Sinclair QL Retro-Computing

QBITS SuperBASIC Progs   ALT Q   ⏏ Q

FileTidy ←	BITMAPS QL
TicTacToe	BITMAPS 24
MineDetect	3DGraphics
TileSlider	QLSound
Conundrum	Warehouse
Darts	Karnak Maze
Golf	Pandemic
Organiser *	Trader
	AD2375 ***
	COP50 ***

QPCII Emulator

Select with ←↑↓→ Cursors and Action with — Spacebar   ↻ ↦

A File Tidy Program – Review and Manage SuperBASIC Progs

# Sinclair QL Retro-Computing

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

Issued 2021 with the release of QPC11 v 5.00 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: -
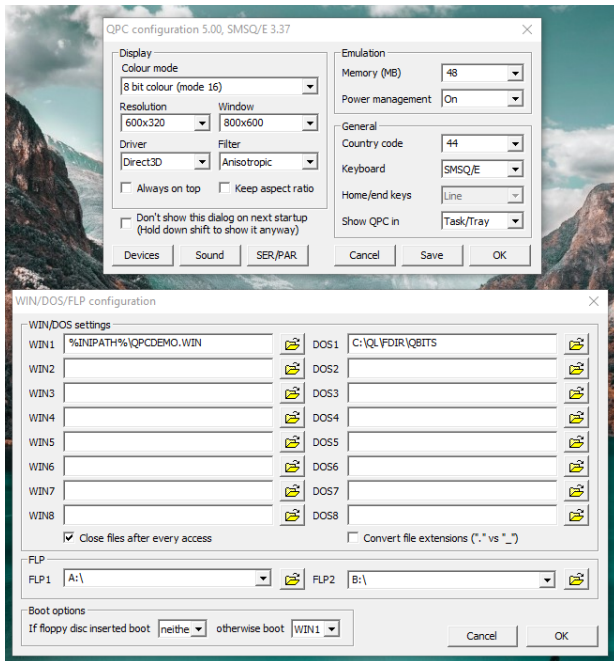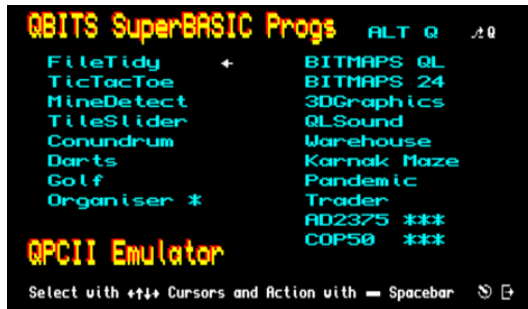
QBITS Progs

Download and unzip into a New Files Folder. In **QPC configuration** Click
on **Devices** and link **dos1** to your **QBITSProgs** 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_QBITS_Boot**

The QBITS Progs Menu should now be displayed
Select a Program with Cursor Keys and Spacebar.

Introduction

This provides a quick introduction to running and action key commands of the QBITS Programs. For a more detailed background and code listings see QBITSProgs_Doc.pdf

This Collection of **QBITS Progs** is configured for use with the **QPC11 Emulator**. In exploring these Progs hopefully, the reader will gain an understanding of the simple to more complex programming aspects of the **S/SuperBASIC Environment**. Information can be found in the QL User's Guide, which introduces the SuperBASIC Language and instructions on programming. Further information is supplied with QPC11 Documentation.

After downloading and installing a copy of **QPC11**, on start-up change the settings shown on previous page. Link the unzipped QBITSProgs Folder to dos1_ and run. Exit to the SuperBASIC command window and type **LRUN dos1_QBITSBoot**.

QBITSBoot copies the **QBITSProgs** Menu to ram2_ and creates a **QBITSConfig** file, which is used to manage common settings. For backward compatibility gx, gy locate the 512x256 screen size to sit within the higher screen resolutions of the QPC11 Emulator. When Exiting a QBITS Programs dn$ is set to 'ram2_QBITSProgs'. LRUN dn$ Returns to QBITSProgs Menu.

For Progs that use **Load**/**Save:** Settings are provided for Dev$, dn%, dm% and a list of Storage Device names, 'mdv1_, flp1_, win1_, etc. These can be changed to personal choices.

Navigating **QBITSProgs** use Cursor keys ← ↑ ↓ → for Action ▬ Spacebar and ↵ Enter key. The Spacebar and Enter tail are provided by BLOCK commands.

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

Other examples would be **ALT** ⟋ **Esc** ↻ and **Exit** ⤷ **Info**/Help ⓘ **Ctrl** ⌦ Symbols.

For **QBITSProgs** commands action (**E**)xit (**N**)ew (**L**)oad (**S**)ave, by pressing upper /lower key character enclosed in brackets.
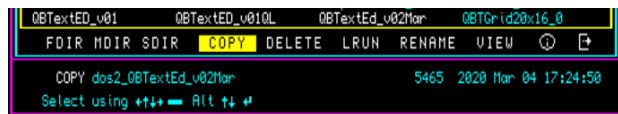
QBITS File Tidy

On start up a **Help** screen of Commands with a brief description of their functions. First choose a Source device (⬆⬇) **DIR**ectory, filenames are then displayed in four columns across the screen. Highlight Commands with ⬅➡Cursors then Press ▬Spacebar or **F M S C D L R V I E** keys.

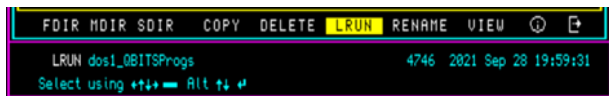> FDIR MDIR SDIR   COPY DELETE LRUN RENAME VIEW   ⓘ ⏻
>
> Select Drive: dos1_ (⬆⬇) ⟨ENTER⟩
>
> Info Exit
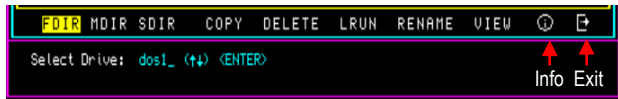
FTidy File Directory

FDIR displays the **DIR**ectory of the Default or last **Device** chosen. Select **MDIR** to Make a new SubDirectory. If SubDIRirectories are shown then Select **SDIR** to access SubDIR levels. Action with <⏎> **ENTER:** The Filenames of the selected **Device** or **SubDIR**ectory are written to **FList** which is Read and Sorted to generate the Filename columns to screen.
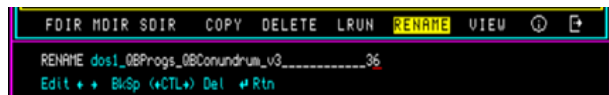
> QBTextED_v01   QBTextED_v01QL   QBTextEd_v02Mar   QBTGrid20x16_0
> FDIR MDIR SDIR   COPY DELETE LRUN RENAME VIEW   ⓘ ⏻
>
> COPY dos2_QBTextEd_v02Mar   5465 2020 Mar 04 17:24:50
> Select using ⬅⬆⬇➡ ▬ Alt ⬆⬇ ⏎

FTidy COPY / DELETE

Select single or multiple files. The Filename(s) are identified by moving through the files listed and highlighting with the Spacebar. For **COPY** select a destination **Target** device then a second pass is made through the selected list with a **'y/n'** for each file before any action is carried out. The selected Filenames are then copied from **Source** to **Target** device. For **DELETE,** the highlighted Filename(s) are confirmed with '**y/n**' before Deleting.

> FDIR MDIR SDIR   COPY DELETE LRUN RENAME VIEW   ⓘ ⏻
>
> LRUN dos1_QBITSProgs   4746 2021 Sep 28 19:59:31
> Select using ⬅⬆⬇➡ ▬ Alt ⬆⬇ ⏎

FTidy LRUN

Select a Filename, the full Filename up to 36 characters is displayed together with its Byte length and Time/Date stamp. You are then prompted with **LRUN** filename '**y/n**'.

> FDIR MDIR SDIR   COPY DELETE LRUN RENAME VIEW   ⓘ ⏻
>
> RENAME dos1_QBProgs_QBConundrum_v3_____36_
> Edit ⬅ ➡ BkSp (⬅CTL➡) Del ⏎Rtn

FTidy RENAME

Select an existing Filename (**file$**) and edit the string (**str$**) with the simple **L**ine **E**ditor. Checks are made that the Filename doesn't already exist, if not a COPY of the file is made with new Filename to source and then the old file is Deleted.

FTidy VIEW

Being able to read the contents, especially the first few lines of a program was seen as a necessary addition to help in recognising a file for what it was. Opening a selected file and reading it requires a little fineness. If a Byte file, a wraparound new line is required after so many characters. For a SuperBASIC or ASCII Character file then acknowledgment of an Enter for each new line.

Note: Executable Files

For this one method would be to write a **SuperBASIC** Program that loads the Byte Program Code into memory and activates its operation. That load Prog can then be **LRUN** from **FTidy**.

QBITS Tic Tac Toe

Select a (**N**)ew Game, who goes first the Nought or Crosses Player is randomly selected? Both players on average will get an even chance at going first, the choice of Player indicated with **O's** or **X's Turn…** Use the **Cursor keys** to select a grid position, then press the **Spacebar** and the relevant Nought or Cross is drawn.

QBITS MINE Detector

Select a (**N**)ew Game, move indicator with **Cursor keys** and Click **Spacebar** on a square to reveal its **Status** and some of the surrounding squares or **Enter** to Mark with a Flag as one holding a Mine. As a Single-player Puzzle Game, the object is to Locate and Mark all the "**Mines**". Success is being able to eliminate all possible positions of the distributed Mines within the time scale. If a player Click's a square that is **mined**, the game ends.

QBITS Tiles

Press (**N**) for New Game and use **Cursor keys** to move square highlight over an adjacent Tile to the Blank (Black) Tile space. Pressing **Spacebar** then Swaps the Tile positions. Use (**M**) key to switch between Numbers and Picture Mode. Use (**E**) to Exit Game.

QBITS Conundrum   **WordPlay** 1/25

Play requires **Load**ing of a Word File and each Game randomly selects 25 of the entries. The number completed is shown top left next to the Highlighted **WordPlay**. Toggle **Word** On/Off to show Coloured Blocks or Jumbled Letters. Similarly Toggle On/Off for any **Clue** display. By turning **Word** and **Clue** ON/OFF and changing the length of **Countdown** a wide range of difficulties can be achieved to service players of different ages and abilities. The challenge is further defined by the difficulty of the **Word Lists**.

The menu symbol ◄▭► provides an (**E**)xit point from the Game. In **Wordplay** it allows setting of the Countdown clock and in **WordGen** selection of a (**N**)ew Word File.

This displays columns for **Word** and **Clue**s and can be selected [Page 1 **WordGen**]
with **Up/Down** cursors and switched between using the **Tab** key. In either column pressing '**E**' invokes the **Line Editor**. For each **Word** up to 18 Upper-case Alphabet characters with no spaces is permitted. For **Clue** up to 36 Alphanumeric Characters including spaces and punctuation marks. If a **Word File** hasn't been previously loaded, use **Load** or start the creation of a **New** word file. Each word File can have 6 pages of 16 rows adding up to total of 96 entries. A minimum of 25 entries are required for **WordPlay** ie. the number of Random choices for a full Game. (**S**)**ave** file to default device, use (**E**)dit to change Filename
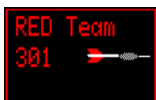
QBITS Word Files: Word Play Load ◄▭► Save WGen Clue
       WGen_Countries :
       WGen _DELTA   : WGen_DEMO : WGen_GAMMA
   **WGen_GenKnowl**

QBITS DARTS

Select choice of Game (**3**) (**5**) (**C**). For the **3**01 and **5**01 **Red** and **Green** teams, or individual players can play against each other. The **C**lock-face option is for a single player to complete in as few throws as possible. The sliders stop positions are controlled by **CTRL** and **ALT** keys. At End of a Game the board is scrolled up with results displayed, and shows the number of Darts thrown.

Note: Adjustments to the **Slider** Speed (sp) use Up/Down Cursor Keys (range 5 to 15).

QBITS Golf

A Green with Golf cart introduces the QBITS Golf Game with options for **NEW** game or **LOAD** a previously Saved one. Having selected (**N**)ew or (**L**)oad use the Spacebar to **Tee Off**. This will present a new Fairway. (**S**)ave is inactive until at least one hole has been played. Use (**E**)xit to leave the Game between Fairways.

Tee Off ▬ (N)ew (L)oad (S)ave (E)xit
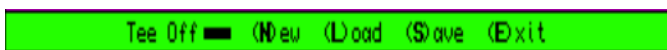
Club Power is a Slider controlled by the Up/Down Cursor keys. The **Angle of direction** is a rotating bar below the Golfers feet and changed with the Left/Right Cursor keys. Drive is 100%, Putt 50%. To Action the selected Power & Angle of Direction press Spacebar. The ball distance from hole is then calculated and displayed.

Hazards Boundary incurs a Penalty Shot, Rough reduces Power to 50%, a Bunker 25%. Hitting a Tree, ball is bounced until clear. Landing in Water, ball returned to Tee. The maximum shots 9.

At the end of each hole a SCORECARD is shown with the Player results.

Tee/Off with Spacebar or (**S**)ave or simply (**E**)xit which does not save the present Game.

Score Ratings
"Hole in One! – Superb Shot"
"An Albatross... Incredible"
"Fantastic shot…an Eagle"
"Well played…a Birdie"
"A Par - Not bad!"
"A Single Bogey"
"A Double Bogey"
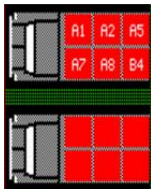"Not so good on this hole"
"You are out of shots"

.
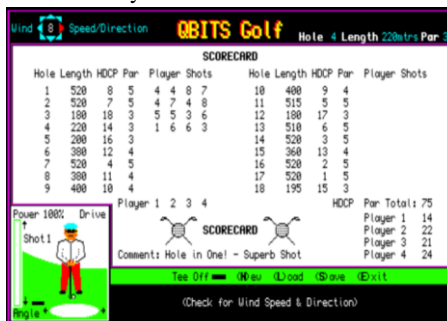
QBITS Warehouse

Start a (**N**)ew Game select the number of **Invoices,** these are in multiples of 5


from 10 to 40 and then **Skill** level (Forman Storeman Trainee). The higher skill the shorter the duration of time between Lorry departures.
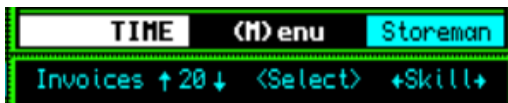
QBITS Warehouse Printers and Lorries

The Printers and printouts are in line with their respective loading Bay. They cater for **Invoices** and **Deliveries** (Stock Requests). The six spaces of an empty Lorry are to be filled as shown by the Invoice. A Delivery holds the Stock items Requested. As a lorry departs, the displayed printout is screwed up into a ball then further reduced to finally drop into the adjacent wastepaper basket.
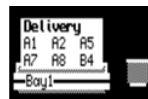
To Load/Unload lorry use **Cursor Keys** to move PickUp Truck and use **Spacebar** to cycle direction use (**P**)ick or (**D**)rop to access and place Stock. Warehouse location, levels and loading bays are identified as part of an array **Stock(r, c, l),** row (**r**), column (**c**) level (**l**). Four levels of storage added more gaming difficulty and introduced the graphics of Sam seated on his Pick-Up Truck to indicate which level is being accessed (**lev**).

Hazards, a Store **Computer glitch** which is just annoying, **Missing Stock** reduces the **Asset** and **Tax Revenues**, **Energy Bills,** and **Stolen Goods**, which deducts credits from **Sales**.

QBITS Warehouse Sales & Assets

As **Sales** are fulfilled Stocks (**Assets**) are reduced. To replenish items (**S**)tock Requests order in new Goods Deliveries. It uses the Store Computer display to highlight the Stock item for selection. You cannot make a Stock Request if you have less than 12 Sales credits, or a delivery is already being processed.

As an Invoice is completed, the count is incremented to the next. On each Lorry Departure or Hazzard, **Assets** and **Sales** are checked and results displayed.

Truck movement, Storage Level, Pick and Drop of Stock following a Delivery and/or fulfilling an Invoice (**Sales**), these are processed to update the **SCORE** shown as **Sales/Assets**, press (**M**) for Menu and the Warehouse screen area shows an **Audit Report** a Chart displaying the status of Profitability from completed transactions.

For Load / Save Select device and Audit File. Use Cursor keys

Abort Spacebar

Action Enter
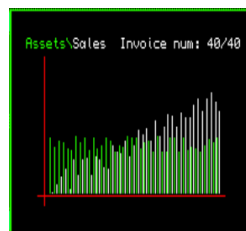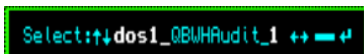
QBITS Karnak Maze - a Walk Through

The opening screen displays a Warning and Mission Statement, plus Graphics representing the **Sphere of Destiny.** This is the where the final part of the mission is played out. Pressing any key reveals the Game board and the League Table. At this point you may Start a **New** Game or **Load** a previously saved one.
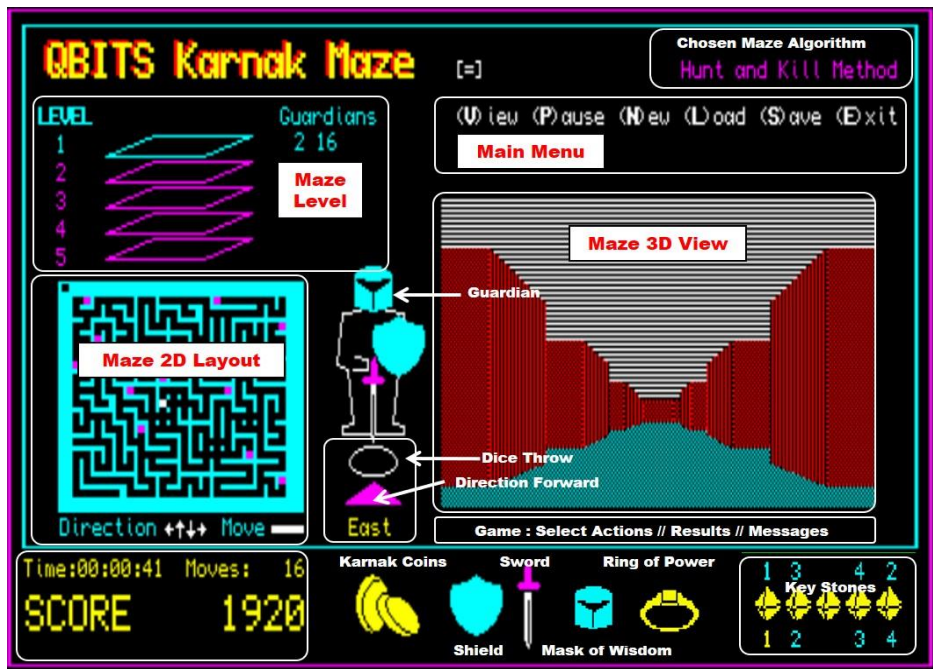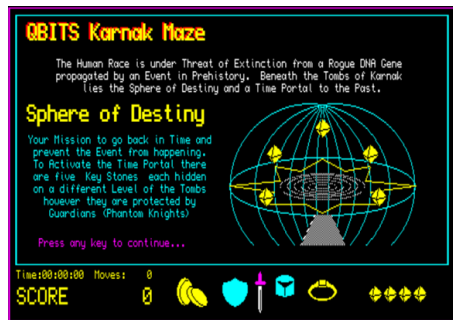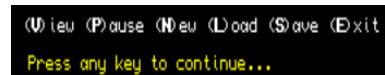

QBITS Maze - (V)iew

This is an **ON/OFF** switch that displays the location of **Maze Treasures** and the **Current Position** of the player within the **Maze 2D** layout. The number of **Points** taken for **each move** depends on the **Level** and if **View** is switched **ON** or **OFF.**
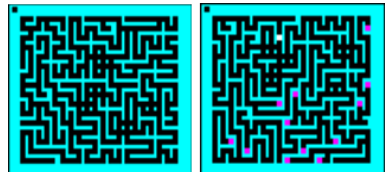
QBITS Maze - (P)ause

The **Game Timer** is halted and time stored (**GTS**). Message displayed '**Press any key to continue…**', pressing of which will restart the Game & Timer.

QBITS Maze - (N)ew Game

Select from one of three [1] [2] [3] presented Maze Algorithms. To abort press <**Spacebar**> <**Enter**> sets things in motion creating a **2D Maze** Layout in the lower left-hand part of the screen (Window#3).

QBITS Maze - (L)oad

Select **Device** and **MazeData** File <**Spacebar**> will abort or continue with <**Enter**>. Action and a search is made returning a '**File NOT found**' or continues with '**Loading…**'.

QBITS Maze - (S)ave

Select **Device** and **MazeData** File, <**Spacebar**> will abort or continue with <**Enter**>. Action and a search will return **DEVICE ERROR** if not found. If File exists an **Overwrite y/n** prompt is displayed. No aborts the action. If not previously existing or reply is 'Yes' the **MazeData** File is Saved to selected Device.

QBITS Maze - (E)xit

Prompted 'Y/N' Any key other than 'Y' or 'y' will return to the Game. A Yes will LRUN **QBITSProgs.**

```
[=]                Recursive Backtraking
(V)iew (P)ause (N)ew (L)oad (S)ave (E)xit
Select Maze Algorythm  [1] [2] [3]    ▬ ↵
```

```
(V)iew (P)ause (N)ew (L)oad (S)ave (E)xit
Select:↑↓ dos1_MazeData_0 ↔ ▬ ↵
Searching...
 File Not found...
Loading..............
```

```
(V)iew (P)ause (N)ew (L)oad (S)ave (E)xit
Select:↑↓ dos1_MazeData_0 ↔ ▬ ↵
Searching...
DEVICE ERROR...
Overwrite y/n
Saving..............
```

```
(V)iew (P)ause (N)ew (L)oad (S)ave (E)xit
Exit Game (Y/N)
```

QBITS Maze - Treasures

Each level holds **Coins** of Karnak, **Mask** of Wisdom, **Ring** of Power and a **Key Stone**, which adds Points to the **Score.** The **Mask** and **Ring** also aid in defending against or eliminating one or more of the **Guardians**.

QBITS Maze - Guardians

Encountering a **Guardian** a Player has four possible options, **[1] Shield** which avoids the confrontation by Teleporting to another part of the current Maze level. **[2] Sword**, here you attack and are required to throw a six to defeat the **Guardian**. If acquired **[3] Mask** will banish Level **Guardians** for 120 moves and **[4] Ring** will delete all of the current **Level Guardians**. Each of these choices will incur a loss of Points.

QBITS Maze - Levels

You can accept a **Key Stone** or return to it. Accepting activates the **Portal** and makes the jump to the next **Maze Level**. The final jump to the **Sphere of Destiny** can only be made if all remaining **Guardians** have been defeated.

QBITS Maze - Sphere of Destiny

Upon reaching the **Sphere of Destiny** the five acquired **Key Stones** from the Maze Levels have to be aligned to their correct position to those within the Sphere. The fifth Key Stone position is given, the other four must be **Matched**. Twenty-four different combinations are possible. If successful the **Time Porta**l is opened and humanity saved from extinction. If not then sorry, maybe you will have better luck next time.

The opening screen displays a Statement outlining the nature of the Game, a World Map and eight WHO Specialists, four of which are randomly chosen to become the team for each New Game. Press any key and the Game screen is displayed. City names are randomly shuffled and the first twelve selected to create an initial **Outbreak**. The Game then begins after choosing a City to locate the WHO Headquarters.

City Location of Specialist

Specialist

| Flight | Vaccine | MED | RES | R: | Airlift | Virus | View | **:ACTIVITY** |

QBITS Pandemic Turns

This can appear quite complex with the decisions that may be taken. A **Specialist**/Player carries out **2 Events** and **4 Actions** that may be taken in any order. The **Event** /**Action** image is selected using the **Left** & **Right Cursor Keys** and by pressing the **Spacebar**. The Red highlight will disappear and a printed **Prompt** is displayed requiring a response. **Enter** will confirm the activity and **Spacebar** will return without the activity taking place The **City** location when required will be identified by a **crosswire** with the **Popu**lation **R:** and **City Name** displayed just above the activity window. Whatever decisions are made all **Events** and **Actions** must be taken to move onto the **Next Turn / Specialist**.

Pressing (**h**) will display the attribute of current **Specialist** and the current **City locations** of all four.
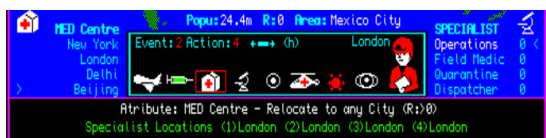
Events: 2 (Select from:)

Flight	Move **Specialist** to another City
Vaccine	Deliver and clear City Infections **R:** (active only after Vaccine Release)
MED	Relocate **MED** Centre to another City
RES	Add **RES**earch Credit (active until Vaccine Release)

Action: 4 (Combination of :)

R:	Reduce the **R:** rate in current City if applicable.
Airlift	Move **Specialist** +/- four cities from current location.
Virus	Release **Vaccine** if current Specialist has required credits
View:	Use **Left** & **Right Cursor keys** to move City to City across the Map shown by crosswires, **Popu**lation, **R:** rate and **City Area names** are displayed.

QBITS Pandemic Activity

Activity **Cure** and **Vaccine** Release are dependent on the state of play. The **R:** Rate is active if the current City Infection is above zero. Once enough **Cure** credits are gathered a **Vaccine** can be released stopping further city Infections. Each **Specialists** carries an *Attribute* see below: -
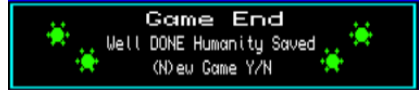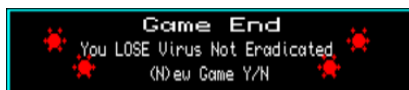
Flight:
event-1
Dispatcher
This Offers transfer of Specialist to the next City in Card Deck. Useful to reach an Infected City.
Destination extended to any City 1-48

Vaccine:
event-1
Field Medic
Delivers to a group of Cities based around next City in Card Deck. Once delivered City R: is reduced to zero.
Delivery extended to any City 1-48

MED Centre**:**
event-1
Operations
Relocation of MED Centre to next City in Deck. Upon arrival City R: is reduced to zero
Relocation extended to any City 1-48

RESearch Credits**:**
event-1
Scientist
Adds Credits to Specialists Total

Gains an extra Turn added to Countdown

R: rate
acttion-1
Planner
Reduce R: by one for one Action

Free Turn against Countdown

Airlift:
action-1
Quarantine
Offers Transfer of Specialist to group of local cities. Once in location can use **R:** rate to reduce Infections
Upon arrival City R: is reduced to zero

Cure:
action-1
Researcher
Doctor
If Specialist has 5 Credits and in City with a MED Centre Vaccine can be released.
As before but requires only 4 not 5 Credits
With 5 Credits can release Vaccine from any City

View Info:
Access any City Area to show Status

QBITS Pandemic Virus Spread

At the end of a **Specialist**/Player **Turn** and until a **Vaccine** is released, City Infections continue with the next card from the deck in accordance with **Global Infection Rates 2/3/4**. If an **Epidemic** card this raises **R:** Rate by 3**.**

QBITS Pandemic Game End

The Game is **Lost** if more than seven **Outbreaks** occur or if the number of **Turns** runs out without managing to **Clear** all **Infected Cities**. For a **Specialist Team** to **Win** all infected Cities have to be cleared of the **Virus**.

Game End
You LOSE Virus Not Eradicated
(N)ew Game Y/N

Game End
Well DONE Humanity Saved
(N)ew Game Y/N

Select (**N**)ew Game WHO Headquarters QBITS Pandemic Deaths 1.76m Cases 37.0m London (N)ew (E)xit or (**E**)xit

QBITS TRADER

Select **Currency (D) (E) (P) (Y)** from the **Intro Screen**, '**£**' is set as the **Default**.

The Trader Screen is displayed and **Market** entries Initialised. The Company Share **Trends** are then Calculated for the first half year (twenty-six weeks). The beginning Phase of the game is to build a **Portfolio** of Company Shares using the opening **10,000 Credits**.
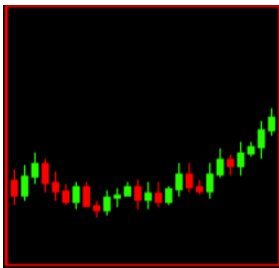
As the game progresses the **Bull & Bear** Status show vertically extending bars giving notice to next **End** of **Week Share Price** changes.

Trends are shown using **CandleWick** Graphics.

Scroll the **MARKET** list of Companies with **Up/Down** cursor keys and select with **Spacebar** to reveal Company **Info**rmation and display Share **Trends** for the preceding twenty-six weeks.

QBITS Trader 'Company Info'
Sym is the abbreviation/index of a Company's Name.

Div (**Dividend)** is a declared % of Face Value (FV) of a Share based on annual Company Profits. **Yld (Yield)** is a Rate of Return calculated by subtracting Start value of the investment from its Final value, dividing the Result by the Start value before multiplying by 100. **P/E** (**Price/Earnings)** represents the Market value of Stock compared to the Company's earnings.

Open, High, Low, Last are used in analysing a changing **Share Price** and are represented by a **Candle** for the **Open** to **Last** or Closing price range and **Wicks** for the **High** and **Low** of price movement**,** the **Colour** reveals the direction. A **Bull** is shown in **Green** with **Red** for a **Bear**.

Review of patterns formed by the **CandleWic**k graphics can indicate Market Opportunities. They provide insight into the balance between **Buy**ing and **Sell**ing pressures, a steady continuation or Market indecision.

The **Chg** (Change) is the difference between the previous and current weeks **Last Share Price**.

Ask & **Bid** values are calculated from the current weeks **Last Share Price.**

Vol is the Shares Volume being offered.

QBITS Trader 'PORTFOLIO'

Up to eight (8) Portfolio entries can be held at any one time. Use the <**Tab**> key to switch between **Market** and **PorFolio** and scroll with Up/Down Cursor keys to Highlight and Select one of the Entries.

QBITS Trader 'BUY

Press '**B**' and use Cursor keys to change the presented '**Bid**' and '**Vol**' values. **Enter** actions your choice, **Spacebar** aborts. Your '**Bid**' may or may not be accepted. It will be rejected if lack of funds '**Credits'.**

If you **BUY** Shares from the **Market** of a Company already in the **Portfolio** list these will be added to the **Stocks** held and the **Price** will be updated to the new purchase price. Each Transaction incurs a '**Fee**', payment of which is deducted from the **Credits**.

QBITS Trader 'SELL'

Once the **PORTFOLIO** has an entry (entries) use <<**Tab**>> to switch between **Market** and **PortFolio** then select with **Up/Down** Cursor keys to highlight an entry. **Chg** is % difference between **PortFolio Price** shown and **Last Share Price**.

Press '**S**' and use Cursor keys to change the presented '**Ask**' and '**Vol**' values. **Enter** actions your choice, **Spacebar** aborts. Your '**Ask**' Price may or may not be accepted.
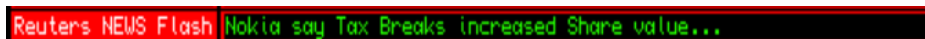
QBITS Trader 'Profits & Dividends'

Profits are the difference between the Price when Shares were bought and the Last Share Price and multiplied by the Stock Volumes held. Company Stocks held by the Portfolio who post a div% receive Dividends which are accumulative and pay-out every quarter (13weeks).

QBITS Trader 'Reuters NEWS Flash'

Once a **PortFolio** has been started as part of the **End** of **Wee**k Share Price a **Reuters NEWS Flash** is displayed. This may change one or more of a Company's Share values held and the calculation of **Share Price** or **Dividends** posted.
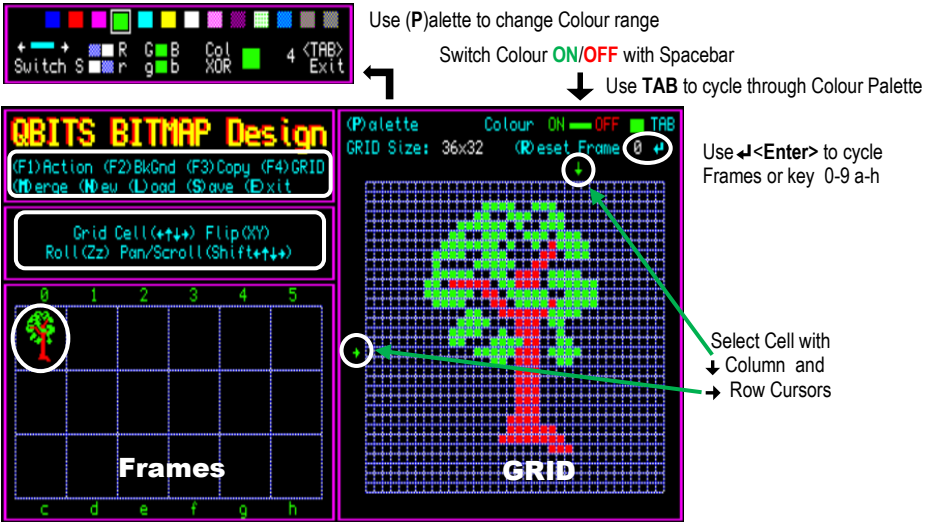

QBITS Trader 'GAME END'

After 156 Weeks the **GAME END**s the **Profits** and **Dividends** are added together to identify **Total Assets**. The Performance Review shows the level of achievement and a Trader Rating.

Press **N** for (**N**)ew Game or **E** to (**E**)xit.

QBITS BITMAP Design

The screen layout below has a **BITMAP GRID** area for **O**bject Designs of up to 36x32 Pixels and **Frames** in three rows of six identified as 0 to 9 & a to h. Each GRID Cell is filled with a background colour, the default being Black (0) use **(F2)BkGnd** to choose an alternative from the Colour Palette. Select 'P' for Pallet to change any of the 14 Colours. **Spacebar** switches between Colour selection and changing the colour parameters rR,gG,bB keys with 'S' to choose stipple. (TAB) returns to Grid and is used to cycle through Colour Pallet for selecting Grid Cell colour.


Use (**P**)alette to change Colour range

Switch Colour **ON**/**OFF** with Spacebar

Use **TAB** to cycle through Colour Palette

Use ↵<**Enter**> to cycle Frames or key 0-9 a-h

Select Cell with
↓ Column and
→ Row Cursors

Flip(XY) Swaps Left-Right / Top-Bottom   **Roll** (**zZ**) Turns Grid 90^0 Clockwise / Anti-clockwise
Pan/Scroll (Shift ← ↑ ↓ →) moves the columns horizontally and rows vertically. (**R**)**eset** clears all the Cells of selected **Frame** back to **Black** (Colour = 0). (**N**)ew prompts for a Save before clearing all Frames.

QBITS BITMAP GRID Flip Roll & Slid

As the **GRID** is stored as an Array swapping or moving entries (column/row) with a **Flip** left or right, top to bottom or **Slid** with Pan and Scroll a column or row at a time is relatively simple. A 90^0 **Roll** requires a little more sophistication when relocating cell entries from corner to corner. When a resized GRID is selected this allows an expansion of the Sprite area. The left Grid 24x20 has been transposed into the 28x24 on the right leaving unused areas to the right and bottom still shown with a default Black Background.
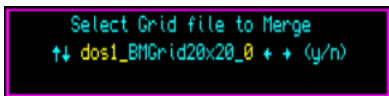

Slid xX

Flip xX

Resizing Grid

Slid yY

Flip yY   Roll zZ
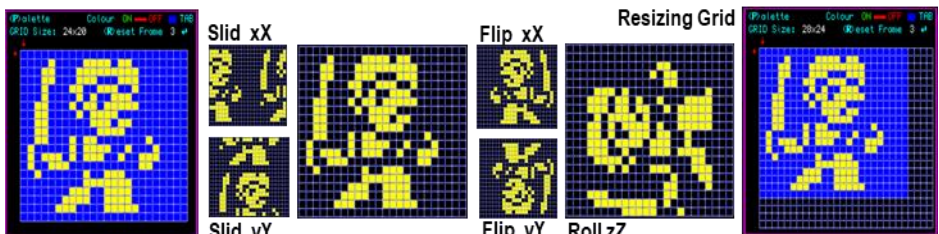
QBITS BITMAP Commands
On start-up you are prompted to select a GRID Size.

QBITS BITMAP (M)erge
This allows two GRID Files of same or different
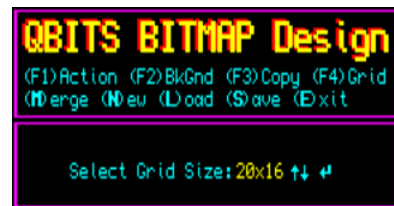GRID Sizes to combine their Frames [**0 TO 9**] .

Note: If Files different Grid sizes, (**L**)oad smaller
First, then **Resize** with (**F4**)**Grid** command.

QBITS BITMAP (N)ew
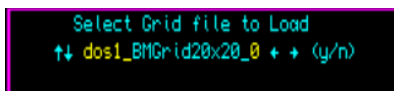This will reset all Frames, but will first present the opportunity to **(S)ave** current Frame Set

QBITS BITMAP (L)oad
You can only Load a BITMAP File that has the
same Selected GRID Size.

QBITS BITMAP (S)ave
You can Save BITMAP Files as a GRID in Array
Format or as Lines of DATA.
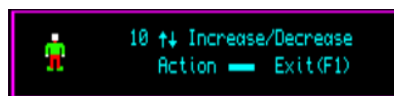
QBITS BITMAP (E)xit
Press UPPER case 'E' any other key than 'yY' will
continue with Prog.
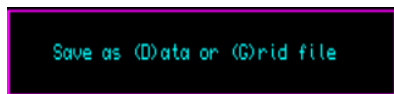
(F1)Action - this runs the sequence of Frames. Set
PAUSE to -1 and Step though at your own pace or
set a 1-20 Frame delay and run the sequence...

(F2)BkGnd – Select a Background colour. Reverse
action by Selecting same Background colour again.

(F3)Copy - from current Frame to selected Frame.

Note: The Frames show a simple Sprite in various
positions. Using **(F3) Copy** Frame (0) is copied to
Frame (1). The left arm position is altered. Copying
this to Frame (2) the next change is made and so on.
In copying Frames, **Flip, Slid** and **Roll** commands
can be used to build up a sequence of altered images.

(F4)GRID - use to select any of the available Grid
Sizes with Up/Down Cursors to expand a grid size
or resize for a BITMAP File to Load or Save.

Note: In Saving to a smaller Grid Size may delete
Pixels on the edges of the current design.
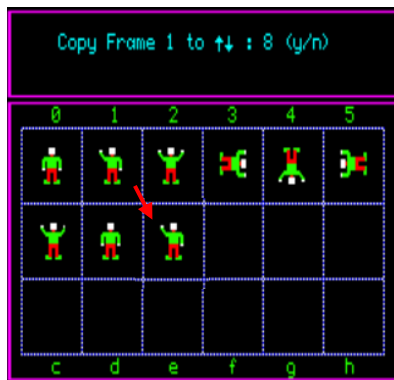
QBITS BITMAP Files

(S)ave options are as (D)ata or a (G)rid File. Select type (D) or (G) then device and Filename. A search will return with a message 'DEVICE ERROR', 'Overwrite y/n' or 'Saving…'.

Save as (D)ata or (G)rid file
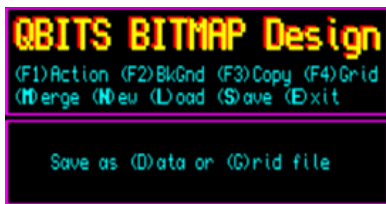
For (L)oad Select Device and Grid File. A search will return 'File NOT Found' or 'Loading…'

QBITS BITMAP Files

BMGrid05x07_0	Character Fonts 0-9A-H
BMGrid20x16_0	Animation Sprite
BMGrid24x20_0	Sprites Collection
BMGrid36x32_0	Background Scene

QBITS BITMAP 24

For true colour this uses the **Colour_24** (P)alette which has no Stipple just **Red Green** & **Blue** each with a range of 0-255 or in Hex 00-FF. Changing the Pallet colour range use Spacebar and rR,gG,bB much the same as with BITMAP QL.

Note: INK, BLOCK etc. colour attributes are more easily written in Hex numbers ($num).

|		
000000	**Red**	= num DIV 65536
TO	**Green**	= num MOD 65536 DIV 256
FFFFFF	**Blue**	= num MOD 65536 MOD 256

Select Shape. Turn auto-rotation ON/Off with spacebar.
Rotate anticlockwise with lower case '**x,y,z**' and
clockwise with UPPER case '**X,Y,Z**'
Resize with '**v**' to Decrease and '**V**' to Increase.
Change Focal Point - Increase with '**p**', Decrease with '**P**'
Key '**f**' toggles hidden planes On/Off   '**F**' adds Frame Colour
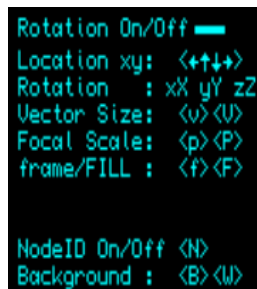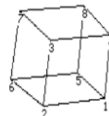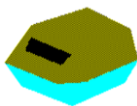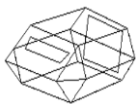
(**N**)ode turns Numbering ID On/Off

Background colour (**B**)lack or (**W**)hite changes PAPER colour (bg1) and INK (bg2) either a Black background with white INK, or White background with black INK.
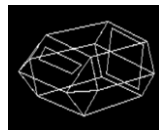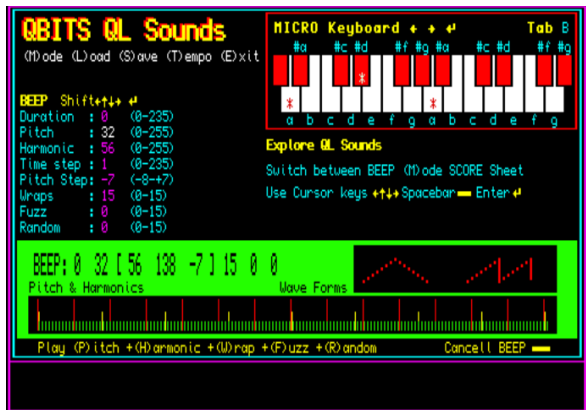
QBITS QL Sounds

BEEP Mode allows changes to the Sound attributes. Select one of the 23 Keys from the Micro Keyboard use Left /right Cursors and Enter.

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Use Shift Up/Down Cursors. To select Attribute and change value with Left/Right Cursors.

Press Enter and the Waveform Pitch & Harmonics are displayed graphically.

For Sounds - Pitch through to Random press key (**P**) (**H**) (**W**) (**F**) (**R**). Cancel with Spacebar.

SCORE Mode use Left/Right Cursors and Enter to select Note position on Stave. Select Notes, Rests, with Up/Down Cursors. Enter places selected on Stave at position of marker.

Shift Left/Right cursors to move Stave Marker, switch between Rows with Spacebar. Use Shift Up/Down cursors to change the Stave Rows displayed (0-9).
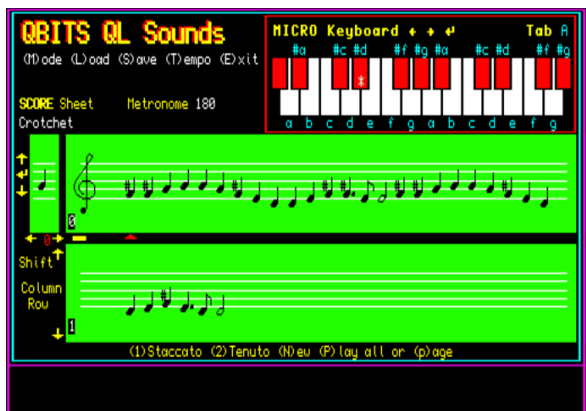
(**1**)Staccato Shortens Note (dot)
(**2**)Tenuto Lengthens Note (dash)
(**N**)ew clears Score Sheet. (**P**)lays all 0-9 rows, (**p**)age plays only the Stave rows displayed.

QBITS QL Sound Menu
(**M**)ode switches between **BEEP** and Musical **SCORE.** For Storage and Retrieval of data files QBSDat_0 to 9 use (**S**)ave and (**L**)oad.

(**T**)empo is only active in Musical SCORE Mode.

(**E**)xit prompts with Y/N. Asbwer 'yY' – LRUN QBITSProgs.

GALAXY AD2375

AD2370 having reached a level of maturity this New Release has changes to the Layout with more sophisticated Space craft. The opposing sides are Alliance and Republic with added Trade options, a fuel bar and more work put into Phasor and Shield Graphics for the Encounter section.

My aim is to complete the Work in Progress by the first quarter 2022.
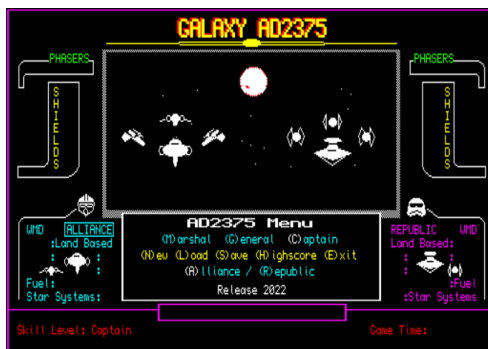
QBITS Organiser

This began as a collection of programs, each interesting in their own way but residing on floppies that were largely defunct. I did manage to copy some across and add in the missing code. Then carried out a number of updates before presenting a version posted on the QLForum.co.uk.

After further investigations I plan to release an Updated Revision in 2022.
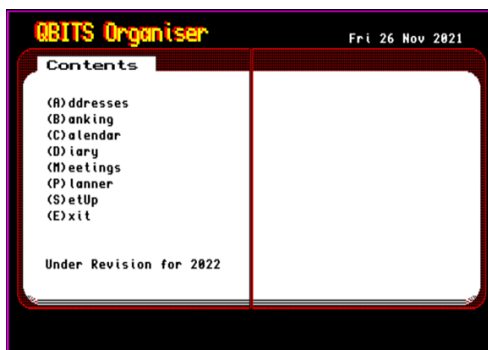
QBITS COP50

The COVID19 Pandemic has made us more aware of how internationally we are all connected. In that light Climate Change has again raised the urgency of Global reduction in Carbon Emissions.

Therefore, it will come as no surprise that my thoughts have become focused on creating a Game Scenario covering these Global issues.

The family response was favourable and not without a few suggestions. I'm looking forward to the challenge QBITS COP50 will present. Hopefully it will reflect the scale of changes necessary and complex difficulties in accomplishing the required International Cooperation. The Pledges made and complied with and the possible disaster that awaits us all if they aren't!

This will be the QBITS Project for 2022.