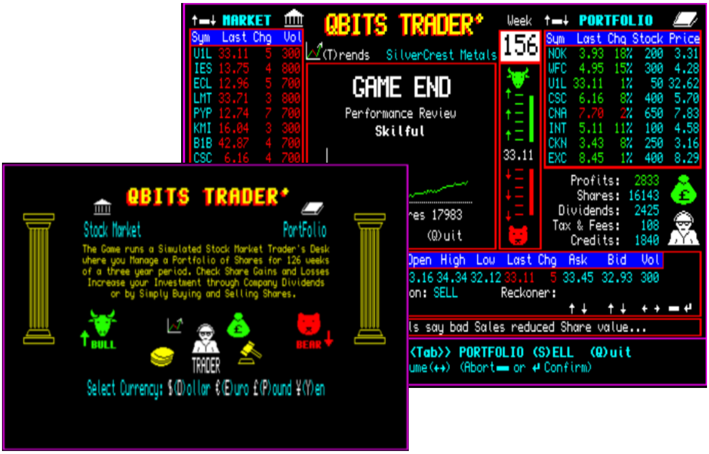


```
↑▬↓ MARKET            QBITS TRADER*              Week  ↑▬↓ PORTFOLIO
Sym  Last Chg  Vol                                156  Sym  Last Chg Stock Price
U1L 33.11  5  300   (T)rends   SilverCrest Metals      NOK  3.93 18%  200  3.31
IES 13.75  4  800                                      WFC  4.95 15%  300  4.28
ECL 12.96  5  700         GAME END                     U1L 33.11  1%   50 32.62
LMT 33.71  3  800     Performance Review               CSC  6.16  8%  400  5.70
PYP 12.74  7  700          Skilful                     CNA  7.70  2%  650  7.83
KMI 16.04  3  300                                      INT  5.11 11%  100  4.58
B1B 42.87  4  700                                 33.11 CKN  3.43  8%  250  3.16
CSC  6.16  4  700                                      EXC  8.45  1%  400  8.29
                                                          Profits:  2833
                                                           Shares: 16143
                                    res 17983          Dividends:  2425
                                                       Tax & Fees:   108
                                     (Q)uit              Credits:  1840
                                   Open High  Low  Last Chg  Ask   Bid  Vol
                                   3.16 34.34 32.12 33.11  5 33.45 32.93 300
                                   on: SELL       Reckoner:
                                                      ↑↓   ↑↓  ←→ ▬↵
                                   ls say bad Sales reduced Share value...
                                   <Tab>> PORTFOLIO (S)ELL  (Q)uit
                                   ume(←→) (Abort▬ or ↵ Confirm)
```

```
QBITS TRADER*
Stock Market                                      PortFolio
The Game runs a Simulated Stock Market Trader's Desk
where you Manage a Portfolio of Shares for 126 weeks
of a three year period. Check Share Gains and Losses
Increase your Investment through Company Dividends
or by Simply Buying and Selling Shares.
BULL                      TRADER                  BEAR
Select Currency: $(D)ollar €(E)uro £(P)ound ¥(Y)en
```

Introduction

Back in the day I attended a Business course at London University on Company Finance. Invited back to a seminar we were assigned in groups as Company Directors asked to run a pretend Business. Our task to invent Marketable Products, devise Advertising and Sales Campaigns, Manage Factory production and deliver goods to imaginary customers. Today that may sound a bit like a theme form the Apprentice. The crux of it was success or failure dictated by a Stock Market Simulation Program run over 3-days representing a three-year period in the Trading lives of a group of very different Companies.

QBITS Trader 'Concept'

Memories of that course formed the background to a QBITS Stock Market Game. First was reviewing setups of Stock Market Trader screens and investing my time looking at Board Games with a similar theme. I imagined two ways to play the Stock Market the long haul where investments increase through Company Dividends and the Maverick method, riding the rise and fall of Share Prices, making snap judgments when to Buy and Sell. The latter statistically riskier and with the potential to fail dramatically.

Thoughts on QBITS coding began as usual with layouts, what to include and the best way to represent them on screen. Company list, Stock Market Info, Share pricing and Volumes on offer. Start-up capital to buy Stock and build a Portfolio. BUY, SELL actions and display of accumulative Gains or Losses. The GAME END Results.

Design of a Game involves developing those parts that provide a repeated familiarity, that promote the development of stratagems to advance a player's ability to do well. Plus, those random elements that make the Game a touch more worthwhile a Challenge.

QBITS Trader 'Challenge'

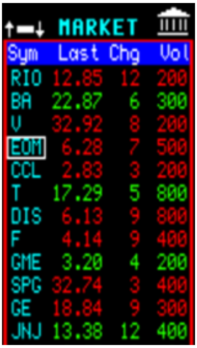
Manage a Stock Market Trader's Desk and make as large as possible the return from an initial start-up fund. Initialised with Stocks and Share Price Trends, the Game is to build a Shares Portfolio, which is adapted to meet the Price changes of a Simulated Stock Market over a three-year period. The GAME END Performance Rating being achieved through accumulative Dividend pay-outs and Profits from Buying and Selling.

QBITS Trader 'Intro'

The Intro screen gives a quick overview and then asks you to Select a **Currency (D)ollar (E)uro (P)ound (Y)en .**

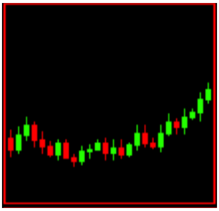
The '**£**' is set as the **Default**.

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 **10000 Credits**.



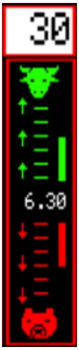
↑▬↓ MARKET

Sym	Last	Chg	Vol
RIO	12.85	12	200
BA	22.87	6	300
V	32.92	8	200
EOM	6.28	7	500
CCL	2.83	3	200
T	17.29	5	800
DIS	6.13	9	800
F	4.14	9	400
GME	3.20	4	200
SPG	32.74	3	400
GE	18.84	9	300
JNJ	13.38	12	400



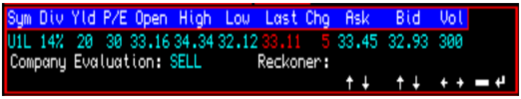
Bull & Bear vertically bars increase giving notice of next **End of Week Share Price** changes.

Trends are shown using **CandleWick** Graphics.



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

QBITS Trader 'Company Info'



Sym	Div	Yld	P/E	Open	High	Low	Last	Chg	Ask	Bid	Vol
UIL	14%	20	30	33.16	34.34	32.12	33.11	5	33.45	32.93	300

Company Evaluation: SELL Reckoner:

↑↓ ↑↓ ←→ ▬↵

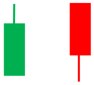
Sym is the abbreviation/index of a Company's Name.

Div (Dividend) is a declared % of Face Value (FV) of a Share based on annual Company profits. A range between 3% to 8% is considered healthy. Irrespective of Market value they are paid out to shareholders quarterly (every 13Wks).

Yld (Yield) is a rate of **Return**. Calculated by subtracting the starting value of the investment from its final value and then dividing the figure by the starting value before multiplying by 100 to give persentage.

P/E (Price/Earnings) represents the Market value of Stock compared to the Company's earnings. It shows what the market is willing to pay based on past or forecasted future earnings. This is an indicator to the viability for future investment.

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 **CandleWick** graphics can indicate market opportunities - provide insight into the balance between **Buy**ing and **Sell**ing pressures, a steady continuation or market indecision.

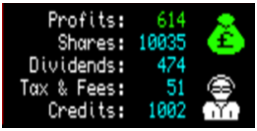
The **Chg (Change)** is difference between previous weeks and current **Last** Share Price.

Ask & **Bid** values are calculated for current week against **Last** Share price**.**

Vol (Volume) is the number of **Shares** being offered

QBITS Trader ‘Account’

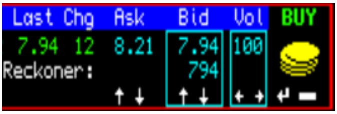
The account details provide a visual status as to how well things are going. As the Game Progresses **Profits** will vary with Current **Share** Price but hopefully climb. The **Dividends** shown are added to the **Credits** and can be used to buy more Shares, potentially more expensive ones.



```
   Profits:   614
    Shares: 10035
 Dividends:   474
Tax & Fees:    51
   Credits:  1002
```

QBITS Trader ‘BUY’

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



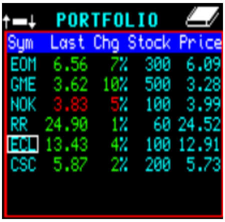
```
Last Chg  Ask   Bid  Vol  BUY
7.94  12  8.21  7.94 100
Reckoner:        794
            ↑↓   ↑↓  ←→   ↵ ▬
```

QBITS Trader ‘Fees’

Each Transaction incurs a ‘**Fee**’, which is deducted from the **Credits**.

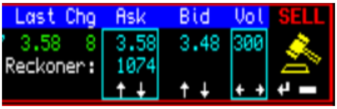
QBITS Trader ‘SELL’

Once the **PORTFOLIO** has an entry or entries use <<**Tab**>> to switch between **Market** and **PortFolio** then Scroll selection with **Up/Dow** Cursor keys to highlight an entry. **Chg** is % difference between **PortFolio** shown purchase **Price** and **Last Share Price**.



```
↑↓    PORTFOLIO
Sym  Last Chg Stock Price
EOM  6.56   7%  300  6.09
GME  3.62  10%  500  3.28
NOK  3.83   5%  100  3.99
RR  24.90   1%   60 24.52
ECL 13.43   4%  100 12.91
CSC  5.87   2%  200  5.73
```

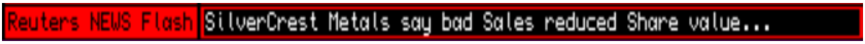
Press ‘**S**’ and use Cursor keys to change the presented ‘**Ask**’ and ‘**Vol**’ values. **Enter** Confirms your choice, **Spacebar** Aborts. Your ‘**Ask**’ Price may or may not be accepted. If not try again.



```
Last Chg  Ask   Bid  Vol  SELL
3.58   8  3.58  3.48 300
Reckoner: 1074
           ↑↓   ↑↓   ←→   ↵ ▬
```

QBITS Trader ‘Reuters NEWS Flash’

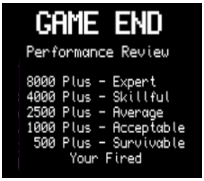
Once a **PortFolio** has been started as part of the **End** of **Wee**k Share Price a **Reuters NEWS Flash** is displayed. This will change one or more of the Company’s whose Shares are held and the calculation of **Share Price** or **Dividends** posted.



Reuters NEWS Flash SilverCrest Metals say bad Sales reduced Share value...

QBITS Trader ‘Dividends’

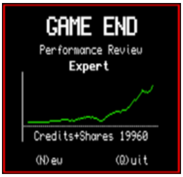
The first method of acquiring returns on Stock is to choose those that have high **Dividends**. Of the Company Stocks held in the **PortFolio,** those that post a dividend make a pay-out every 13 weeks. To thwart the possibility of buying shares just before a dividend pay-out and reselling to make a quick profit, a Company’s **Share Price** is automatically reduced after a dividend pay-out.



```
GAME END
Performance Review

8000 Plus - Expert
4000 Plus - Skillful
2500 Plus - Average
1000 Plus - Acceptable
 500 Plus - Survivable
   Your Fired
```

QBITS Trader ‘GAME END’

After 156 Weeks **GAME END**s **Profits** and **Dividends** are added together to identify **Total Assets**. The Performance Review has bands to describe levels of achievement.



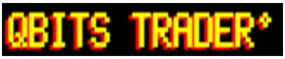
```
GAME END
Performance Review
Expert

Credits+Shares 19960
(N)ew          (Q)uit
```

QBITS Trader 'Text Presentation'

Back in the day I tried out various character strings using KEYWORD CSIZE, OVER with CURSOR and PRINT. Set with different offsets produced **3D Style Headings** or **BOLD** characters prints.

PROC Title is used for Headings, **ch** Windows channel ID, **ci** the character INK, CSIZE **tw**, **td** then **ts** for 3D size, **tx, ty** the pixel coordinates, and, **str$** to hold character string.

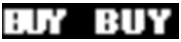
Title 2,2,2,1,1,134,2,'QBITS TRADER*' x-offset **:**
Title 2,6,2,1,1,136,0,'QBITS TRADER*' repeated with y-offset


QBITS TRADER*

```
1328 DEFine PROCedure Title(ch,bi,ci,tw,td,tx,ty,cstr$)
1329 CSIZE#ch,tw,td:OVER#ch,1
1330 INK#ch,bi:FOR i=0 TO ts:CURSOR#ch,tx+i,ty:PRINT#ch,cstr$
1331 INK#ch,ci:FOR i=0 TO ts:CURSOR#ch,tx+i,ty:PRINT#ch,cstr$
1332 CSIZE#ch,0,0:OVER#ch,0:INK#ch,7
1333 END DEFine
```

Note: Change in CSIZE at bottom of a Window can cause unexpected scrolls with following PRINT statements.

PROC TBold uses a simple pixel offset for Bold Characters as printing with CSIZE 0,0 can leave characters blurred.


BUY BUY

```
1186 DEFine PROCedure TBold(ch,col,cs,cx,cy,str$)
1187 INK#ch,col:OVER#ch,1
1188 FOR a=1 TO LEN(str$)
1189    FOR b=0 TO cs:CURSOR#ch,cx+b+a*(6+cs),cy:PRINT#ch,str$(a)
1190 END FOR a:OVER#ch,0
1191 END DEFine
```

TBold 2,5,1,32,4,'MARKET'

MARKET

TBold ,5,1,382,4,'PORTFOLIO'

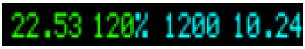
PORTFOLIO

PROC DRJ is used for Currency where numbers require a **D**ecimal point (**dp**) and/or added **sp**acing (**sp**) so as to be **R**ight **J**ustified. QL SuperBASIC allows coercion of data to a type that will allow a specified operation to proceed such as converting a numeric character string to floating point integer and vice versa. This allowing **DRJ** to accept the **num** variable as an integer or numeric string.

```
1193 DEFine PROCedure DRJ(ch,cx,cy,dp,sp,num)
1194 str$=ABS(INT(num)):sl=LEN(str$)
1195 IF dp>0 AND sl>dp:str$=str$(1 TO sl-2)&'.'&str$(sl-1 TO sl)
1196 IF dp>0 AND sl=dp:str$='.'&str$
1197 IF dp>0 AND sl<dp:str$='.0'&str$
1198 CURSOR#ch,cx,cy:PRINT#ch,FILL$(' ',sp-LEN(str$))&str$
1199 END DEFine
```

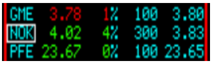
Decimal Right Justified

Variuos outputs with/without decimal point


```
22.53 120% 1200 10.24
```

QBITS Trader 'Highlight'

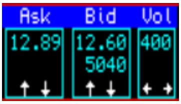
This uses LINE and the Graphics coordinates system to draw a box. The SCALE is made the same as the Windows vertical pixel size.


```
GME  3.78  1% 100  3.80
NOK  4.02  4% 300  3.83
PFE 23.67  0% 100 23.65
```

```
1060 DEFine PROCedure HGL(ch,w,d,x,y)
1061 OVER#ch,-1:LINE#ch,x,y TO x,y+d TO x+w,y+d TO x+w,y TO x,y:OVER#ch,0
1062 END DEFine
```

HiGhLight

This is also used to highlight the **Ask**, **Bid** and **Vol** Areas
HGL 7,12,15,88.5,0 : HGL 7,12,15,102,0 : HGL 7,7.4,15,116.4,0


```
 Ask    Bid   Vol
12.89  12.60  400
        5040
 ↑ ↓    ↑ ↓   ↑ ↓
```

QBITS Trader 'Share Pricing'

The Game opening Initialises the Market entries setting Company Name, Symbol, Dividends, Yields, Price/Earnings. Trends are then Calculated for the first 26 weeks generating a range of changes for Prices and Volume of Shares Traded.

As **QBITS Trader** Game progresses and a **PortFolio** is built, continued changes are made to the **Share Price**, **Volume** and **Dividends**. Future releases could include changes that reflect **Yield** and **Price/Earnings**.

Altering Stock Prices involves making changes to the integer that represents the Share value and is also used to Calculate the Graphic coordinates that builds the **CandleWick** display. For each Week of Trading the display requires four values **Open** (**oy**), **High** (**hy**), **Low** (**ly**) and **Last** (**cy**) a closing 'y' coordinate. Open (**oy**) is based on the previous Weeks Last (**cy**) entry.

The array **Trend(sn,wn,1-4)** identifies a Company place in the Stock Market List
(1 to 40), the week number (**wn**) and stores integers for:
(1) **Vol**ume of Shares :(2) **High** :(3) **Low** :4) **Las**t.

Trend_Set(wn) generates **End** of **Week Share Prices** for all 40 **MARKET** Companies.

```
1269 DEFine PROCedure Trend_Set(wn)
1270 CLS#0:CURSOR#0,60,10:PRINT#0,'Calculating Stock Trends':CLS#0,4
1271 IF pm>0:n=Asset(RND(1 TO pm),1):rc=RND(1 TO 8):PRINT#6,CO$(n);' ';RNew$(rc)
1272 FOR a=1 TO 40
1273   CURSOR#0,200+a*6,10:PRINT#0,'.'
1274   Trend(a,wn,1)=100*RND(1 TO 8):ry=RND(2 TO 12):mf=RND(1 TO 2)
1275   IF wn>1:oy=Trend(a,wn-1,4):ELSE oy=84
1276   IF pm>0
1277     IF rc=1 AND a=n:mf=1:ry=12                    :REMark Shares ↑
1278     IF rc=2 AND a=n:mf=2:ry=12                    :REMark Shares ↓
1279     IF rc=3 AND a=n:Stock(n,2)=RND(8 TO 16)       :REMark Div   ↑
1280     IF rc=4 AND a=n:Stock(n,2)=RND(0 TO 4)        :REMark Div   ↓
1281     IF rc=5 AND a=n:mf=1:ry=6                     :REMark Tax   ↑
1282     IF rc=6 AND a=n:mf=2:ry=6                     :REMark Tax   ↓
1283     IF rc=7:mf=1:ry=8                             :REMark Bull  ↑
1284     IF rc=8:mf=2:ry=8                             :REMark Bear ↓
1285   END IF
1286   IF wn MOD 13=0 AND Stock(a,2)>0:mf=2:ry=2+INT(Stock(a,2)/4)
1287   IF mf=1:cy=oy+ry:IF cy>148   :cy=oy-RND(2 TO 6)
1288   IF mf=2:cy=oy -ry:IF cy< 20   :cy=oy+RND(2 TO 6)
1289   IF cy>oy:hy=cy+RND(2 TO 7 ):ly=oy-RND(2 TO 7)
1290   IF cy<oy:hy=oy+RND(2 TO 7) :ly=cy-RND(2 TO 7)
1291   Trend(a,wn,2)=hy:Trend(a,wn,3)=ly:Trend(a,wn,4)=cy
1292 END FOR a
1293 END DEFine
```

[Variables: **pm** portfolio max number of entries: **rc** row company : **ry** RND y : **mf** +/- math function]

Once the **PortFolio** holds one or more entries at the end of each **Trading Week** there is a selected **Reuters NEWS Flash** of Company held Shares. This adds further elements to the calculation of changes to the **Share Price** and/or **Dividend** % posted pay-outs.

QBITS Trader ‘MARKET’

To create an imitative Market for **QBITS Trader,** Company name Symbol, and Trading Information was generated from reading Stock Market Lists. This covered Energy suppliers, Consumer goods, Financial Institutes, Health Care, Industrial Manufactures, Information Technology, Mining/Material Production, Real Estate and Utilities.

QBITS Trader ‘Stocks’

Information is held in Arrays **CN$(40)** the Company **Name**, **Stock$(40)** Company **Sym** and

Stock(40,6) 1) unused, 2**) Div,** 3) **Yld,** 4) **P/E,** 5) **Price,** 6) **Chg**
Trend(40,156,3) 1) **Vol,** 2) **Hig**h, 3) **Low,** 4) **Las**t

```
1412 DEFine PROCedure Init_Stocks
1413 CURSOR#0,76,10:PRINT#0,'Initialising Market':CLS#0,4:RESTORE 1418
1414 FOR a=1 TO 40
1415   READ CN$(a),Stock$(a):FOR b=1 TO 6:READ Stock(a,b):END FOR b
1416   CURSOR#0,184+a*6,10:PRINT#0,'.':PAUSE 1
1417 END FOR a
```

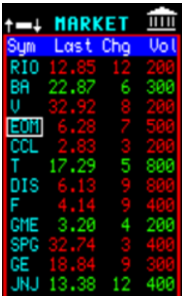
Note: Data Lines Follow for the forty Entries

```
1221 DEFine PROCedure MStock(n,my)                          :REMark Market Stock
1222 INK#3,5:CURSOR#3,2,my:PRINT#3,Stock$(n)                :REMark Stock Sym
1223 IF Trend(n,wn,4)>Trend(n,wn-1,4):INK#3,4:INK#7,4:ELSE INK#3,2:INK#7,2
1224 DRJ 3,26,my,2,5,Stock(n,5)+Trend(n,wn,4)               :REMark Stock Last
1225 DRJ 3,60,my,0,3,Trend(n,wn,4)-Trend(n,wn-1,4)          :REMark Stock Chg
1226 INK#7,5:DRJ 3,82,my,0,4,Trend(n,wn,1)                  :REMark Stock Vol
1227 END DEFine
```

Having forty entries which are not all shown to screen at the same time required the need to scroll Up and Down the list within its own window space. Part of the main program loop includes actions of **(k)** following a key press, in this case the **Up/Down** cursors.

```
1030  k=CODE(INKEY$(50)):BLOCK#7,240,10,0,32,0

1034   =  9:IF schk=0:schk=1:ELSE schk=0              [Tab Key]

1037   =208:IF schk=0:mr=mr -1:sn=sn -1:M_Up:ELSE pr=pr-1:IF pr<1:pr=1
1038   =216:IF schk=0:mr=mr+1:sn=sn+1:M_Dn:ELSE pr=pr+1:IF pr>pm:pr=pm
```

```
1064 DEFine PROCedure M_Up
1065 IF mr<1 AND sn>0:SCROLL#3,10:MStock sn,0
1066 IF mr<1:mr=1
1067 IF sn<1:sn=1
1068 END DEFine

1070 DEFine PROCedure M_Dn
1071 IF mr>18 AND sn<41:SCROLL#3,-10:MStock sn,170
1072 IF mr>18:mr=18
1073IF sn>40:sn=40
1074 END DEFine
```

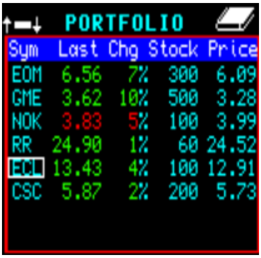


```
↑▬↓ MARKET
Sym  Last Chg  Vol
RIO 12.85  12  200
BA  22.87   6  300
V   32.92   8  200
EOM  6.28   7  500
CCL  2.83   3  200
T   17.29   5  800
DIS  6.13   9  800
F    4.14   9  400
GME  3.20   4  200
SPG 32.74   3  400
GE  18.84   9  300
JNJ 13.38  12  400
```

The **Sym** of a Company entry is highlighted with **HGL** and the use of **M_Up** and **M_dn** to scroll the other entries of the list to screen. The <**Tab**> key switches between **MARKET** << **Tab** >> **PORTFOLIO** lists.

QBITS Trader ‘PORTFOLIO’

Up to eight Portfolio entries can be held at any one time. Use the <<**Tab**>> key to switch between **Market** and **PorFolio** and Cursor keys to scroll **Up**/**Down** to Highlight an entry and Select it with <**Spacebar**>.

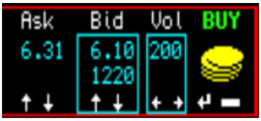


↑▬↓ PORTFOLIO

Sym	Last	Chg	Stock	Price
EOM	6.56	7%	300	6.09
GME	3.62	10%	500	3.28
NOK	3.83	5%	100	3.99
RR	24.90	1%	60	24.52
ECL	13.43	4%	100	12.91
CSC	5.87	2%	200	5.73

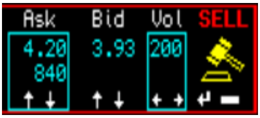
If you **BUY** Company Shares from the **Market** already in the **Portfolio** list these will be added to the **Stocks** held and the **Price** will be updated to the new purchase price. The disadvantage being if the new price is lower than the previous it can also reduce future **Dividend** pay-outs.

```
1133 DEFine PROCedure S_Add(pr,snum)
1134 Asset(pr,1)=sn:Asset(pr,2)=INT(Asset(pr,2)+vol):Asset(pr,3)=cost
1135 sval=sval+snum:sfee=sfee+5+INT(vol/100):cash=cash-snum
1136 Trend(sn,wn,4)=cost-Stock(sn,5):PStock sn,pr:CStock sn
1137 END DEFine
```



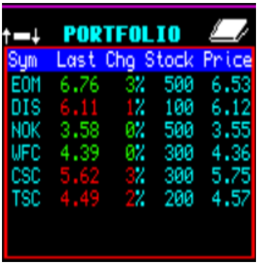
If you **SELL** Shares from the **Portfolio** the chosen Volume will be deducted from the Stocks held. If you SELL all of the Stocks held the Company entry will be deleted.

```
1151 DEFine PROCedure S_Del(pr,snum)
1152 Asset(pr,2)=Asset(pr,2)-vol:Asset(pr,3)=cost
1153 sval=sval-snum:sfee=sfee+5+INT(vol/100):cash=cash+snum
1154 Trend(sn,wn,4)=cost-Stock(pn,5):PStock pn,pr:CStock sn
1155 END DEFine
```



Deleting a **PortFolio** entry requires a change to the **Asset** array held information and the screen row of characters to be removed. PROCedure **S_Sort** addresses this requirement by moving held information for the three possible **Asset** list positions, First row, Middle rows and Last row. By calculating and setting the CURSOR position and using SCROLL -10 with option 2 the screen area below the cursor moves upward and clears the screen of row/entry being deleted.

```
1157 DEFine PROCedure S_Sort(pr,pm)
1158 IF pr<pm
1159   FOR row=pr TO pm-1
1160     FOR c=1 TO 3:Asset(row,c)=Asset(row+1,c)
1161   END FOR row
1162 END IF
1163 FOR c=1 TO 3:Asset(pm,c)=0
1164 IF pr=1:SCROLL#5,-10
1165 IF pr>1:CURSOR#5,0,(pr-2)*10:SCROLL#5,-10,2
1166 pm=pm-1:IF pr>pm:pr=pm
1167 END DEFine
```

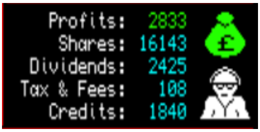


↑▬↓ PORTFOLIO

Sym	Last	Chg	Stock	Price
EOM	6.76	3%	500	6.53
DIS	6.11	1%	100	6.12
NOK	3.58	0%	500	3.55
WFC	4.39	0%	300	4.36
CSC	5.62	3%	300	5.75
TSC	4.49	2%	200	4.57

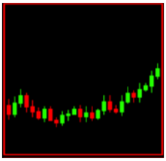
QBITS Trader ‘Profits & Dividens’

Profits are the difference between the Price when Shares were bought and the Last Share Price Posted and multiplied by the Stock Volumes held. Company Stocks held by the Portfolio also accumulate any div% **Dividends** for each quarterly (13week) pay-out.

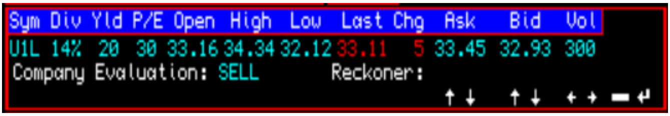


Profits: 2833
Shares: 16143
Dividends: 2425
Tax & Fees: 108
Credits: 1840

QBITS Trader ‘Stock UpDates’

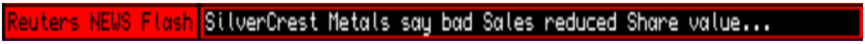


AStock		Account Info	[Variables **sval sdiv sfee sinv cash**]
PStock	**n**, **pm**	Portfolio Info	[Variables **wn py**]
MStock	**n**, **my**	Market Info	[Variables **wn**]
CStock	**n**	Company Info	[Variables **str$ ops ols nws wk1 wk2**]
STrend	**n en**	CandleWicks	[Variables **n en**]



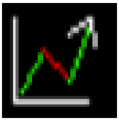
```
Sym Div Yld P/E Open  High  Low   Last  Chg Ask   Bid   Vol
U1L 14%  20  30 33.16 34.34 32.12 33.11  5  33.45 32.93 300
Company Evaluation: SELL        Reckoner:
                                  ↑↓   ↑↓   ←→  ▬↵
```

The **END** of **WEEK** Triggers a new set of **Trend** Calculations with Updates to the Trader **Accounts**, **MARKET**, **PORTFOLIO**, Company **INFO, CandleWick** display and issues a new **Reuters NEWS Flash**.



```
Reuters NEWS Flash  SilverCrest Metals say bad Sales reduced Share value...
```

QBITS Trader ‘Trend Analysis’

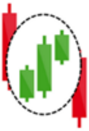


The **BUY**ing and **SELL**ing Price of Shares varies over a period of time and depends on a number of factors. This essentially relies on Marketable goods or Services and maintaining Market Share over other competitors.

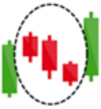
The volume of turnover can indicate the stability of a company to weather any sudden market depressions. It may also be that in trying to maintain Market Share it reduces prices that lead to falling Profits. It may depend on materials or parts provided by other suppliers. Other disrupting factors can be the weather conditions, industrial disputes, interest rate changes, government taxes, new restrictions on use of certain materials or products, border controls, Tariffs, conflicts etc.

QBITS Trader ‘Trading Strategy’

This is based on summarising the Trends with movement displayed as Candle & Wicks. Small **CandleWicks** indicate little price movement and represent consolidation. Large **CandleWicks** show strong buying or selling pressures and identify the highs and lows of the Trading Share Price in **Bull** and **Bear** Markets.



The Time to **Buy:** a **GREEN CandleWick** showing a lower opening price rising to a high and falling back to close above the opening price. The time to Sell a **RED** CandleWick with wick pointing upwards indicates an opening price rising and then falling to a lower closing price.



Trading Volumes, Price Movements, should be viewed with a Company’s strengths and weaknesses, derived from the Dividends, Yields and Price/Earnings.

At the end of the three years (**156 weeks**) the **Game Ends**. Results will reveal if you have made any significant gains. This will be the combination of Dividends and Profits. For the best rewards divide Stock into those with high Dividend pay-outs and those that add Quick Profits by Buying and Selling at the right time.

QBITS Trader 'Summary'

Name	Company Name	
Sym	Symbol	1-3 Capital Letters identifying the Company
Div	Dividend	Yearly return as a % paid on each share.
Yld	Yield	Annual Dividend divided by current stock price
P/E	Price/Earnings	Ratio between stock Price and Company's Earning
Open	Price	Opening Share Price
High	Price	Trade High between Open - Close
Low	Price	Trade Low between Open - Close
Last	Last Price	Stock Price at end of Trading Week
Chg	Net Change	Change between previous Last and current Last.
Ask	Price	Share Price Requested
Bid	Price	Share Price Offered
Vol	Volume	The number of Shares Offered for Exchange.

QBITS Trader 'Reuter NEWS Flash'

Announcements with potential to affect Share Price or Dividends.

BUYing Company Shares:

Check 1 If Insufficient Funds or Bid to low Purchase **Rejected**.
Check 2 If Company Already in Portfolio **Add Shares** to existing.
Check 3 If Company Not already in Portfolio Add **New Entry** to next free slot
Check 4 If No free slots Purchase **Rejected**. Notice - Sell Shares

SELLing Company shares:

Check 1 If Company shares sold reduce Volume of shares accordingly.
Check 2 If Company shares sold reduced Stock to zero **Delete** slot.

Stock Trends: 'CandleWicks'

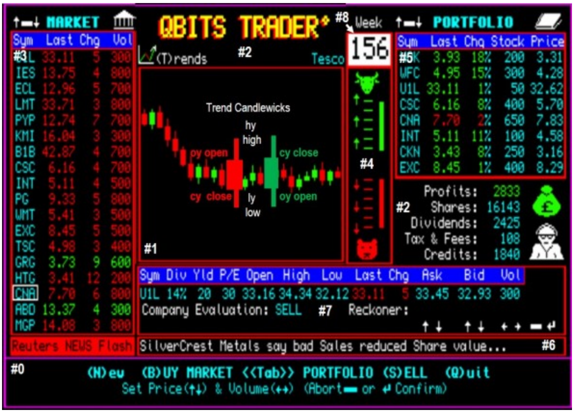
This monitors the Stock Share movement and displays previous 26 Weeks.

QBITS Trader 'Challenge:'

Starting with Credits of 10000 - **BUY**/**SELL** Shares to make Gains either through Dividend payments by taking advantage of Share Price Rises.

QBITS Trader '#ch Setup'

NOTE: If you need to take a break! Activating **BUY** or **SELL** suspends **End** of **Week** Timer and **PAUSE**'s the Program. Use **Spacebar** to restart, but this will likely jump you into the **NEXT WEEK**.



↑▬↓ MARKET

Sym	Last	Chg	Vol
#3L	33.11	5	300
IES	13.75	4	800
ECL	12.96	5	700
LMT	33.71	3	800
PYP	12.74	7	700
KMI	16.04	3	300
B1B	42.87	4	700
CSC	6.16	4	700
INT	5.11	4	500
PG	9.33	5	800
WMT	5.41	3	500
EXC	8.45	5	500
TSC	4.98	3	400
GRG	3.73	9	600
HTG	3.41	12	200
CNA	7.70	6	800
ABD	13.37	4	300
MGP	14.08	3	800

Week 156

↑▬↓ PORTFOLIO

Sym	Last	Chg	Stock	Price
#5K	3.93	18%	200	3.31
WFC	4.95	15%	300	4.28
U1L	33.11	1%	50	32.62
CSC	6.16	8%	400	5.70
CNA	7.70	2%	650	7.83
INT	5.11	11%	100	4.58
CKN	3.43	8%	250	3.16
EXC	8.45	1%	400	8.29

Profits: 2833
Shares: 16143
Dividends: 2425
Tax & Fees: 108
Credits: 1840

Sym	Div	Yld	P/E	Open	High	Low	Last	Chg	Ask	Bid	Vol
U1L	14%	20	30	33.16	34.34	32.12	33.11	5	33.45	32.93	300

Company Evaluation: SELL Reckoner:

↑↓ ↑↓ ←→ ▬↵

Reuters NEWS Flash SilverCrest Metals say bad Sales reduced Share value...

#0 (N)ew (B)UY MARKET <<Tab>> PORTFOLIO (S)ELL (Q)uit
Set Price(↑↓) & Volume(←→) (Abort▬ or ↵ Confirm)

QBITS Trader PROCedures

Intro	Opening Introduction to QBTS Trader and Selection of Currency
Init_Trader	Opens windows and sets Trader screen layout
Title	Presents BOLD and 3D Character strings
Init_RNews	The NEWS statements used in the Game
Init _Stocks	Set up the Games Stock Market

QBITS _Trader	Main Program Loop
THelp	Help on Key usage
HGL	**H**i**G**h**L**ights to Aid Game Play
M_Up	**M**arket Scroll **Up**
M_Dn	**M**arket Scroll **D**ow**n**
SMWeek	Print **S**tock **M**arket **Week** Number
Game_End	Review of Assets & Performance
S_Buy	BUY Shares
S_Add	Add Shares to Portfolio
S_Sell	SELL Shares
S_Del	Delete Shares in Portfolio
S_Sort	Sort Portfolio List
S_Vol	Display Change Ask Bid, Volume and manual changes

TBold	Display Bold Charters
DRJ	Draw Right Justified + decimal point

AStock	Display Account Changes
PStock	Display Portfolio Stock entries
MStock	Display Market Stock entries
CStock	Display Company Info of Stock selected
STrend	Display 26 weeks of Price Changes of Company selected
Wick	Display Price changes in CandleWick Format
Trend_Set	Calculate Week changes for the Market Stock

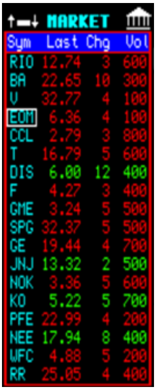
Graphics	
TBuy	Display BUY icon and heading
TSell	Display SELL icon and heading
Market	Market icon
Asset	Asset icon (Portfolio)
Chart	Simple Bull/Bear Chart
Money	Coins Display
Trader	Head & shoulders of Trader with headphones
Bear	Bear view full face
Bull	Bull view full face
Pillar	Display Fluted Column

TestMode	**F1 – F5** Program Checks
TM	Test Mode Symbol # On/Off

QBITS Trader Coding

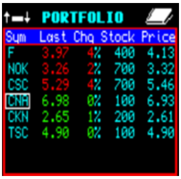
```
1000 REMark QBITS_Trader_bas [QBITS Trader 2024 QL40th - QPC2] vM30

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

1004 WHEN ERRor :CONTINUE:END WHEN

1006 REMark Import QBITSConfig Settings - QPC2
1007 OPEN_IN#9,dev$&'QBITSConfig':INPUT#9,gx\gy\dn$:CLOSE#9

1010  REMark Arrays
1011 DIM CN$(40,20),Stock$(40,3),Stock(40,6),RNew$(8,40),Trend(40,156,4)
1012 Tdel=40                                     :REMark Trade week delay 40sec

1018 Intro_Trader:Init_Trader:Init_Stocks:Init_RNews:QBITS_Trader

1020 DEFine PROCedure QBITS_Trader
1021 DIM Asset(8,4),Audit(130):CLS#5:CLS#1:CLS#0
1022 pm=0:FOR wn=1 TO 26:DRJ 8,0,0,0,3,wn:Trend_Set wn:PAUSE 1:CLS#0
1023 sn=1:FOR mr=1 TO 18:MStock mr,(mr*10)-10
1024 sn=1:mr=1:pm=0:pr=1:pn=1:n=1:cash=10000:sval=0:sdiv=0:sfee=0:sinv=0
1025 schk=0:tnck=0:TMck=0:AStock:THelp:GTm=DATE+Tdel
1026 REPeat Loop
1027  SMWeeK:IF Asset(pr,1)=0:schk=0:END IF
1028  IF schk=0:INK#3,7:HGL 3,16,9,0,181-mr*10:n=sn
1029  IF schk=1:INK#5,7:HGL 5,16,9,0, 81-pr*10:n=Asset(pr,1)
1030  k=CODE(INKEY$(50)):BLOCK#7,240,10,0,32,0
1031  IF schk=0:HGL 3,16,9,0,181-mr*10
1032  IF schk=1:HGL 5,16,9,0, 81-pr*10
1033  SELect ON k
1034   =  9:IF schk=0:schk=1:ELSE schk=0               :REMark Tab Stock<<>>Portfolio
1035   = 32:IF wn<=156:CStock n:STrend n,wn            :REMark Space View Info / Trends
1036   =84,116:IF wn<=156:TReview                      :REMark (T)ader Review
1037   =208:IF schk=0:mr=mr -1:sn=sn -1:M_Up:ELSE pr=pr -1:IF pr<1:pr=1
1038   =216:IF schk=0:mr=mr+1:sn=sn+1:M_Dn:ELSE pr=pr+1:IF pr>pm:pr=pm
1039   =66,  98:IF wn<=156 AND schk=0:S_Buy  sn:AStock :REMark (B)UY
1040   =83,115:IF wn<=156 AND schk=1:S_Sell pr:AStock  :REMark (S)ELL
1041   =78,110:GEnd 1, 72:BLOCK#0,20,10, 72,14,0       :REMark (N)ew Game
1042   =81,113:GEnd 2,412:BLOCK#0,20,10,412,14,0       :REMark (Q)uit
1043   =35:IF TMck=0:TMck=1:TM:ELSE TMck=0:TM          :REMark TestMode On/Off
1044   =232,236,240,244,248:IF TMck=1:TestMode         :REMark Test F1/F2/F3/F4/F5
1045  END SELect
1046 END REPeat Loop
1047 END DEFine

1049 DEFine PROCedure GEnd(cn,cx)
1050 CURSOR#0, cx,14:PRINT#0,'Y/N':PAUSE
1051 IF KEYROW(5)=64:IF cn=1:QBITS_Trader :ELSE LRUN dn$:STOP:END IF
1052 END DEFine

1054 DEFine PROCedure THelp
1055 TBold 0,5,1,64,4,'(N)ew  (B)UY MARKET <<Tab>> PORTFOLIO (S)ELL  (Q)uit'
1051 TBold 0,5,0,98,14, '(↑ ↓)Set Price  & Volume (← →)  (Abort      or ← Confirm)'
1057 BLOCK#0,12,3,304,18,5:BLOCK#0,2,4,344,16,5
1058 END DEFine
```

```
1060 DEFine PROCedure HGL(ch,w,d,x,y)                        :REMark HiGhLight
1061 OVER#ch,-1:LINE#ch,x,y TO x,y+d TO x+w,y+d TO x+w,y TO x,y:OVER#ch,0
1062 END DEFine

1064 DEFine PROCedure M_Up
1065 IF mr<1 AND sn>0:SCROLL#3,10:MStock sn,0
1066 IF mr<1:mr=1
1067 IF sn<1:sn=1
1068 END DEFine

1070 DEFine PROCedure M_Dn
1071 IF mr>18 AND sn<41:SCROLL#3,-10:MStock sn,170
1072 IF mr>18:mr=18
1073 IF sn>40:sn=40
1074 END DEFine

1076 DEFine PROCedure SMWeeK
1077 del=GTm-DATE:IF del<0:del=0
1078 BLOCK#4,4,42-del,28,10+del,4:BLOCK#4,4,42-del,28,70,2
1079 IF GTm<DATE:BLOCK#4,4,48,28,4,0:BLOCK#4,4,48,28,68,0
1080 IF GTm<DATE:Stock_UpDate wn:GTm=DATE+Tdel
1081 END DEFine

1083 DEFine PROCedure Stock_UpDate(wn)
1084 IF wn<156:wn=wn+1:ELSE TReview:RETurn
1085 Trend_Set wn:CStock n:STrend n,wn:sval=0:snum=0:dnum=0
1086 FOR rs=18 TO 1 STEP -1:MStock (sn-mr)+rs,(rs*10)-10
1087 FOR rp=1 TO pm
1088   rn=Asset(rp,1):pdiv=Stock(Asset(rp,1),2)
1089   snum=INT(Asset(rp,2)*(Stock(rn,5)+Trend(rn,wn,4))/100)
1090   IF wn MOD 13=0 AND pdiv>0
1091     dnum=INT(snum*pdiv/400):sdiv=sdiv+dnum:cash=cash+dnum
1092   END IF
1093   sval=sval+snum:PStock Asset(rp,1),rp
1094 END FOR rp
1095 AStock:PAUSE 10:CLS#0:THelp
1096 END DEFine
```



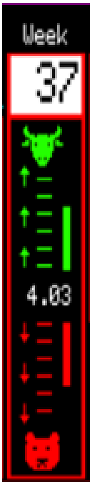
↑▬↓ MARKET

Sym	Last	Chg	Vol
RIO	12.74	3	600
BA	22.65	10	300
V	32.77	4	100
EOM	6.36	4	100
CCL	2.79	3	800
T	16.79	5	600
DIS	6.00	12	400
F	4.27	3	400
GME	3.24	5	500
SPG	32.37	5	500
GE	19.44	4	700
JNJ	13.32	2	500
NOK	3.36	5	600
KO	5.22	5	700
PFE	22.99	4	200
NEE	17.94	8	400
WFC	4.88	5	200
RR	25.05	4	400



↑▬↓ PORTFOLIO

Sym	Last	Chq	Stock	Price
F	3.97	4%	400	4.13
NOK	3.26	2%	700	3.32
CSC	5.29	4%	700	5.46
CNA	6.98	0%	100	6.93
CKN	2.65	1%	200	2.61
TSC	4.90	0%	100	4.90

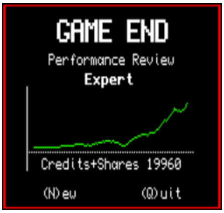


Weeks Passed

Bars Extend
Up/Down to
End of Week

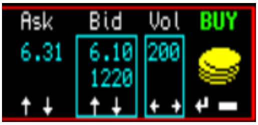
Note Trend Review with Portfolio entry

```
1098 DEFine PROCedure TReview
1099 IF pm=0:RETurn :ELSE CLS#1:INK#1,7:CSIZE#1,0,0
1100 CURSOR 36,28:PRINT 'Performance Review’: Audit(0)=10000
1101 LINE 18,30 TO 18,100:INK 248:LINE 18,44 TO 160,44:INK 4
1102 FOR i=1 TO wn-26
1103   x1=23+i:x2=24+i:y1=8+Audit(i-1)/250:y2=8+Audit(i)/250:LINE x1,y1 TO x2,y2
1104 END FOR i
1105 INK 5:CURSOR 32,110:PRINT 'SpaceBar to Return'
1106 IF wn=156
1107   CURSOR 0,0:Title 1,7,2,1,1,42,6,'GAME END'
1108   score=Audit(130)-10000:cx=48:str$='Your FIRED'
1109   IF score>  500:cx=48:str$='Survivable'
1110   IF score>1000:cx=48:str$='Acceptable'
1111   IF score>2500:cx=58:str$='Average'
1112   IF score>4000:cx=58:str$='Skilful'
1113   IF score>8000:cx=60:str$='Expert'
1114   CURSOR 30,92:PRINT 'Credits+Shares ';INT(credits+sval)
1115   TBold 1,7,1,cx,40,str$:CURSOR 30,110:PRINT '(N)ew       (Q)uit'
1116 END IF
1116 END DEFine
```



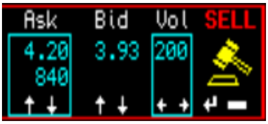
GAME END
Performance Review
Expert
Credits+Shares 19960
(N)ew (Q)uit

```
1119 DEFine PROCedure S_Buy(sn)
1120 TBuy 7,131,11:TBold 7,4,2,344,0,'BUY':CStock sn:STrend sn,wn
1121 vn=Trend(sn,wn,1):vm=vn:cn=Stock(sn,5)+Trend(sn,wn,4)
1122 S_Vol 102.5,286,2,5,vn,vm,cn:IF k=32:RETurn
1123 IF cost<Stock(sn,5)+Trend(sn,wn,4)-RND(6 TO 12)
1124   CURSOR#7,2,32:PRINT #7,'Unsuccessful Bid - Try Again':PAUSE 20:RETurn
1125 END IF
1126 snum=INT(vol*cost)/100 :credits= cash+sdiv+sinv-sfee       :REMark cost=Bid
1127 IF snum+20>:CURSOR#7,2,32:PRINT#7,'Insufficient Funds':PAUSE 20:RETurn
1128 FOR pr=1 TO pm:IF Asset(pr,1)=sn:S_Add pr,snum:RETurn
1129 IF pm<8:pm=pm+1:S_Add pm,snum:RETurn
1130 CURSOR#7,2,32:PRINT#7,'Sell Some Shares'
1131 END DEFine
```



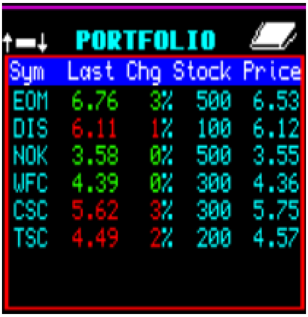
```
Ask   Bid   Vol  BUY
6.31  6.10  200
      1220
↑ ↓   ↑ ↓   ← →  ↵ ▬
```

```
1133 DEFine PROCedure S_Add(pr,snum)
1134 Asset(pr,1)=sn:Asset(pr,2)=INT(Asset(pr,2)+vol):Asset(pr,3)=cost
1135 sval=sval+snum:sfee=sfee+5+INT(vol/100):cash=cash-snum
1136 Trend(sn,wn,4)=cost-Stock(sn,5):PStock sn,pr:CStock sn
1137 END DEFine
```



```
Ask   Bid   Vol  SELL
4.20  3.93  200
840
↑ ↓   ↑ ↓   ← →  ↵ ▬
```

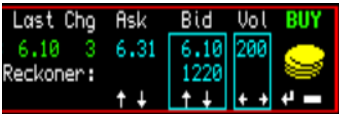
```
1139 DEFine PROCedure S_Sell(pr)
1140 pn=Asset(pr,1):IF pn<=0:RETurn
1141 TSell 7,133,10:TBold 7,2,2,340,0,'SELL'
1142 STrend pn,wn:CStock pn:vm=Asset(pr,2):IF vm>900:vm=900
1143 vn=vm:S_Vol 88.5,248,2,5,vn,vm,Stock(pn,5)+Trend(pn,wn,4):IF k=32:RETurn
1144 IF cost>Stock(pn,5)+Trend(pn,wn,4)+RND(0 TO 12)
1145    CURSOR#7,0,32:PRINT#7,'Unsuccesful Sale - Try Again':PAUSE 20:RETurn
1146 END IF
1147 snum=INT(vol*cost)/100                                    :REMark cost=Ask
1148 S_Del pr,snum:IF Asset(pr,2)=0:S_Sort pr,pm
1149 END DEFine

1151 DEFine PROCedure S_Del(pr,snum)
1152 Asset(pr,2)=Asset(pr,2)-vol:Asset(pr,3)=cost
1153 sval=sval-snum:sfee=sfee+5+INT(vol/100):cash=cash+snum
1154 Trend(sn,wn,4)=cost-Stock(pn,5):PStock pn,pr:CStock sn
1155 END DEFine

1157 DEFine PROCedure S_Sort(pr,pm)
1158 IF pr<pm
1159   FOR row=pr TO pm-1
1160     FOR c=1 TO 3:Asset(row,c)=Asset(row+1,c)
1161   END FOR row
1162 END IF
1163 FOR c=1 TO 3:Asset(pm,c)=0
1164 IF pr=1:SCROLL#5,-10
1165 IF pr>1:CURSOR#5,0,(pr-2)*10:SCROLL#5,-10,2
1166 pm=pm-1:IF pr>pm:pr=pm
1167 END DEFine
```



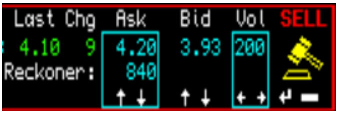
↑▬↓ PORTFOLIO

Sym	Last	Chg	Stock	Price
EOM	6.76	3%	500	6.53
DIS	6.11	1%	100	6.12
NOK	3.58	0%	500	3.55
WFC	4.39	0%	300	4.36
CSC	5.62	3%	300	5.75
TSC	4.49	2%	200	4.57

```
1169 DEFine PROCedure S_Vol(x,cx,dp,sp,vn,vm,cn)
1170 INK#7,5:HGL 7,12,15, x,0:HGL 7,7.4,15,116.4,0
1171 REPeat Vol_lp
1172  DRJ 7,324,12,0,3,vn:DRJ 7,cx,12,2,5,cn
1173  DRJ 7,cx,22,0,5,INT((cn*vn)/100)
1174  k=CODE(INKEY$(-1))
1175  IF k=192:vn=vn -10:IF vn<  10:vn=  10          :REMark Bid Price Volume of Shares
1176  IF k=200:vn=vn+10:IF vn>  vm:vn=  vm
1177  IF k=208:cn=cn+ 1 :IF cn>9990:cn=9990          :REMark Ask Price Volume of Shares
1178  IF k=216:cn=cn - 1 :IF cn<   1:cn=   1
1179  IF k= 32:EXIT Vol_lp
1180  IF k= 10:vol=vn:cost=cn:EXIT Vol_lp
1181 END REPeat Vol_lp
1182 INK#7,5:HGL 7,12,15,x,0:HGL 7,7.4,15,116.4,0
1183 BLOCK#7,30,12,cx,22,0:BLOCK#7,34,32,348,0,0
1184 END DEFine
```



```
Last Chg  Ask   Bid  Vol  BUY
 6.10  3  6.31  6.10 200
Reckoner:       1220
           ↑↓   ↑↓   ←→  ↵ ▬
```

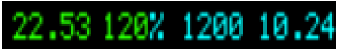


```
Last Chg  Ask   Bid  Vol  SELL
 4.10  9  4.20  3.93 200
Reckoner:  840
           ↑↓   ↑↓   ←→  ↵ ▬
```

```
1186 DEFine PROCedure TBold(ch,col,cs,cx,cy,str$)
1187 INK#ch,col:OVER#ch,1
1188 FOR a=1 TO LEN(str$)
1189   FOR b=0 TO cs:CURSOR#ch,cx+b+a*(6+cs),cy:PRINT#ch,str$(a)
1190 END FOR a:OVER#ch,0
1191 END DEFine
```

```
1193 DEFine PROCedure DRJ(ch,cx,cy,dp,sp,num)          :REMark Decimal Right Justified
1194 str$=ABS(INT(num)):sl=LEN(str$)
1195 IF dp>0 AND sl>dp:str$=str$(1 TO sl-2)&'.'&str$(sl-1 TO sl
1196 IF dp>0 AND sl=dp:str$='.'&str$
1197 IF dp>0 AND sl<dp:str$='.0'&str$
1198 CURSOR#ch,cx,cy:PRINT#ch,FILL$(' ',sp-LEN(str$))&str$
1199 END DEFine
```

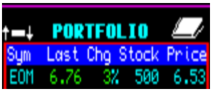
Variuos outputs with/without decimal point



```
22.53 120% 1200 10.24
```

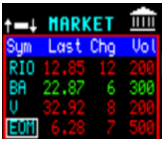
```
1201 DEFine PROCedure AStock                           :REMark Account Stock Info
1202 Audit(wn-26)=sval+cash+sdiv-sfee:sinv=(cash+sval)-10000
1203 IF sinv<0:INK#2,2:ELSE INK#2,4 :END IF :credits=cash+sdiv+sinv-sfee
1204 DRJ 2,428,112,0,5,sinv:INK#2,5      :REMark Profit Loss or Gain
1205 DRJ 2,428,122,0,5,sval              :REMark Share Value    1-8 Int((stock*last)/100)
1206 DRJ 2,428,132,0,5,sdiv              :REMark WK13  Dividend 1-8 Int((sval*sdiv)/400)
1207 DRJ 2,428,142,0,5,sfee              :REMark Fees  each Transaction vol/100
1208 DRJ 2,428,152,0,5,credits           :REMark Cash + Dividends +/- Profit - Fees
1209 END DEFine
```

```
1211 DEFine PROCedure PStock(n,pr)                     :REMark Portfolio Stock Info
1212 INK#5,5:py=(pr-1)*10:CURSOR#5,2,py:PRINT#5,Stock$(n)     :REMark Stock Sym
1213 sChg=Stock(n,5)+Trend(n,wn,4)-Asset(pr,3):CURSOR#5,78,py:PRINT#5,'%'
1214 IF sChg<0:INK#5,2:ELSE INK#5,4
1215 DRJ 5,26,py,2,5,Stock(n,5)+Trend(n,wn,4)                 :REMark Last
1216 DRJ 5,60,py,0,3,(sChg/Asset(pr,3))*100:INK#5,5          :REMark Chg
1217 DRJ 5,90,py,0,4,Asset(pr,2)                             :REMark Stock
1218 DRJ 5,119,py,2,5,Asset(pr,3)                            :REMark Price
1219 END DEFine
:
```



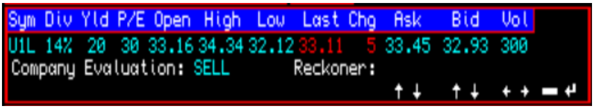
```
↑→↓  PORTFOLIO
Sym  Last Chg Stock Price
EOM  6.76  3%  500  6.53
```

```
1221 DEFine PROCedure MStock(n,my)                    :REMark Market Stock  Info
1222 INK#3,5:CURSOR#3,2,my:PRINT#3,Stock$(n)           :REMark Stock Sym
1223 IF Trend(n,wn,4)>Trend(n,wn-1,4):INK#3,4:INK#7,4:ELSE INK#3,2:INK#7,2
1224 DRJ 3,26,my,2,5,Stock(n,5)+Trend(n,wn,4)         :REMark Stock Last
1225 DRJ 3,60,my,0,3,Trend(n,wn,4)-Trend(n,wn-1,4)    :REMark Stock Chg
1226 INK#7,5:DRJ 3,82,my,0,4,Trend(n,wn,1)            :REMark Stock Vol
1227 END DEFine
```



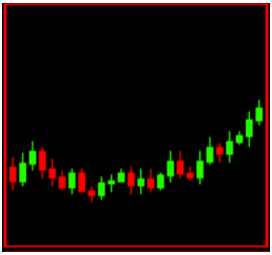
```
↑▬↓ MARKET
Sym  Last Chg  Vol
RIO 12.85  12  200
BA  22.87   6  300
V   32.92   8  200
EOM  6.28   7  500
```

```
1229 DEFine PROCedure CStock(n)                       :REMark Company Stock Info
1230 INK#7,5:CURSOR#7,0,12:PRINT#7,Stock$(n);'   %'    :REMark Sym
1231 REMark DRJ 7, 24,10,0,4,Stock(n,1)                :REMark Unused at this time
1232 DRJ 7, 24,12,0,2,Stock(n,2)                      :REMark Dividend
1233 DRJ 7, 52,12,0,2,Stock(n,3)                      :REMark Yield
1234 DRJ 7, 74,12,0,2,Stock(n,4)                      :REMark Price/Expense
1235 ops=Stock(n,5):ols=Trend(n,wn-1,4):nws=Trend(n,wn,4)
1236 DRJ 7,92,12,2,5,ops+ols                          :REMark Open
1237 DRJ 7,125,12,2,5,ops+ols+Trend(n,wn,2)           :REMark High
1238 DRJ 7,158,12,2,5,ops-(Trend(n,wn,3)-ols)         :REMark Low
1239 IF nws>ols:INK#3,4:INK#7,4:ELSE INK#3,2:INK#7,2
1240 DRJ 7,191,12,2,5,ops+nws                         :REMark Last
1241 DRJ 7,224,12,0,3,nws-ols  :INK#7,5               :REMark Change
1242 DRJ 7,324,12,0,3,Trend(n,wn,1)                   :REMark Volume
1243 DRJ 7,286,12,2,5,ops+nws-RND(10 TO 20)           :REMark Bid
1244 DRJ 7,248,12,2,5,ops+nws+RND(10 TO 40)           :REMark Ask
1245 wk1=Trend(n,wn-13,4)*Stock(n,4)*Stock(n,3)/100
1246 wk2=Trend(n,wn,4)*Stock(n,4)*Stock(n,3)/100
1247 IF wk1>wk2:str$='BUY ':ELSE str$='SELL'            :REMark 13wk Trend
1248 CURSOR#7,122,22:PRINT#7,str$
1249 END DEFine
```



```
Sym Div Yld P/E Open High  Low  Last Chg  Ask   Bid  Vol
U1L 14%  20  30 33.16 34.34 32.12 33.11  5 33.45 32.93 300
Company Evaluation: SELL        Reckoner:
                                         ↑↓   ↑↓  ←→  ▬↵
```

```
1251 DEFine PROCedure STrend(n,en)                    :REMark Stock Trend
1252 CURSOR#2,180,28:PRINT#2,FILL$(' ',20-LEN(CN$(n)))&CN$(n)
1253 INK#4,7:DRJ 4,2,56,2,5,Stock(n,5)+Trend(n,en,4)
1254 DRJ 8,0,0,0,3,en:CLS:INK#4,7:cw=1:CLS
1255 FOR i=en-25 TO en
1256   IF i>1:oy=Trend(n,i-1,4):ELSE oy=84
1257   hy=Trend(n,i,2):ly=Trend(n,i,3):cy=Trend(n,i,4)
1258   IF cy>oy:col=4:y1=cy:y2=oy:ELSE col=2:y1=oy:y2=cy
1259   Wick 1,col,177,hy,ly,y1,y2
1260 END FOR i
1261 IF y1>84:SCROLL#1,(y1-84)*.6:ELSE SCROLL#1,-(84-y1)*.6
1262 END DEFine
```



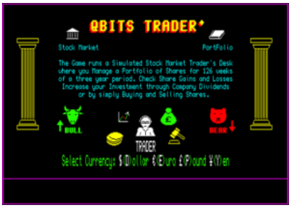
```
1264 DEFine PROCedure Wick(ch,col,wx,hy,ly,y1,y2)
1265 PAN-7:x1=wx-2:x2=wx+2:INK#ch,col:LINE#ch,wx,hy TO wx,ly
1266 FILL#ch,1:LINE#ch,x1,y1 TO x2,y1 TO x2,y2 TO x1,y2 TO x1,y1:FILL#ch,0
1267 END DEFine
```

Variables: n - stock num : en - end week : ch - channel : col - colour : wx hy ly y1 y2 Graphic coordinates

```
1269 DEFine PROCedure Trend_Set(wn)
1270 CLS#0:CURSOR#0,60,10:PRINT#0,'Calculating Stock Trends':CLS#0,4
1271 IF pm>0:n=Asset(RND(1 TO pm),1):rk=RND(1 TO 8):PRINT#6,CN$(n);' ';RNew$(rk)
1272 FOR a=1 TO 40
1273   CURSOR#0,200+a*6,10:PRINT#0,'.'
1274   Trend(a,wn,1)=100*RND(1 TO 8):ry=RND(2 TO 12):mf=RND(1 TO 2)
1275   IF wn>1:oy=Trend(a,wn-1,4):ELSE oy=84
1276   IF pm>0
1277     IF rk=1 AND a=n:mf=1:ry=12                    :REMark Shares↑ Bull
1278     IF rk=2 AND a=n:mf=2:ry=12                    :REMark Shares↓ Bear
1279     IF rk=3 AND a=n:Stock(n,2)=RND(8 TO 16)       :REMark Div  ↑
1280     IF rk=4 AND a=n:Stock(n,2)=RND(0 TO 4)        :REMark Div  ↓
1281     IF rk=5 AND a=n:mf=1:ry=6                     :REMark Tax  ↑
1282     IF rk=6 AND a=n:mf=2:ry=6                     :REMark Tax  ↓
1283     IF rk=7:mf=1:ry=8                             :REMark Bull ↑
1284     IF rk=8:mf=2:ry=8                             :REMark Bear ↓
1285   END IF
1286   IF wn MOD 13=0 AND Stock(a,2)>0:mf=2:ry=2+INT(Stock(a,2)/4)
1287   IF mf=1:cy=oy+ry:IF cy>148:cy=oy-RND(2 TO 6)
1288   IF mf=2:cy=oy-ry:IF cy< 20:cy=oy+RND(2 TO 6)
1289   IF cy>oy:hy=cy+RND(2 TO 7):ly=oy-RND(2 TO 7)
1290   IF cy<oy:hy=oy+RND(2 TO 7):ly=cy-RND(2 TO 7)
1291   Trend(a,wn,2)=hy:Trend(a,wn,3)=ly:Trend(a,wn,4)=cy
1292 END FOR a
1293 END DEFine
```

1300 REMark **Intro Screen**

Note: Select currency **[D] [E] [P] [Y]**
any other key will set Default Currency c$ = **£**



QBITS TRADER*

Stock Market   PortFolio

The Game runs a Simulated Stock Market Trader's Desk
where you Manage a Portfolio of Shares for 126 weeks
of a three year period. Check Share Gains and Losses
Increase your Investment through Company Dividends
or by simply Buying and Selling Shares.

Select Currency: $(D)ollar €(E)uro £(P)ound ¥(Y)en

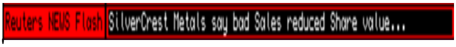
```
1302 DEFine PROCedure Intro_Trader
1303 OPEN#9,scr_:WINDOW#9,512,256,gx,gy:PAPER#9,0:BORDER#9,1,3:CLS#9
1304 Title 9,2,3,1,3,152,20,'QBITS TRADERº':SCALE#9,100,0,0
1305 Title 9,6,3,1,2,155,18,'QBITS TRADERº'
1306 Market 9,36,88:Chart 9,60,46:Money 9,86,47,288,142,'`':Assets 9,114,88
1307 Bull   9 ,36,46:Title 9,4,3,1,1,  94,144,'↑':Title 9,4,1,0,2,109,156,'BULL'
1308 Bear 9,112,46:Title 9,2,3,1,1,402,144,'↓':Title 9,2,1,0,2,368,156,'BEAR'
1309 INK#9,6:Pillar 9,12,60:Pillar 9,134,60:RESTORE 1311
1310 FOR i=1 TO 5:READ str$:CURSOR#9,98,60+i*10:PRINT#9,str$
1311 DATA "The Game runs a Simulated Stock Market Trader's Desk"
1312 DATA "where you Manage a Portfolio of Shares for 126 weeks"
1313 DATA "of a three year period. Check Share Gains and Losses"
1314 DATA " Increase your Investment through Company Dividends"
1315 DATA "          or by Simply Buying and Selling Shares."
1316 TBuy 9,58,34:Trader 9,74,40:TSell 9,92,34:CSIZE#9,0,1:OVER#9,1:INK#9,5
1317 CURSOR#9,100,48:PRINT#9,'Stock Market  ',,,,'  PortFolio'
1318 CURSOR#9,104,190:PRINT#9,"Select Currency: $( )ollar µ( )uro `( )ound ž( )en"
1319 RESTORE 1320:INK#9,7:FOR i=1 TO 5:READ x,y,c$:CURSOR#9,x,y:PRINT#9,c$
1320 DATA 206,190,'$ D',266,190,'µ E',314,190,'` P',368,190,'ž Y',236,170,'TRADER'
1321 k=CODE(INKEY$(-1)):c$='`':OVER#9,0:CSIZE#9,0,0:CLS#9
1322 SELect ON k=68,100:c$='$'     :REMark Shift+4
1323 SELect ON k=69,101:c$='€'     :REMark Ctrl+Shift+U
1324 SELect ON k=80,112:c$='£'     :REMark Shift+3
1325 SELect ON k=89,121:c$='¥'     :REMark Ctrl+shift+.
1326 END DEFine
```

QBITS TRADER°

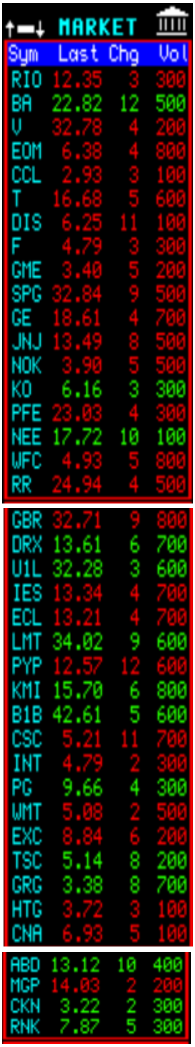
```
1328 DEFine PROCedure Title(ch,col,w,d,t,tx,ty,str$)
1329 CSIZE#ch,w,d:OVER#ch,1:INK#ch,col
1330 FOR i=0 TO t:CURSOR#ch,tx+i,ty:PRINT#ch,str$
1331 CSIZE#ch,0,0:OVER#ch,0:INK#ch,7
1332 END DEFine
```

Note: Title set with horizontal vertical offset to mimic 3D affect.

```
1350 REMark Trader Desk

1352 DEFine PROCedure Init_Trader
1353 WINDOW#0,512,32,gx,gy+224   :PAPER#0,0:INK#0,5:BORDER#0,1,3
1354 WINDOW#1,186,125,120+gx,40+gy:PAPER#1,0:INK#1,7:BORDER#1,1,2
1355 WINDOW#2,500,222,gx+6,gy+2  :PAPER#2,0:INK#2,7:RESTORE 1358
1356 FOR i=3 TO 8:OPEN#i,scr_:READ a,b,c,d:WINDOW#i,a,b,c+gx,d+gy:BORDER#i,1,2
1357 INK#6,7:SCALE#4,80,0,0:SCALE#2,100,0,0:SCALE#1,164,0,0
1358 DATA 112,193,  6, 17,  42,125,308, 40, 154,93,352,18  :REMark Win 3/4/5
1359 DATA 386, 12,120,211, 386, 44,120,166,  42,22,308,18  :REMark win 6/7/8
1360 Title 2,2,2,1,1,130,4,'QBITS TRADERº':Title 2,6,2,1,1,132,3,'QBITS TRADERº'
1361 PAPER#8,7:INK#8,0:CSIZE#8,2,1:CLS#8:BLOCK#7,347,11,0,0,2
1362 BLOCK#7,346,10,0,0,1:INK#7,7 :SCALE#7,20,0,0:OVER#7,1
1363 RESTORE 1364:FOR i=1 TO 16:READ x,y,str$:CURSOR#7,x,y:PRINT#7,str$
1364 DATA 0,0,'Sym',24,0,'Div',48,0,'Yld',72,0,'P/E',96,0,'Open',129,0,'High'
1365 DATA 164,0,'Low',194,0,'Last',224,0,'Chg',254,0,'Ask',292,0,'Bid'
1366 DATA 325,0,'Vol',254,32,'↑  ↓',292,32,'↑  ↓',325,32,'←  →',366,32,'← '
1367 BLOCK#7,2,4,372,34,7:BLOCK#7,10,3,352,36,7  :OVER#7,0
1368 INK#7,7:CURSOR#7,2,22:PRINT#7,'Company Evaluation:          Reckoner:'
1369 Chart 2,38,89:Trader 2,161,34:Money 2,161,48,476,122,c$:BLOCK#9,112,12,4,210,2
1370 STRIP#9,2:INK#9,0:CURSOR#9,5,211:PRINT#9,'Reuters NEWS Flash':STRIP#9,0
1371 Title 2,5,1,0,2,380,5,'PORTFOLIO':Assets 2,162,99
1372 INK#5,7:STRIP#5,1:PRINT#5,'Sym  Last Chg Stock Price':STRIP#5,0
1373 WINDOW#5,154,82,352+gx,28+gy:BORDER#5,1,2:SCALE#5,80,0,0
1374 INK#4,4:FOR i=1 TO 3:CURSOR#4,4,i*14:PRINT#4,'↑'
1375 Bull 4,8,76:FOR i=1 TO 6:BLOCK#4,8,1,14,14+i*6,4
1376 INK#4,2:FOR i=1 TO 3:CURSOR#4,4,54+i*14:PRINT#4,'↓'
1377 Bear 4,8,7:FOR i=1 TO 6:BLOCK#4,8,1,14,64+i*6,2
1378 Title 2,5,1,0,2,32,5,'MARKET':Market 2,34,99
1379 INK#3,7:STRIP#3,1:PRINT#3,'Sym  Last Chg  Vol':STRIP#3,0
1380 WINDOW#3,112,182,6+gx,28+gy:BORDER#3,1,2:SCALE#3,180,0,0   :REMark Market
1381 RESTORE 1382:FOR i=1 TO 9:READ x,y,str$:CURSOR#2,x,y:PRINT#2,str$
1382 DATA 2,4,'↑    ↓',346,4,'↑    ↓',128,28,'(T)rends',310,5,'Week'
1383 DATA 378,122,'Shares:',360,132,'Dividends:',354,142,'Tax & Fees:'
1384 DATA 372,112,'Profits:',372,152,'Credits:'
1385 BLOCK#2,10,3,10,9,7:BLOCK#2,10,3,354,9,7
1386 END DEFine

1400 DEFine PROCedure Init_RNews
1401 RESTORE 1363:FOR i=1 TO 8:READ RNew$(i)
1402 DATA 'announce release of New Shares...'
1403 DATA 'say bad Sales reduced Share value...'
1404 DATA 'announces Increase in their Dividends...'
1405 DATA 'announce Lower Dividends this quarter...'
1406 DATA 'say Tax Breaks increased Share value...'
1407 DATA 'say Tax Penalties reduced Share value...'
1408 DATA '- Forecasts a Shares Price Rise...'
1409 DATA '- Market Depression Reduces Share value.'
1410 END DEFine
```

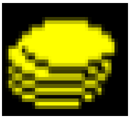

Reuters NEWS Flash SilverCrest Metals say bad Sales reduced Share value...

```
1412 DEFine PROCedure Init_Stocks
1413 CURSOR#0,76,10:PRINT#0,'Initialising Market':CLS#0,4:RESTORE 1380
1414 FOR a=1 TO 40
1415   READ CN$(a),Stock$(a):FOR b=1 TO 6:READ Stock(a,b):END FOR b
1416   CURSOR#0,184+a*6,10:PRINT#0,'.':PAUSE 1
1417 END FOR a
1418 REMark Info>> Company Name:Sym:Sector,Status,Div,Yld,P/E,Last,Chg
1419 DATA 'Rio Tinto'                 ,'RIO'  ,0,5,20,30,1200,12
1420 DATA 'Boeing Co.'                ,'BA '  ,0,0,20,30,2200,-5
1421 DATA 'Visa'                      ,'V  '  ,0,10,12,30,3220,18
1422 DATA 'Exxon Mobil'               ,'EOM' ,0,8,20,30,580,-6
1423 DATA 'Carnival Corp.'            ,'CCL'  ,0,5,20,30,230,-8
1424 DATA 'AT&T Inc.'                 ,'T  '  ,0,12,20,30,1620,-5
1425 DATA 'Walt Disney Co.'           ,'DIS'  ,0,0,20,30,490,2
1426 DATA 'Ford Motors'               ,'F  '  ,0,4,20,30,370,-10
1427 DATA 'GameStop'                  ,'GME' ,0,12,20,30,240, 2
1428 DATA 'Simon Property Grp'        ,'SPG'  ,0,0,20,30,3200, 2
1429 DATA 'General Electric'          ,'GE '  ,0,8,20,30,1820, 2
1430 DATA 'Johnson & Johnson'         ,'JNJ'  ,0,0,20,30,1230, 2
1431 DATA 'Nokia'                     ,'NOK' ,0,12,20,30,280, 2
1432 DATA 'Coca-Cola Co.'             ,'KO '  ,0,0,20,30,470, 2
1433 DATA 'Pfizer Inc'                ,'PFE'  ,0,10,20,30,2220, 2
1434 DATA 'NextEra Energy'            ,'NEE'  ,0,0,20,30,1670, 2
1435 DATA 'Wells Fargo'               ,'WFC' ,2000,12,20,30,370, 2
1436DATA 'Rolls Royce Holdings'       ,'RR'   ,0,10,20,30,2390, 2
1437 DATA 'New Concept Energy'        ,'GBR'  ,0,0,20,30,3200, 2
1438 DATA 'Drax'                      ,'DRX'  ,12,10,20,30,1310, 2
1439 DATA 'SilverCrest Metals'        ,'U1L'  ,0,10,20,30,3200, 2
1440 DATA 'Infinity Energy'           ,'IES'  ,5,10,20,30,1260, 2
1441 DATA 'Ecolab'                    ,'ECL'  ,0,12,20,30,1250, 2
1442 DATA 'Lockheed Martin.'          ,'LMT'  ,0,4,20,30,3290, 2
1443 DATA 'PayPal Holdings'           ,'PYP'  ,0,0,20,30,1200, 2
1444 DATA 'Kinder Morgan'             ,'KMI'  ,0,5,20,30,1530, 2
1445 DATA 'Vista Gold Grp'            ,'B1B'  ,0,10,20,30,4200, 2
1446 DATA 'Computer Systems Co.'      ,'CSC'  ,0,5,20,30,490, 2
1447 DATA 'Intel Corp.'               ,'INT'  ,0,5,20,30,385, 2
1448 DATA 'Procter & Gamble Co.'      ,'PG '  ,0,12,20,30,890, 2
1449 DATA 'Walmart'                   ,'WMT' ,0,5,20,30,470, 2
1450 DATA 'Exelon Corp.'              ,'EXC'  ,0,12,20,30,780, 2
1451 DATA 'Tesco'                     ,'TSC'  ,0,5,20,30,380, 2
1452 DATA 'Greggs'                    ,'GRG' ,0,0,20,30,230, 2
1453 DATA 'Hunting'                   ,'HTG'  ,0,0,20,30,320, 2
1454 DATA 'Centrica'                  ,'CNA'  ,0,5,20,30,670, 2
1455 DATA 'Abingdon Health'           ,'ABD'  ,0,0,20,30,1200, 2
1456 DATA 'Medica Group P'            ,'MGP' ,0,5,20,30,1370, 2
1457 DATA 'Clarkson'                  ,'CKN'  ,0,0,20,30,200, 2
1458 DATA 'Rank'                      ,'RNK'  ,0,10,20,30,680, 2
1459 END DEFine
```

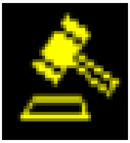


```
↑▬↓ MARKET
Sym  Last Chg  Vol
RIO 12.35   3  300
BA  22.82  12  500
V   32.78   4  200
EOM  6.38   4  800
CCL  2.93   3  100
T   16.68   5  600
DIS  6.25  11  100
F    4.79   3  300
GME  3.40   5  200
SPG 32.84   9  500
GE  18.61   4  700
JNJ 13.49   8  500
NOK  3.90   5  500
KO   6.16   3  300
PFE 23.03   4  300
NEE 17.72  10  100
WFC  4.93   5  800
RR  24.94   4  500

GBR 32.71   9  800
DRX 13.61   6  700
U1L 32.28   3  600
IES 13.34   4  700
ECL 13.21   4  700
LMT 34.02   9  600
PYP 12.57  12  600
KMI 15.70   6  800
B1B 42.61   5  600
CSC  5.21  11  700
INT  4.79   2  300
PG   9.66   4  300
WMT  5.08   2  500
EXC  8.84   6  200
TSC  5.14   8  200
GRG  3.38   8  700
HTG  3.72   3  100
CNA  6.93   5  100

ABD 13.12  10  400
MGP 14.03   2  200
CKN  3.22   2  300
RNK  7.87   5  300
```

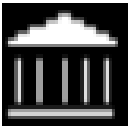
```
1500 REMark Trader Graphics

1502 DEFine PROCedure TBuy(ch,x,y)
1503 INK#ch,6:FILL#ch,1:ARC#ch,x-3.5,y TO x+4,y,-PI/2
1504 LINE#ch TO x+3.4,y-3:ARC#ch TO x-4,y-3,-PI/2:LINE#ch,x-4,y-3 TO x-4,y
1505 FILL#ch,0:INK#ch,0:ARC#ch,x-3,y-.6 TO x+4,y-.6,PI/2
1506 ARC#ch,x-4,y-1.6 TO x+3.6,y-1.6,PI/2:ARC#ch,x-4,y-2.5 TO x+3.6,y-2.5,PI/2
1507 END DEFine
```



```
1509 DEFine PROCedure TSell(ch,x,y)
1510 INK#ch,6:LINE#ch,x-5,y-2.5 TO x-1,y-2.5 TO x,y-4 TO x-6,y-4 TO x-5,y-2.5
1511 FILL#ch,1:LINE#ch,x-5,y TO x-2,y+4 TO x,y+2.8 TO x-3,y-1 TO x-5,y
1512 FILL#ch,0:LINE#ch,x-2,y+1.8 TO x+2.4,y-1 TO x+1.8,y-2 TO x-2,y+.6
1513 INK#ch,0:LINE#ch,x-5,y+1 TO x-2,y-.8:LINE#ch,x-3,y+3.6 TO x,y+1.8
1514 END DEFine
```

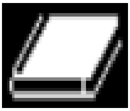


```
1516 DEFine PROCedure Market(ch,x,y)
1517 INK#ch,7:FILL#ch,1
1518 LINE#ch,x-3,y-1.5 TO x,y TO x+3,y-1.5 TO x-3,y-1.5:FILL#ch,0
1519 LINE#ch,x-1.3,y-2.2 TO x-1.3,y-4.6:LINE#ch,x-2.5,y-2.2 TO x-2.5,y-4.6
1520 LINE#ch,x+1.3,y-2.2 TO x+1.3,y-4.6:LINE#ch,x+2.5,y-2.2 TO x+2.5,y-4.6
1521 LINE#ch,x,y-2.2 TO x,y-4.6       :LINE#ch,x-3,y-5 TO x+3,y-5
1522 END DEFine
```



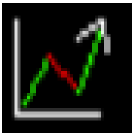
```
1524 DEFine PROCedure Assets(ch,x,y)
1525 INK#ch,7:FILL#ch,1:LINE#ch,x+3,y-1 TO x-1.8,y-1
1526 LINE#ch TO x-3.8,y-4 TO x+1,y-4 TO x+3.2,y-1:FILL#ch,0
1527 LINE#ch,x-2.5,y-1 TO x-4.5,y-4:LINE#ch,x+1.2,y-5 TO x+3.5,y-2
1528 ARC#ch,x-4,y-4 TO x-4,y-5,PI:LINE#ch TO x+1,y-5:ARC#ch TO x+1,y-4,-PI
1529 END DEFine
```

Note: Portfolio



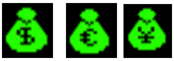
```
1531 DEFine PROCedure Chart(ch,x,y)
1532 INK#ch,7:LINE#ch,x,y TO x,y-5 TO x+5,y-5:INK#ch,4
1533 LINE#ch,x+.5,y-4.5 TO x+2,y-2:INK#ch,2:LINE#ch TO x+3.5,y-3.8:INK#ch,4
1534 LINE#ch TO x+5,y :INK#ch,7:LINE#ch,x+3.6,y-1 TO x+5,y TO x+5.2,y-2
1535 END DEFine
```

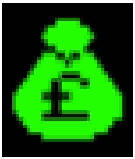
Note: Trends



```
1537 DEFine PROCedure Money(ch,x,y,c$)
1538 INK#ch,4:FILL#ch,1:CIRCLE#ch,x,y,1.6,.6,PI/2:FILL#ch,0
1539 INK#ch,4:FILL#ch,1:CIRCLE#ch,x,y-4,3:FILL#ch,0
1540 INK#ch,4:FILL#ch,1:CIRCLE#ch,x,y-5,4,.6,PI/2:FILL#ch,0
1541 INK#ch,0:LINE#ch,x-1,y-1 TO x,y-2 TO x+1,y-1
1542 CSIZE#ch,2,0:STRIP#ch,4:INK#ch,0
1543 CURSOR#ch,xc,yc:PRINT#ch,c$:STRIP#ch,0:CSIZE#ch,0,0
1544 END DEFine:
```

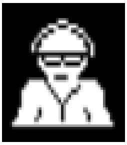
Note: Default



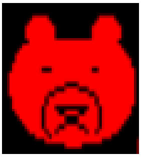


c$ - **c**urrency $tring variable PRINT Chr$

```
1546 DEFine PROCedure Trader(ch,x,y)
1547 INK#ch,7:ARC#ch,x+3,y+.7 TO x-3,y+.7,PI:FILL#ch,1:CIRCLE#ch,x,y+.8,2.4
1548 FILL#ch,0:INK#ch,0:LINE#ch,x-3,y+1 TO x+3,y+1:LINE#ch,x-.6,y-1.2 TO x+.6,y-1.2
1549 INK#ch,7:FILL#ch,1:ARC#ch,x-4,y-4 TO x-1,y-3,-PI:LINE#ch TO x+1,y-3
1550 ARC#ch TO x+4,y-4,-PI:LINE#ch TO x+5,y-6 TO x-5,y-6 TO x-4,y-4:FILL#ch,0
1551 INK#ch,0:CIRCLE#ch,x-1,y+.5,.8,.6,-PI/2:CIRCLE#ch,x+1,y+.5,.8,.6,-PI/2
1552 LINE#ch,x-1.8,y-2 TO x,y-4 TO x+1.8,y-2:LINE#ch,x,y-4 TO x,y-6
1553 LINE#ch,x-2.4,y-4.5 TO x-2.8,y-6:LINE#ch,x+2.4,y-4.5 TO x+2.8,y-6
1554 END DEFine
```

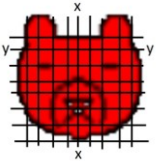


```
1556 DEFine PROCedure Bear(ch,x,y)
1557 INK#ch,2:FILL#ch,1:LINE#ch,x-3,y+1 TO x+3,y+1
1558 ARC#ch TO x+3,y-5,-PI/2 TO x-3,y-5,-PI/3 TO x-3,y+1,-PI/2:FILL#ch,0
1559 FILL#ch,1:CIRCLE#ch,x-3,y+1,1:FILL#ch,0
1560 FILL#ch,1:CIRCLE#ch,x+3,y+1,1:FILL#ch,0:INK#ch,0
1561 LINE#ch,x-1.2,y-5 TO x+1,y-3.5 TO x-1,y-3.5 TO x+1.2,y-5
1562 LINE#ch,x-2,y-1 TO x-1.4,y-1:LINE#ch,x+1.4,y-1 TO x+2,y-1
1563 END DEFine
```



Graphics Design

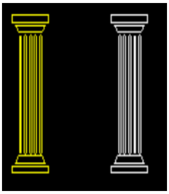
These are first designed using a Grid to work out x and y offsets to a defined location within a screen window. It then becomes a trial-and-error process to present a fit by use of varying the Graphics SCALE of the window and degrees of scale for use with the Graphic Commands ARC CIRCLE LINE.



ch - Windows **ch**annel : **x,y** - Graphics coordinates (deg)

```
1565 DEFine PROCedure Bull(ch,x,y)
1566 INK#ch,4:FILL#ch,1:ARC#ch,x-1,y+1 TO x+1,y+1,PI/4
1567 ARC#ch TO x+2.8,y, PI/2 TO x+.8,y-6,-PI/4 TO x-.8,y-6,PI/4
1568 ARC#ch TO x-2.8,y,-PI/4 TO x-1,y+1,PI/2:FILL#ch,0
1569 FILL#ch,1:ARC#ch,x-2,y+1 TO x-4,y+3,-PI/2 TO x-2,y+1, PI:FILL#ch,0
1570 FILL#ch,1:ARC#ch,x+2,y+1 TO x+4,y+3, PI/2 TO x+2,y+1,-PI:FILL#ch,0
1571 LINE#ch,x-3,y TO x-5,y-1 TO x-3,y-1:LINE#ch,x+3,y TO x+5,y-1 TO x+3,y-1
1572 INK#ch,0:LINE#ch,x-1.8,y-1.5 TO x-1,y-1.5:LINE#ch,x+1.8,y-1.5 TO x+1,y-1.5
1573 CIRCLE#ch,x-.8,y-4.8,.4:CIRCLE#ch,x+.8,y-4.8,.4
1574 END DEFine
```

```
1576 DEFine PROCedure Pillar(ch,x,y)
1577 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
1578 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
1579 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
1580 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
1581 FOR c=1 TO 5
1582   x1=x-4+c*1.5-.3:x2=x-4+c*1.5+.3:y1=y+17:y2=y-17
1583   ARC#ch,x1,y1 TO x2,y1,-PI:LINE#ch TO x2,y2
1584   ARC#ch,x2,y2 TO x1,y2,-PI:LINE#ch TO x1,y1
1585 END FOR c
1586 END DEFine
```



```
1800 DEFine PROCedure TestMode
1801 SELect ON k
1802   =232:Stock_UpDate 25:wn=26                    :REMark Reset to Start F1 Reset to Wk 25
1803   =236:Stock_UpDate wn                          :REMark Increments Weeks F2 Adds a Wk
1804  =240:Wick 1,col,177,90,70,85,75:IF col=4:col=2:ELSE col=4F3 Check Candle Wick
1805   =244:FOR i=1 TO 8:PRINT#6,CN$(i);' ';RNew$(i):PAUSE 50:CLS#6F4 Reuters News Flash
1806   =248:Audit(0)=10000
1807        FOR i=1 TO 130:Audit(i)=Audit(i-1)+i*RND(-4 TO 6):END FOR IF5 Game End
1808        wn=156:pm=1:sval=INT(Audit(130)/2) : TReview:wn=25:pm=0
1809 END SELect
1810 END DEFine
```

```
1812 DEFine PROCedure TM
1813 IF TMck=1:CURSOR#0,0,0:PRINT#0,'#':ELSE BLOCK#0,10,10,0,0,0
1814 END DEFine
```