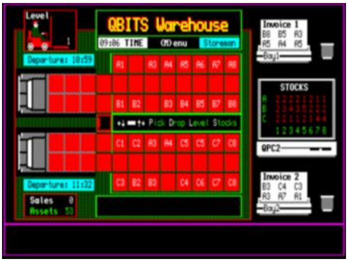
Play 18 Holes
with Scorecard.

Fairways are variable in length and difficulty, the wind an added factor.

The Scorecard displays result for each hole and at the end a Player's course Handicap.

QBITS Warehouse

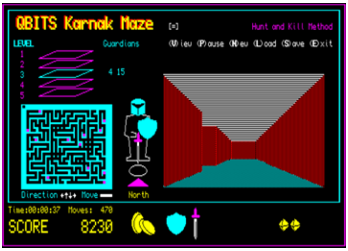
The Warehouse Prog started out as Storeman Sam the Guy driving the pickup. It then expanded to a larger store with two lorry bays and multi levels. The Printers show Sales Invoices and requested Stock Deliveries. The PC keeps Track of all held Stocks. The Sales generated by departing Lorries loaded with Goods. Includes hazards, Stock losses etc. and Progress Chart of Sales/Stock.



QBITS Karnak Maze

This utilises a 3-Dimentional view around a Maze over five levels. Recover coins and other artifacts to collect while avoiding the Phantom Guardians.

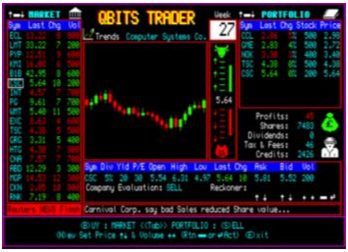
Your gained Wealth is used to solve a puzzle that unlocks a Time Portal and rescue, but before this you have to defeat all the Phantom Guardians.



QBITS Trader

Here you take charge of a Trader's Portfolio. Buy and Sell Company Shares on the Stock Market over a three-year period. Hazards include Stock Market fluctuations in Share values and changes to Company Dividends.

Achievements are assessed at the end.

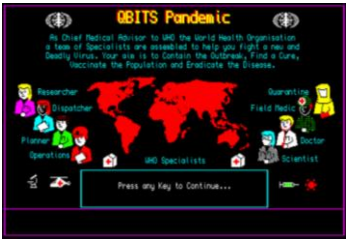

MARKET
QBITS TRADER
Week
27
PORTFOLIO
Sym Last Chg Vol
Trends Computer Systems Co.
Sym Last Chg Stock Price
5.64
Profits:
Shares: 7483
Dividends: 0
Tax & Fees: 46
Credits: 2426
Sym Div Yld P/E Open High Low Last Chg Ask Bid Vol
CSC 5% 20 30 5.54 6.31 4.97 5.64 10 5.81 5.52 200
Company Evaluation: SELL
Reckoner:
Reuters NEWS Flash
(B)UY : MARKET <<Tab>> PORTFOLIO : (S)ELL
(N)ew Set Price & Volume (Rtn or Act) (E)xit

Carnival Corp. say bad Sales reduced Share value...

QBITS Pandemic

An outbreak of a deadly virus and you are in charge of a group of Specialists deployed to find a Cure and Eradicate the Infection from all Cities.

The number of turns, city infections and random Virus outbreaks, the decisions made effecting any successful outcome.

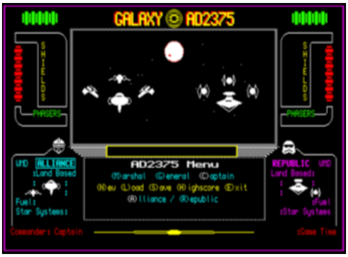


As Chief Medical Advisor to WHO the World Health Organisation a team of Specialists are assembled to help you fight a new and Deadly Virus. Your aim is to Contain the Outbreak, Find a Cure, Vaccinate the Population and Eradicate the Disease.

Press any Key to Continue...

QBITS GALAXY AD2375

In the Role of Alliance or Republic. Take over the Galaxy, Star system by Star system by Acquisition or Military Force. Expect some Twists of Fortune along the way and encounters with enemy Fighters attacking your Space Ships.



DEMO: Start New Game: Press F1 for Simulation Mode, then sit back and watch as things unfold.

QBITSBoot_bas Code

All Journeys have a beginning, start by checking that the present setting meet your local requirements. Feel free to make changes where needed.

```
100 REMark QBITSBoot_bas (QBITS Boot 2023 Review - QPC2)

120 dev$='win1_':MODE 4:WINDOW 512,220,0,0:PAPER 2:BORDER 5,7:CLS:INK 7

140 CSIZE 2,1:QBold 190,12,'QBITSBoot':QBold 180,74,'QBITSConfig':CSIZE 1,1
150 BLOCK 320,90,86,100,0:QBold 92,42,'Select Source  Drive? [ie win1_]'
160 CURSOR 356,42:INPUT dr$:IF dr$<>":dev$=dr$:END IF :QBold 356,42,dev$
170 str$="Press a KEY to Continue OR 'CTRL+SpaceBar' to Edit Settings"
180 CSIZE 0,0:CURSOR 66,194:PRINT str$:RESTORE 260
:
200 REMark *** QBITSConfig Settings ***
210 gx=0:gy=0                          :REMark SuperBASIC Screen Coordinates
220 dn$=dev$&'QBITSProgs_bas'          :REMark QBITS Menu Return Path
230 dn%=0:FOR d=0 TO 15:READ d$:IF d$=dev$:dn%=d:END FOR d
240 dm%=15                             :REMark dn% source : dm% max
250 REMark *** Device List ***
260 DATA 'mdv1_','mdv2_','flp1_','flp2_','win1_','win2_','dos1_','dos2_'
270 DATA 'mdv3_','mdv4_','flp3_','flp4_','win3_','win4_','dos3_','dos4_'
```

Note: Change settings as required for default drive **dev$** - Screen **gx gy** coordinates, return file address **dn$** and for Drive allocations **dn% dm% drv$(dn%)**

```
290 REMark *** QBITSConfig Screen Display ***
300 RESTORE 260:STRIP 0:INK 7
310 CURSOR 100,106:PRINT 'Screen Coordinates  : gx=';gx;':';'gy=';gy
320 CURSOR 100,120:PRINT 'QBITS Menu Return  : dn$=';dn$
330 CURSOR 100,140:PRINT 'drive default/max     : dn%=';dn%;':';'dm%=';dm%
340 CURSOR 100,152:PRINT 'drives dn% 0 TO 15  : drv$(dn%)' :INK 4
350 FOR d=0 TO   7:READ d$:CURSOR  100+d*36,164:PRINT d$
360 FOR d=8 TO 15:READ d$:CURSOR -188+d*36,176:PRINT d$

380 REMark *** QBITSConfig Format ***                Note: Code to overwrite Config settings
390 PAUSE:RESTORE 260:DELETE dev$&'QBITSConfig'
400 OPEN_NEW#9,dev$&'QBITSConfig':PRINT#9,gx\gy\dn$\dev$\dn%\dm%
410 FOR d=0 TO 15:READ d$:PRINT#9,d$:END FOR d:CLOSE#9

430 REMark *** Set ALTKEY ***
440 ALTKEY 'M','LRUN '&dev$&'QBITSProgs_bas'&CHR$(10)
450 ALTKEY  'f' ,'LRUN '&dev$&'QBITS_FTidySE_bas'&CHR$(10)

470 REMark *** QBITSProgs Set dev$ ***                Note: Code to Set a Programs Default Drive
480 OPEN#9,dn$:INPUT#9,a$\b$\c$:CLOSE#9:c$=c$(1 TO 11)&dev$&c$(17 TO)
490 OPEN#9,dn$:PRINT#9,a$\b$\c$:CLOSE#9:LRUN dn$:STOP

510 DEFine PROCedure QBold(x,y,str$)
520 OVER 1:FOR i=0 TO 1:CURSOR x+i,y:PRINT str$:END FOR i:OVER 0
530 END DEFine
```

QBITSProgs_bas Code

```
1000 REMark QBITSProgs_bas [QBITS Progs 2023 Review - QPC2]

1002 dev$='win1_':MODE 4:gx=0:gy=0    :REMark Basic Settings

1004 WHEN ERRor :CONTINUE:END WHEN
```

Note: Progs opening Code Lines used as File Header to facilitate use of common settings.

```
1006 REMark Import QBITSConfig Settings
1007 OPEN_IN#9,dev$&'QBITSConfig':INPUT#9\gx\gy\dn$\dev$:CLOSE#9

1010 QBProgs:QBMenu

1012 DEFine PROCedure QBProgs
1013 DIM Prog$(22,20)
1014 OPEN#3,scr_:WINDOW#3,512,256,gx,gy:PAPER#3,0:BORDER#3,1,3:CLS#3
1015 FOR i=0 TO 2:PAPER#i,0:CSIZE#i,0,0:INK#i,7:STRIP#i,0:SCALE#i,100,0,0
1016 WINDOW#2,500,204,gx+6,gy+4
1017 WINDOW#1,500,204,gx+6,gy+4  :BORDER#1,1,5:CLS#1
1018 WINDOW#0,500, 42,gx+6,gy+210:BORDER#0,1,5:CLS#0
1019 OVER 1:CSIZE 2,1:QFLASH 2,2,2:QFLASH 6,0,0:Pillar 1,9,46:Pillar 1,171,46
1020 INK#1,2:FOR i=0 TO 1:CURSOR 114+i,6:PRINT 'QBITS SuperBASIC Progs'
1021 INK#1,6:FOR i=0 TO 1:CURSOR 116,7+i:PRINT 'QBITS SuperBASIC Progs'
1022 CSIZE 1,1
1023 INK 2:FOR i=0 TO 1:CURSOR 25+i,163:PRINT 'QPCII Emulator'
1024 INK 6:FOR i=0 TO 1:CURSOR 26,164+i:PRINT 'QPCII Emulator'
1025 OVER 0:AT 0,0:CSIZE 2,0:RESTORE 1027
1026 FOR a=1 TO 22
1027   READ x,y,str$,P$:QBold 1,5,12,x,y,str$:Prog$(a)=P$
```

Note: Progs Menun & Filename

```
1028 END FOR a
1029 DATA  80, 36,'FTidy          ','FTidySE_bas'
1030 DATA  80, 47,'FontEdit       ','FontEditSE_bas'
1031 DATA  80, 58,'QLFonts        ','QLFonts_bas'
1032 DATA  80, 70,'PIXELArt       ',‘PIXArtSE_bas'
1033 DATA  80, 81,'3DGraphics     ','3DGraphicSE_bas'
1034 DATA  80, 92,'QLSounds       ',‘QLSoundSE_bas'
1035 DATA  80,103,'Organiser      ','OrgII_bas'
1036 DATA  80,114,'Enigma         ','EnigmaSE_bas'
1037 DATA  80,125,'               ',''
1038 DATA  80,136,'               ',''
1039 :
1040 DATA 270, 36,'TicTacToe      ','TTT_bas'
1041 DATA 270, 47,'MineDetect     ','MDETR_bas'
1042 DATA 270, 58,'TileSlider     ','Tiles_bas'
1043 DATA 270, 70,'Conundrum      ','Conundrum_bas'
1044 DATA 270, 81,'Darts          ','Darts_bas'
1045 DATA 270, 92,'Golf           ','Golf_bas'
1046 DATA 270,103,'Warehouse      ','WHQPC2_bas'
1047 DATA 270,114,'Karnak         ','KarnakMaze_bas'
1048 DATA 270,125,'Trader         ','Trader_bas'
1049 DATA 270,136,'Pandemic       ','Pandemic_bas'
1050 DATA 270,147,'Galaxy         ','AD2375SE_bas'
1051 DATA 270,158,'               ',''
1052 END DEFine
```

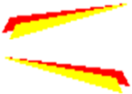
Note: As a Program is highlighted a brief description is shown in WINDOW#0.

```
1054 DEFine PROCedure QBold(ch,col,w,x,y,str$)
1055 OVER#ch,1:INK#ch,col
1056 FOR i=1 TO LEN(str$):CURSOR#ch,x+w*i,y    :PRINT#ch,str$(i)
1057 FOR i=1 TO LEN(str$):CURSOR#ch,1+x+w*i,y:PRINT#ch,str$(i)
1058 OVER#ch,0
1059 END DEFine

1061 DEFine PROCedure QBMenu
1062 CSIZE 1,0:QBold 1,7,7,386,184,'Esc   Exit':KEsc 1,7,140,6:KExit 2,7,155,7
1063 QBold 1,7,7,24,182,'Select with ← ↑↓→ Cursors and Action with ↵ Enter'
1064 AT 0,0:CSIZE#1,3,0:BLOCK#1,2,4,320,186,7:col=0:x=230:y=1:max=8:c$='←'
1065 REPeat Menu_lp
1066   IF x=230:RESTORE 1079+y:ELSE RESTORE 1090+y
1067   CLS#0:READ str$:sl=LEN(str$):CURSOR#0,248-6*(sl/2),10:PRINT#0,str$
1068   CURSOR x,24+y*11:PRINT c$:k=CODE(INKEY$(-1)):BLOCK 18,10,x,24+y*11,0
1069   SELect ON k
1070     =192:IF x=250:x=230:max=  8:col=  0:c$='←':IF y>max:y=max
1071     =200:IF x=230:x=250:max=11:col=10:c$='→'
1072     =208:y=y-1:IF y<1  :y=max
1073     =216:y=y+1:IF y>max:y=1
1074     = 10:CLS#3:DD$=dev$&'QBITS_'&Prog$(y+col):QBDev:LRUN DD$
1075     = 27,69,101:CSIZE#2,0,0:INK#2,7:EXIT Menu_lp
1076   END SELect                                  Note: Esc (E)xit QBITSProgs for Editing
1077 END REPeat Menu_lp
1078 END DEFine
                                                             Note: Menu Title Descriptions
1080 DATA 'A File Tidy Program - Review and Manage File Directories'
1081 DATA 'QLFont Editor to Modify Character Fonts - Plus Retro ARCADE Games'
1082 DATA 'QLFont Viewer - Scroll Up/Down to check out QL Character Fonts'
1083 DATA 'Explore PIXEL Art - Create Sprites & Retro Games etc.'
1084 DATA 'Exploring 3D Rotation Graphics - Plus Escape POD Rescue Game'
1085 DATA 'Exploring the Musical Attributes of the QL BEEP Commands'
1086 DATA 'Exploring the Functions of a 1980s Style Personal Organiser'
1087 DATA 'Enigma - A simulation of the WWII Encipher/Decipher Machine'
1088 DATA ''
1089 DATA ''
1090 :
1091 DATA 'The Coffee Break Challenge - Classic Noughts & Crosses'
1092 DATA 'Clear a Mine Field - Based on Mine Sweeper of the 1980s'
1093 DATA 'A Sliding Tile Puzzle Game with Numbers or MINIONS Picture'
1094 DATA 'Type Correct Order of Letters that Spellout the Hidden Word'
1095 DATA 'Classic Darts - Play 301/501 or Around the Clock Face Game'
1096 DATA 'Compete over an 18 Hole Course - SCORECARD with Par & HandiCap'
1097 DATA 'Manage a WareHouse - Handle Invoice Requests & Stock Deliveries'
1098 DATA 'Solve the Maze - Your Mission Travel back in Time to Save Humanity'
1199 DATA 'As a Market Trader - Manage a Portfolio of Company Stocks & Shares'
1100 DATA 'As a Specialist - Lead a Team to Contain & Eradicate a Deadly Virus'
1101 DATA 'Galaxy Adventure AD2375 : The First Order - Alliance v Republic'
1102 DATA ''
```

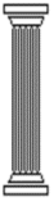
```
1104 DEFine PROCedure QBDev
1105 IF Prog$(y+col)='WIP':RETurn
1106 OPEN#9,DD$:INPUT#9,a$\b$\c$:CLOSE#9c$=c$(1 TO 11)&dev$&c$(17 TO)
1107 OPEN#9,DD$:PRINT#9,a$\b$\c$:CLOSE#9
1108 END DEFine
```

Note: QBDev Overwrites the Source Drive 'dev$' of a Selected Program before it is then LRUN. Where opening lines use dev$ to access QBITSConfig and Import QBITS Progs common settings. On (E)xit LRUN dn$ [ie. dev$&'QBITSProgs_bas'] to return to QBITSProgs Menu.

```
1200 REMark QBITSProgs Graphics
```



```
1202 DEFine PROCedure QFLASH(ic,x,y)
1203 INK ic:FILL 1:LINE 40,90 TO 5-x,80+y TO 7-x,84+y TO 40,90:FILL 0
1204 FILL 1:LINE 142,90 TO 177+x,80+y TO 175+x,84+y TO 142,90:FILL 0
1205 END DEFine
```



```
1207 DEFine PROCedure Pillar(ch,x,y)
1208 LINE#ch, x-5,y+21 TO x+6,y+21 TO x+6,y+23 TO x-5,y+23 TO x-5,y+21
1209 LINE#ch, x-3,y+18 TO x+4,y+18 TO x+5,y+20 TO x-4,y+20 TO x-3,y+18
1210 LINE#ch, x-3,y-18 TO x+4,y-18 TO x+5,y-20 TO x-4,y-20 TO x-3,y-18
1211LINE#ch, x-5,y-21 TO x+6,y-21 TO x+6,y-23 TO x-5,y-23 TO x-5,y-21
1212 FOR c=1 TO 5
1213  x1=x-4+c*1.5-.3:x2=x-4+c*1.5+.3:y1=y+17:y2=y-17
1214   ARC#ch,x1,y1 TO x2,y1,-PI:LINE#ch TO x2,y2
1215   ARC#ch,x2,y2 TO x1,y2,-PI:LINE#ch TO x1,y1
1216 END FOR c
1217 END DEFine
```

```
1219 DEFine PROCedure KEsc(ch,col,x,y)
1220 INK#ch,col : CIRCLE#ch,x,y,2.2:INK#ch,0:FILL#ch,1
1221 LINE#ch, x-3,y+3 TO x-1,y+2 TO x-2,y+1 TO x-3,y+3:FILL#ch,0
1222 INK#ch,col : LINE#ch,x-2,y+2 TO x+.5,y-.5
1223 END DEFine
```

```
1225 DEFine PROCedure KExit(ch,col,x,y)
1226 INK#ch,col:LINE#ch,x+1.2,y+1.8 TO x-1,y+1.8 TO x-1,y-2 TO x+1.6,y-2
1227 LINE#ch,x,y TO x+3,y:LINE#ch,x+2,y+1 TO x+3,y to x+3,y-1 TO x+2,y+1
1228 END DEFine
```

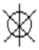
Note: More Symbols created with Graphic commands **ARC**, **CIRCLE**, **LINE**, **POINT**:

ALT

```
2001 DEFine PROCedure KAlt(ch,col,x,y)
2002 INK#ch,col:CURSOR#ch,x,y,0,-5:PRINT#ch,'➔'
2003 LINE#ch,x+.5,y-2 to x+2,y-2::LINE#ch,x-1.5,y-2 TO x-1,y-2 TO x+.2,y
2004 END DEFine
```

Info/Help

```
2006 DEFine PROCedure KInfo(ch,col,x,y)
2007 INK#ch,col:CIRCLE#ch,x,y,2:LINE#ch,x,y-1 TO x,y+.5:POINT#ch,x,y+1
2008 END DEFine
```



```
2010 DEFine PROCedure KCtrl(ch,col,x,y)
2011 INK#ch,col:CIRCLE#ch,x,y+.2,1.2   :LINE#ch,x,y+2.2 TO x,y-2
2012 LINE#ch,x-1.6,y+1.6 TO x+1.6,y-1.6:LINE#ch,x+1.6,y+1.6 TO x-1.6,y-1.6
2013 END DEFine
```

QPC11 Emulator

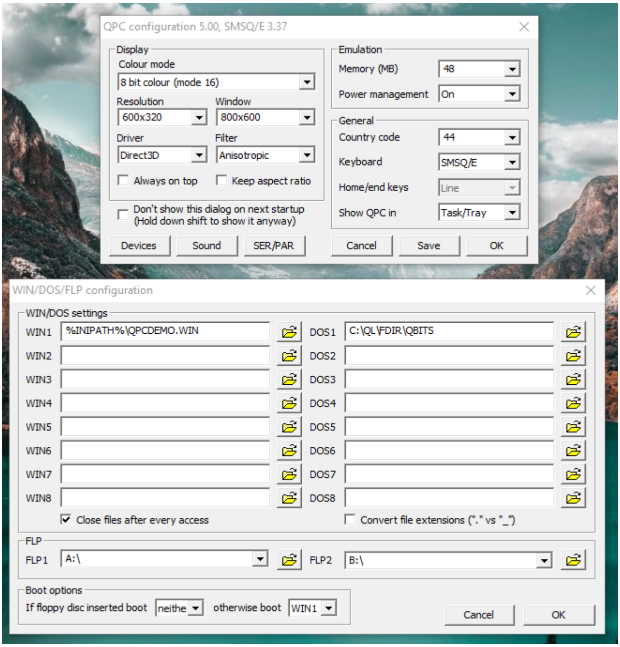
Installed and run on a Windows PC this Emulates a Sinclair QL Computer.
However, it has a far more advanced O/S with Tony Tebby's SMSQ/E
the successor to his QDOS and an updated expanded SBASIC
to the QL SuperBASIC of Jan Jones day.

Downloads: https://www.kilgus.net/qpc/downloads/
Also Check out: http://www.dilwyn.me.uk/emu/index.html

QPC11 Manual

Check latest release of QPC11 it explains Installation, Concepts and
SBASIC keywords. QPC Screen resolution and size is extended from
the original 512x256 with additional Colour Palettes.

Download and follow the documentation's instructions to Install.
Start **QPC11** and change the configuration to that shown below: -



QPC configuration 5.00, SMSQ/E 3.37

Display
Colour mode: 8 bit colour (mode 16)
Resolution: 600x320
Window: 800x600
Driver: Direct3D
Filter: Anisotropic
□ Always on top
□ Keep aspect ratio
□ Don't show this dialog on next startup (Hold down shift to show it anyway)

Emulation
Memory (MB): 48
Power management: On

General
Country code: 44
Keyboard: SMSQ/E
Home/end keys: Line
Show QPC in: Task/Tray

WIN/DOS/FLP configuration

WIN/DOS settings
WIN1: %INIPATH%\QPCDEMO.WIN
DOS1: C:\QL\FDIR\QBITS
WIN2–WIN8, DOS2–DOS8: (empty)
☑ Close files after every access
□ Convert file extensions ("." vs "_")

FLP
FLP1: A:\
FLP2: B:\

Boot options
If floppy disc inserted boot: neithe
otherwise boot: WIN1

Download **QBITS Progs** and UNZIP into a New Files Folder.
In **QPC Configuration** Click on **Devices** and link **DOS1** to your
QBITS Folder, press OK and then **Save**.

Press **Start** and with **QPC11** up and running exit from the demo page and in the
SuperBasic Interpreter's Command Window type: - **LRUN Dos1_QBITSBoot_bas**

Set Source Drive and **LRUN QBITSProgs_bas** to display Menu.
Select a Program with Cursor Keys and Press Enter.