

**Historical Stock Quote Downloader  
(HSQuote V1.89)  
(HSQuote Plus V1.89)**

**User Guide**

**by  
Jui-Pin Er  
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## 1. Overview

This software program makes downloading of historical and real-time stock quotes a quick and simple task. Ticker symbols can be grouped and stored in separate files in your portfolio, and a default ticker file can be set. Once done, you just need to get connected to the Internet in your usual way (even behind a company firewall), indicate the download period, and start the download process. Download process may be started automatically upon application startup.

You may create as many ticker files for your portfolio as you like. You can link them so that they can be run consecutively. You can edit each ticker list directly in the program. The program will automatically create separate sub-directories to store the output files for each ticker list file.

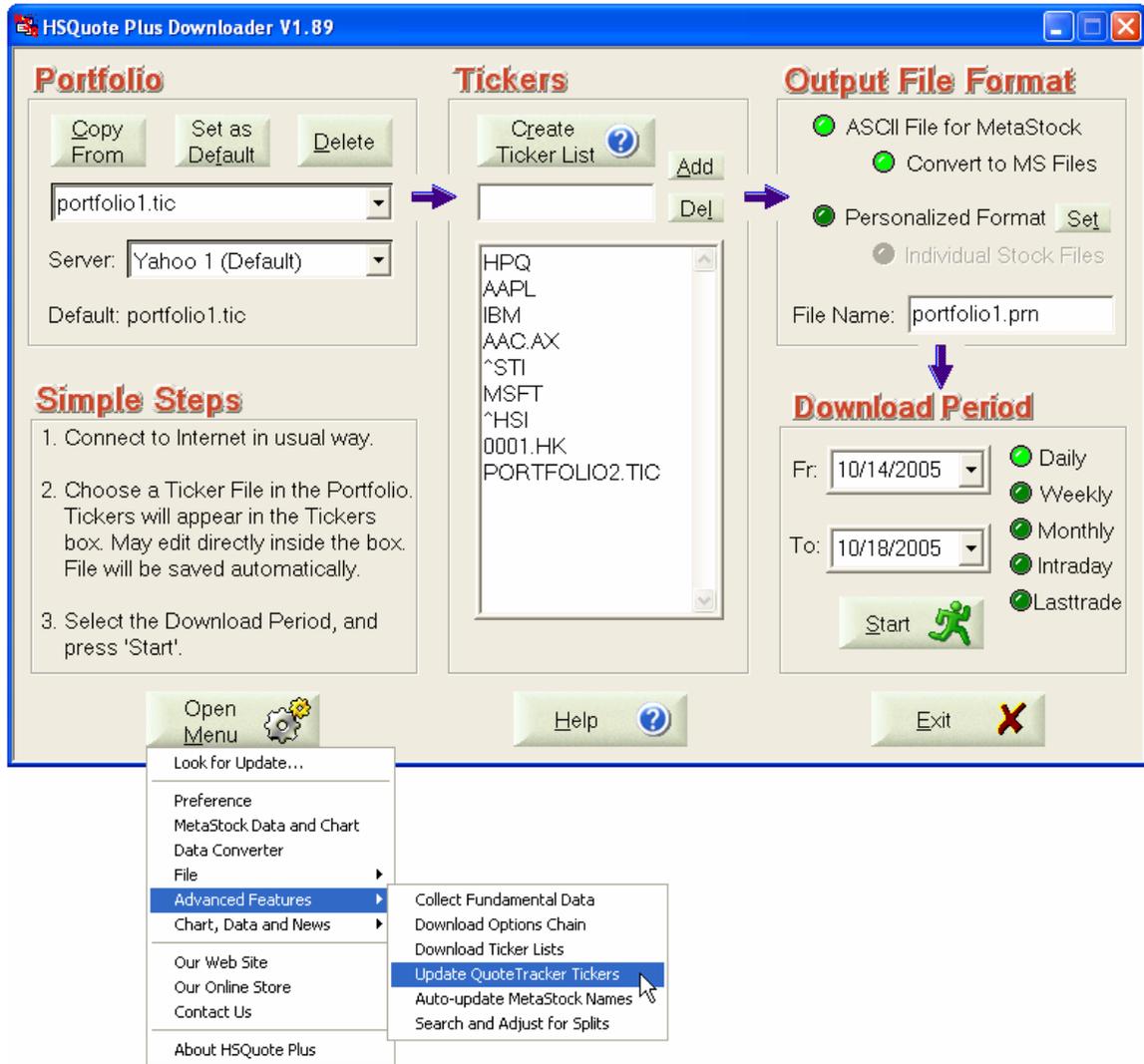
If you are using MetaStock, TradeStation, OmniTrader, Advanced Get, CandlePower, Elliott Wave, Gannalyst, Analyzer II, Supercharts, ElWave, etc., you may choose to automatically convert to MetaStock files. In-built charting feature allows viewing of MetaStock data visually. You may personalize your own text or spreadsheet format suitable as the data source to your analysis program.

### 1.1 Summary of Features and Benefits

- Download stock quotes on major stock exchanges around the world FREE. Also market indices, Forex, commodity futures, mutual funds, money market funds, corporate bonds, and metals.
- One time payment. No monthly subscription. Download anytime and as often as you need.
- Compatible with Metastock, TradeStation, OmniTrader, Advanced Get, CandlePower, Elliott Wave, Analyzer II, Gannalyst, Supercharts, ElWave, Excel, and more...
- Choose download of Daily, Weekly, Monthly, and Intraday, or 20-minute delay last trade data. Can pull real-time streaming data from Medved QuoteTracker, and store as Intraday OHLC MetaStock data. Automatically re-download missing data and update ticker symbols, alert you of invalid and inactive tickers. Auto-repeat Intraday or last trade download at user-defined intervals.
- Auto-collect Options Chain data and user defined fundamental data onto Excel worksheets.
- Up to 60 parallel download processing threads to drastically shorten download time.
- Auto-convert to the most popular MetaStock format, or personalized text or spread-sheet formats.
- A flexible Data Converter to convert data between MetaStock and ASCII text or Excel formats. Alias table helps conversion from 3<sup>rd</sup> party text data to MetaStock data files with different names.
- In-built Charting feature provides visual viewing of MetaStock data, and helps discover abnormal data. Easy to re-download or manually changing data within the chart view.
- **(HSQuote Plus)** Include many charting features, such as more chart styles, indicators, line studies, chart templates, load/save/print charts, etc.
- **(HSQuote Plus)** Allow downloading data from some web pages that provide free ASCII text data.
- **(HSQuote Plus)** Allow post download processing, such as data conversion and move/copy/delete files.
- Link all the portfolio files together for one-click download of all portfolios.
- Easy to use, quick to learn, start using it within 3 minutes. Designed for usability.

- Animated help.
- Can show user-defined charts, news, and data in browser, and even automatically download zip data files for all the tickers in a portfolio.
- Easy to edit your stock tickers/symbols within the program, or copy from existing ticker lists.
- Easy to re-download, delete, modify, or print data and securities while viewing data.
- Auto-repair of data stored in MetaStock format, either online or offline.
- Help to detect, confirm and adjust for stock split data. Auto-adjust EURO currency conversion on 1<sup>st</sup> Jan 1999 for stocks of European Monetary Union countries.
- Auto-update MetaStock names without manual entry. Create ticker lists from MetaStock database.
- Know the last download period for each portfolio and continue download from when you left off.
- Provide command line execution for batch processing.
- Provide an HSQuote Task Scheduler for auto-download at specific times.
- Keep your default stock list, output format setting and corresponding download servers. Coupled with the tracking of the last download period, and automatic conversion to MetaStock files, you can have a One-Click download the next time – just press the Start button! You may even choose to auto-download for the default portfolio, and use Microsoft Task Scheduler in the Control Panel, to auto-start the program and auto-download data at fixed schedule.

## 1.2 Main Screen Shot



## 2. Select Ticker List in Portfolio

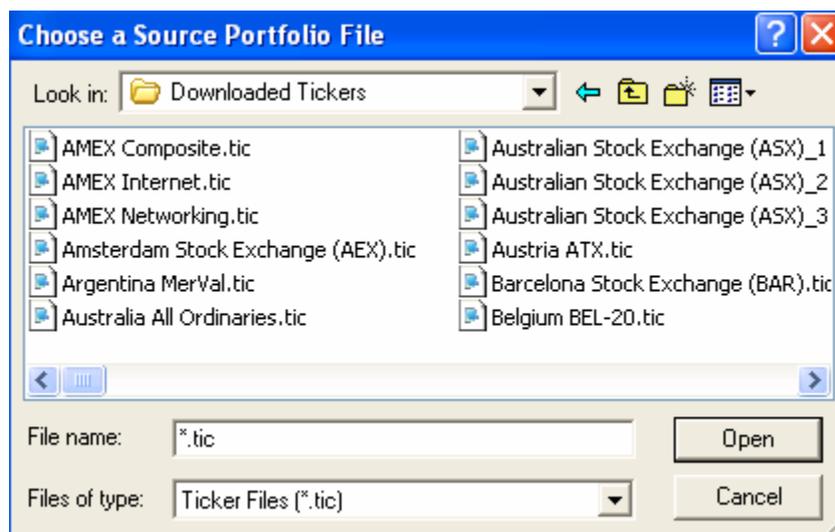
### 2.1 Select Ticker List

In the 'Portfolio' section, type in the name of your ticker file (and click in the Ticker window to type in ticker symbols.) It will always have the '.tic' extension automatically. Once created, you can select it in future by clicking the 'down arrow' key on the right, and click the file. To remove it, click the 'Delete' button.

You may create separate ticker list files in your portfolio, for example, one for common stocks, one for indexes, one for Forex/Currencies, one for commodity futures, etc. Each ticker list can have its own download Server. If 'As in Preference Setting' is selected, the 'EOD Data Server' on the Preference Setting screen will be used.



The ticker symbols are stored in a text file, one symbol on one line. Please see the sample files, portfolio1.tic and portfolio2.tic. If you already have ticker files that are of the same format, you can copy them by pressing the 'Copy From' button. Even if the original file extension is not '.tic', the program will automatically make a copy and save it with the '.tic' extension in the Data File Folder.



## 2.2 File Location

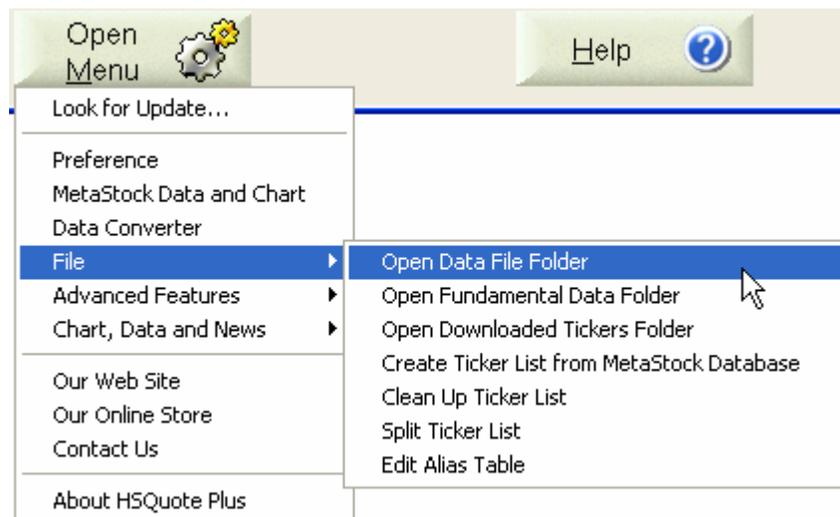
When you first install the program, all the example ticker files are located in the same sub-folder as the installed program (ticker files and data files may be separated from program files and moved to another directory, please see [Section 11.2 Preference Setting – Data File Location.](#))

A folder will be opened for each ticker file when the output is generated. For example, after running for the 'portfolio1.tic' ticker file, a folder called 'portfolio1' will be generated, and the output file, 'portfolio1.prn' or the personalized format file, will be stored inside the 'portfolio1' folder.

If you select 'Convert to MS Files', in the Output File Format section, the downloaded data, which are also stored in the .prn file, will be automatically converted to individual MetaStock files. All these files will be stored in the 'portfolio1' folder.

If 'Individual Stock Files' is selected, individual text files identified by their ticker names will also be created in the 'Text-Files' sub-folder within the 'portfolio1' folder.

To access these ticker files or downloaded data files, click the 'Open Menu' button, and select 'File/Open Data File Folder'. Another way is from the 'Start/Programs' menu, click 'HSQuote V1' then select 'File Folder'.



If you want to separate all ticker files and data files from the program files, or want to point to your own data file directory, or simply want to create a backup of the data files, please see [Section 11.2 Preference Setting – Data File Location.](#)

## 2.3 Set Default

It will save you time if you set the most frequently used Ticker List file and the Output Format as default. This is usually the first ticker file of linked ticker files. After selecting the Ticker file and Server in the 'Portfolio' section and the Output Format, click the 'Set as Default' button.

Note that the Options in the Output File Format section will be set as default as well. The default ticker list will be shown when the program starts up. However, each Ticker file can have its own Data Server, and download period selection. Download period information will only be saved after the first successful download.

**Portfolio**

Server:

Default: &&MasterList1.tic

**Output File Format**

ASCII File for MetaStock  
 Convert to MS Files

Personalized Format   
 Individual Stock Files

File Name:

**Download Period**

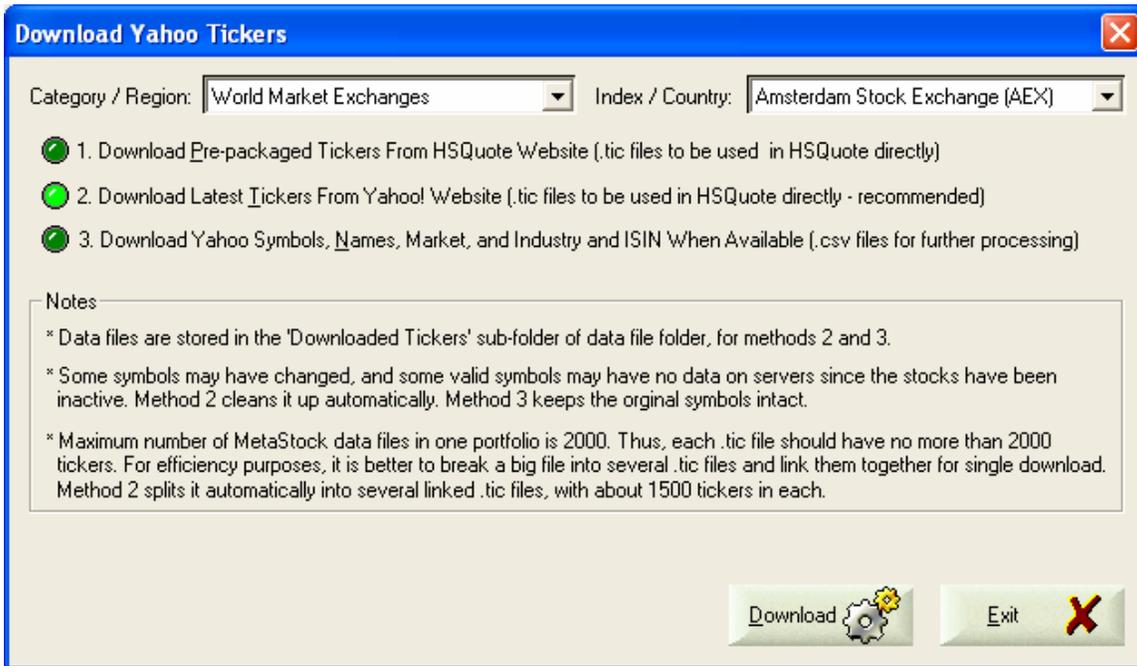
Fr:   Daily  
 Weekly  
To:   Monthly  
 Intraday  
 Lasttrade



### 3. Download, Create and Edit Ticker Lists

#### 3.1 Download Yahoo! Ticker Lists

You can download Yahoo! symbols of indices and stocks for most of the world-wide market exchanges from within the HSQuote program. US mutual funds and ETF are also available. Clicking on the 'Open Menu/Advanced Features/ Download Ticker Lists' will bring up the 'Download Yahoo Tickers' dialog.



Category / Region Selection:



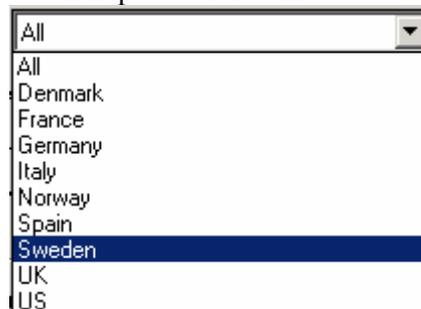
US & Canada Stocks, Funds, Indices



Asia Stocks



Europe & US Stocks



### Major World Indices

- All
- Australia All Ordinaries
- Austria ATX
- Belgium BEL-20
- Brazil Bovespa
- Denmark KFX
- France CAC 40
- Germany DAX
- Hong Kong Hang Seng
- India BSE 30
- Indonesia Jakarta Composite
- Israel TA-100
- Italy MIBTel
- New Zealand NZSE 50
- Norway OSE All Share
- Pakistan Karachi 100
- Singapore Straits Times
- South Korea Seoul Composite
- Spain Madrid General
- Sweden Stockholm General
- Taiwan Weighted
- Thailand SET
- United Kingdom FTSE 100

### Major US Indices

- All
- All
- ^DJI-DJ Industrial
- ^DJT-DJ Transport
- ^DJU-DJ Utilities
- ^DJA-DJ Composite
- ^NDX-NASDAQ 100
- ^IXBK-NASD Banks
- ^IXFN-NASD Financials
- ^IXF-NASD Financials 100
- ^IXIS-NASD Insurance
- ^IXK-NASD Computers
- ^IXTR-NASD Transportation
- ^IXUT-NASD Telecommunications
- ^NBI-NASD Biotech
- ^OEX-S&P 100
- ^MID-S&P 400 MidCap
- ^SML-S&P 600 SmallCap
- ^IIX-AMEX Internet
- ^NWX-AMEX Networking
- ^XMI-Major Market
- ^SOXX-Philadelphia Semiconductor

### World Market Exchanges

- Amsterdam Stock Exchange (AEX)
- Amsterdam Stock Exchange (AEX)
- Australian Stock Exchange (ASX)
- Barcelona Stock Exchange (BAR)
- Berlin Stock Exchange (BER)
- Bilbao Stock Exchange (BIL)
- Bombay Stock Exchange (BSE)
- Buenos Aires Stock Exchange (BUE)
- Calcutta Stock Exchange (CAL)
- Caracas Stock Exchange (CCS)
- Copenhagen Stock Exchange (CPH)
- Dusseldorf Stock Exchange (DUS)
- Frankfurt Stock Exchange (FRA)
- Hamburg Stock Exchange (HAM)
- Hanover Stock Exchange (HAN)
- Hong Kong Stock Exchange (HKG)
- Jakarta Stock Exchange (JKT)
- Korea Stock Exchange (KSC)
- London Stock Exchange (LSE)
- Madrid SE C.A.T.S. (MCE)
- Madrid Stock Exchange (MAD)
- Mexico Stock Exchange (MEX)

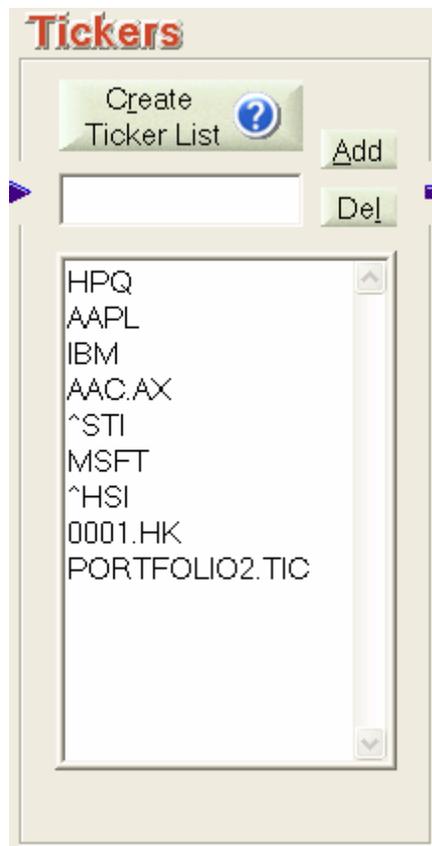
Note: The Major World Indices and Major US Indices change frequently. To keep the program flexible, these two lists are dynamically updated according to availability of Yahoo! Finance, when 'All' is chosen for download. When download of individual item is not available, the list will be updated as well.

You may download pre-packaged ticker lists to be used directly with HSQuote. These lists, however, will not be updated frequently enough. To get the latest ticker lists, you can select the second option to download from Yahoo! website, instead. HSQuote makes the job easy by automating the data collection, removing inactive tickers (valid tickers but no data on Yahoo for a long time), then splitting long ticker list into several smaller ones, each about 1500 tickers, and also joining the .tic files. The ticker lists created will be stored in the 'Downloaded Tickers' folder at the data file location. You can quickly access this folder with 'Open Menu/File/Open Downloaded Ticker Folder'. You may want to use option 3 to download symbols, names, market, and industry and ISIN (if available) to a .csv file, which can be opened with Excel. You can then process it, for example, selecting only the industries or the familiar names you want, or sorting the list, etc.

### 3.2 Manually Create and Edit Ticker Symbols

The 'Create Ticker List' button provides many helpful animated topics about getting free ticker lists and resources to assemble your own ticker lists. You need to assemble your own ticker lists for currencies, metals, and commodity futures. New users should take a tour on the different topics.

1. Manually enter Yahoo! ticker symbols
2. Download and use pre-packaged ticker lists
3. Assemble tickers from Yahoo! sites
4. Link ticker lists together for one-click download
5. Create Currencies list for use with Oanda server
6. Create Commodity Futures list for Brite Futures server



**Help on Creating Ticker Lists**

Topic: 3. Assemble tickers from Yahoo! sites

Steps:

1. Go to Yahoo! Finance and click on 'Market Data' in the left-hand column.
2. Download and use pre-packaged ticker lists
3. Assemble tickers from Yahoo! sites
4. Link ticker lists together for one-click download
5. Create Currencies list for use with Danda server
6. Create Commodity Futures list for Brite Futures server alphabet to see a list of company names starting with that alphabet.

3. Copy the whole table to a Microsoft Excel sheet: use the mouse to highlight all the rows, press Ctrl-c to copy. In Excel sheet, press Ctrl-v to paste the copied contents.

4. Copy the Symbol column (not name column) from Excel to a blank Notepad. Use Ctrl-c to copy and Ctrl-v to paste.

5. Save the list of tickers with an extension .tic.

[Yahoo! Major World Indices](#)

[Yahoo! Major US Indices](#)

[Yahoo! Europe/US Stock Lists](#)

[Yahoo! Asia Pacific Stock Lists](#)

	A	B	C	D	E	F
1	ADSG.DE	ADIDAS SALOMON	99.12 Apr 8	↓ 1.97 (1.97%)	402,627	
2	ALIG.DE	ALTANA	98.88 Apr 8	↓ 0.72 (1.49%)	400,562	
3	ALV.DE	ALLIANZ AG	92.29 Apr 8	↓ 0.14 (0.15%)	1,714,502	
4	BASF.DE	BASF AG	43.22 Apr 8	↓ 0.32 (0.73%)	2,093,778	
5	BAYG.DE	BAYER AG	25.97 Apr 8	↓ 0.23 (1.06%)	2,091,629	
6	BEMG.DE	BAY MOT WERKE	34.97 Apr 8	↑ 0.04 (1.09%)	2,497,097	
7	CBKG.DE	COMMERZBANK AG	14.99 Apr 8	↓ 0.14 (0.93%)	3,191,444	
8	CONG.DE	CONTINENTAL AG	33.09 Apr 8	↑ 0.36 (1.09%)	769,719	
9	BOE.DE	DT BOERSE N	47.28 Apr 8	↓ 0.67 (1.40%)	735,462	
10	DBK.DE	DEUTSCHE BANK N	71.73 Apr 8	↑ 0.93 (0.44%)	3,385,439	
11	DCG.DE	DAIMLERCHRYSLER	34.82 Apr 8	↓ 1.36 (3.88%)	6,639,262	
12	DPW.DE	DEUTSCHE POST NA	18.99 Apr 8	↑ 0.16 (0.84%)	1,651,005	
13	DTG.DE	DT TELEKOM N	14.63 Apr 8	↑ 0.88 (6.06%)	12,951,626	
14	E.ON.DE	E.ON AG	99.12 Apr 8	↑ 0.23 (0.49%)	2,890,078	
15	EMEG.DE	FRESENIUS MEDI	99.38 Apr 8	↑ 0.80 (1.47%)	249,700	
16	HENIG.DE	HENKEL KGAA VZ	79.67 Apr 8	↑ 0.27 (0.36%)	282,493	
17	HVMG.DE	HYPOVERREINSBANK	16.95 Apr 8	↓ 0.01 (0.06%)	3,749,626	
18	EXXN.DE	INFINEON TECH N	15.84 Apr 8	↑ 0.24 (1.94%)	9,299,014	
19	LHA.DE	DT LUFTHANSA AG	14.86 Apr 8	↑ 0.08 (0.57%)	2,596,171	
20	LIN.DE	LINDE	45.22 Apr 8	↑ 0.12 (0.27%)	240,626	
21	MAG.DE	MAN AG	29.84 Apr 8	↑ 0.84 (2.92%)	792,688	
22	MEOG.DE	METRO AG	38.78 Apr 8	↑ 0.17 (1.39%)	1,016,935	
23	MUVG.DE	MUENCH, RUECK N	93.09 Apr 8	↓ 0.30 (0.32%)	1,012,269	
24	RWEG.DE	RWE ST A	38.44 Apr 8	↑ 0.44 (1.16%)	2,236,277	
25	SAP.DE	SAP AG	129.68 Apr 8	↑ 1.99 (1.55%)	1,391,909	
26	SCHG.DE	SCHERING AG	39.39 Apr 8	↓ 0.26 (0.67%)	1,072,332	
27	SIEMG.DE	SIEMENS N	62.95 Apr 8	↑ 0.30 (0.48%)	4,511,016	
28	TKAG.DE	THYSSEN KRUPP	15.98 Apr 8	↓ 0.33 (2.08%)	2,094,767	
29	TUIG.DE	TUI AG	18.88 Apr 8	↑ 0.17 (0.91%)	1,067,488	
30	VOWG.DE	VOLKSWAGEN AG	36.69 Apr 8	↑ 0.40 (1.10%)	3,149,296	
31						

To edit a Ticker list, click anywhere inside the 'Tickers' box. Tickers in the selected portfolio will appear (if not already there), with one symbol on one line. You may add, delete, or change a symbol within the box, just like in Notepad. To add, just insert a new line (using 'Enter' key) and type in the symbol. You may insert at any place. To delete, use 'Delete' or 'Black Space' key. Note that most Yahoo symbols use Capital letters, and they are case sensitive.

Another way to edit the ticker list is to type a symbol in the box on the left of the 'Add' and 'Del' buttons. Then pressing the 'Add' button will add this symbol onto the list. If the symbol already exists on the list, nothing will be added. Similarly pressing the 'Del' button will delete/remove the symbol from the list, if it exists.

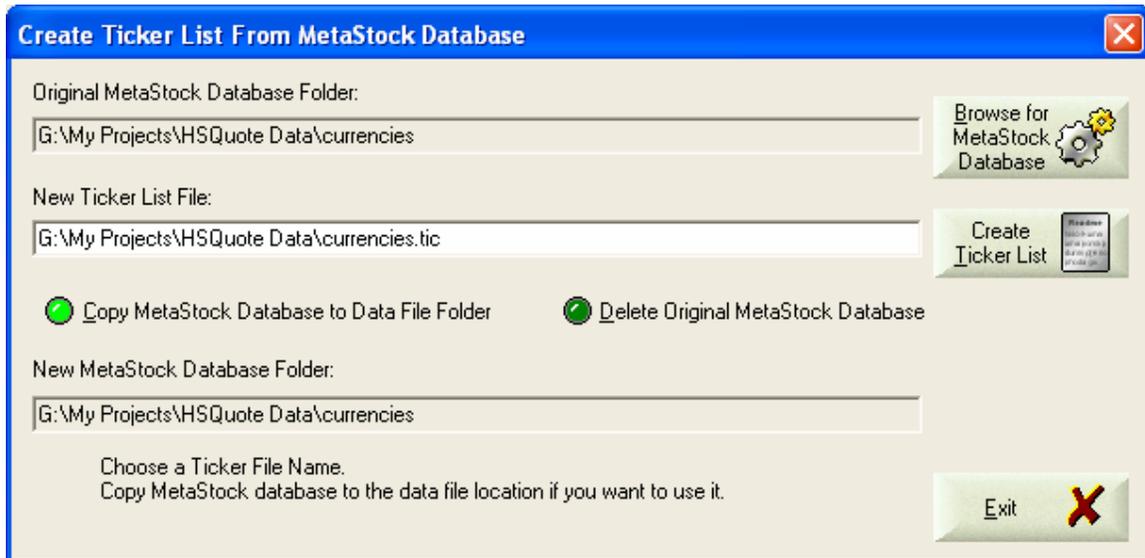


It is advisable to have fewer symbols than 2000 on each list but have separate lists instead, for performance speed reason. For MetaStock database, it is also necessary to keep separate lists for Daily, Weekly, Monthly and Intraday download files, even the tickers are the same. Stocks, Forex and commodity futures are downloaded from different servers, so they ought to have different ticker lists too.

For long ticker list, you can split the .tic file into smaller ones with the 'Open Menu/File/Split Ticker List' feature.

### 3.3 Create Ticker List from Existing MetaStock Database

If you have an existing MetaStock database, and want to continue using it with HSQuote, you will need to have the corresponding ticker list. HSQuote can create the ticker list for you from the MetaStock database. Click on 'Open Menu/File/Create Ticker List from MetaStock Database'. The following dialog window will appear.



You can browse to the existing MetaStock database, and HSQuote can take care of the rest. It will create the ticker list, copy the MetaStock database to the new location and delete the original database if you like.

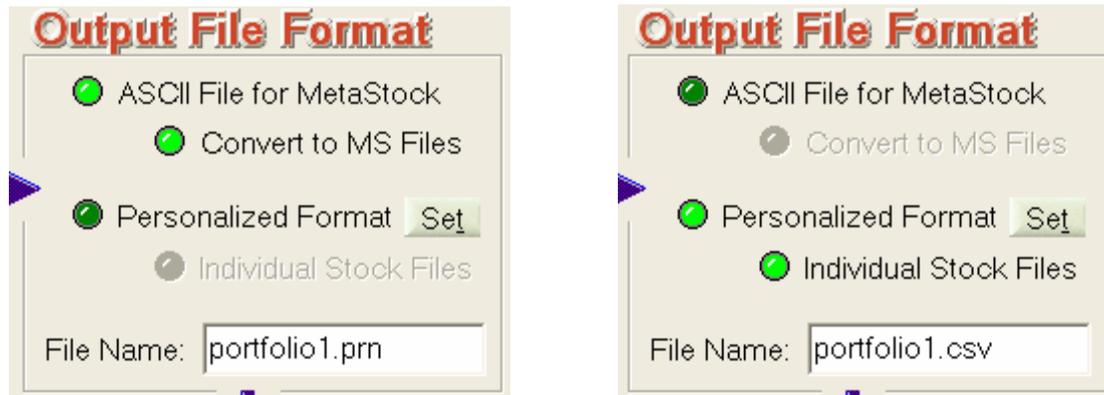
### 3.4 Save Ticker List

File saving is automatic. After editing the Ticker List symbols, you may click anywhere outside the 'Tickers' box, and the ticker list is automatically saved in the Data File Location with the .tic extension.

## 4. Specify Output Format

### 4.1 Output Format

You may choose either the output format that is fully compatible to MetaStock, or your own personalized text and spread-sheet formats. The output file will carry the same file name as the input portfolio file by default, but you can change it, by editing the File Name.



Note that A SUB-FOLDER WITH THE NAME OF THE PORTFOLIO FILE WILL BE GENERATED and THE OUTPUT FILE WILL BE LOCATED IN THIS SUB-FOLDER. This structure keeps all your downloaded data separated for the different Ticker files.

For Metastock data format, an ASCII file with the extension .prn will be generated. You can let the program convert to MetaStock Files directly by selecting 'Convert to MS Files'. If you do not need this ASCII file, you can click on the "Other Options" button on the Preference page and check this option. The MetaStock data files, Fxx.DAT (first 255 files) and Fxx.MWD (from 256 onward), will be stored in the same sub-folder as the output .prn file. Even if you do not use MetaStock data in other charting or analysis programs, this is a convenient way to accumulate downloaded data in the internal database, so that you can view, repair and adjust for stock splits.

Using MetaStock data as inputs to most charting programs is the easiest method. However, if your charting program cannot take MetaStock format data, you can use the very flexible 'Personalized Format' in ASCII text or spread-sheet. You can have your own column sequence, date and time formats, delimiter, header exclusion, date order, omitting caret and country suffix, alias names, renaming of output file, etc. Click the 'Set' button or go to Open Menu/Preference section [[Section 11.3](#)] to change your personalized settings. The output file, name given in the File Name window, will be generated in the download process. This file will have the downloaded data for all the tickers, and thus may be very big.

If your charting program needs to have individual stock files instead of a combined stock file, you can select the 'Individual Stock Files' option. A subfolder 'Text-Files' will be created, and all the individual stock files, identified by their symbols, will be generated with the same personalized format and stored in this subfolder. If you do not need the combined text files, you can turn it off in Preference/Other Options.

## 4.2 Convert to MS Files

If you choose 'ASCII File for MetaStock', you can also let the program convert to MetaStock Files directly during the download process by selecting 'Convert to MS Files'. MetaStock index files, MASTER and EMASTER, will be created if not already available. When data for each ticker has been downloaded, the corresponding data will be stored in the Fxx.DAT files (and Fxx.MWD files if more than 255 data files have been stored.) These MetaStock data files are stored in the same sub-folder as the output .prn file. Handling big database will affect speed performance, you are thus advised to keep fewer than 2000 ticker files in each portfolio folder.

When data are being stored in the Fxx.DAT file, data with new dates will be inserted or appended. The whole data file will automatically be sorted in ascending date sequence.

Usually, old data with the same dates will be over-written by the newly downloaded data. However, for efficiency reason, this step is not checked. To force old data overwrite, please turn on the 'Always over-write previous MS data records' option in the Preference.

If you want to accumulate data, or manipulate data, such as using the auto data repair and split data adjustment features, you need to choose 'Convert to MS Files'.

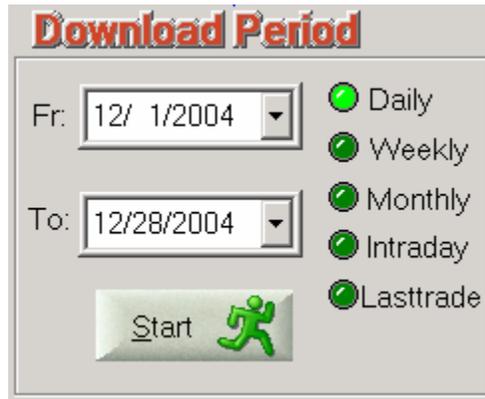
Note that you may use the generic Data Converter to convert your own ASCII text data sources to MetaStock data as well ([Section 15.1](#)) or vice versa.

**Please also note that MetaStock database may get corrupted if you run two application programs that simultaneously accessing the same MetaStock database. Often you will get the "Access Denied" error message.**

## 5. Select Download Period

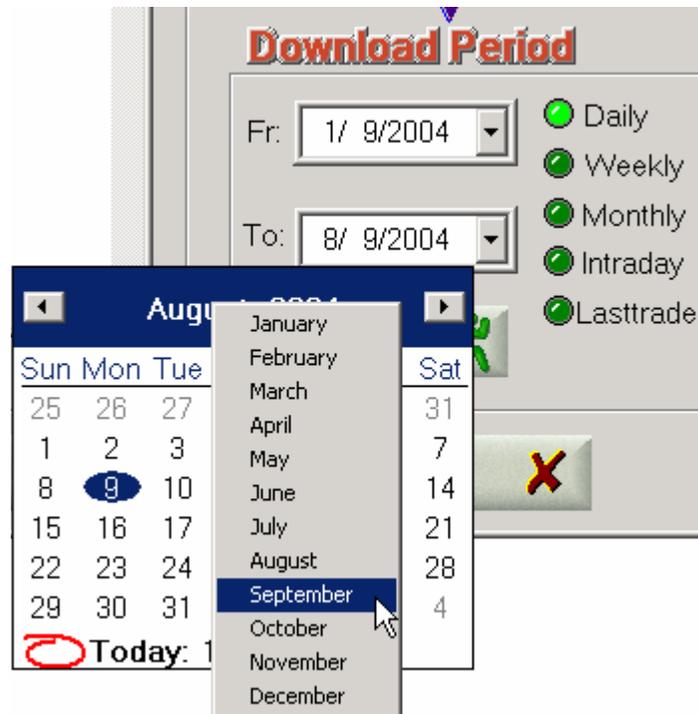
### 5.1 Indicate Start Date

When you start the program, the 'From' date in the 'Download Period' section shows the last successful download date of the default Ticker List. The program assumes that you want to continue from when you left off.



If you want to select other start (From) date, click the 'down arrow' on the right. A calendar will appear. Click and select the date.

To select the Month, click on the Month directly and select from the pop-up list. You may click on the Left or Right arrows to go backward or forward.



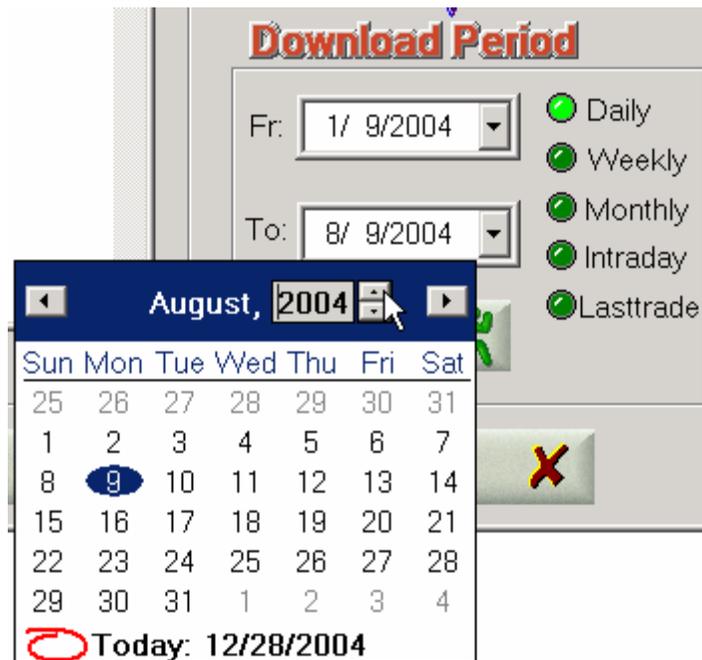
To change the Year, click on the Year directly, then use the Up or Down arrows to go forward or backward.

## 5.2 Indicate End Date

When you start the program, the 'To' date in the 'Download Period' section shows today's date. The program assumes you want to download quotes till today. If you want to select other end (To) date, click the 'down arrow' on the right. A calendar will appear. Click and select the date.

To select the Month, click on the Month directly and select from the pop-up list. You may click on the Left or Right arrows to go backward or forward.

To change the Year, click on the Year directly, then use the Up or Down arrows to go forward or backward.



### 5.3 Indicate Periodicity

You may download Daily, Weekly, Monthly and Intraday data by selecting the appropriate radio buttons in the Download Period section. It is required to create different portfolios for different download periodicities when Metastock format is used.

Unless you want to conserve hard-disk space, you may select Daily data. In MetaStock or other charting programs, you can compress Daily data to Weekly or Monthly.

For Intraday download, you need to indicate the Interval between intraday records. Choices are from 1-min to 60-min. Due to download server's limitation, only a few days of records are downloaded. The most recent date is shown in "Records to yymmdd" and can be changed by going back to the Daily option and changing the 'To Date'. However, this date should usually be within the last 7 to 10 days.



**Download Period**

Records to 060225

Interval: 5-Min

Refresh Every: 5-Min

Daily

Weekly

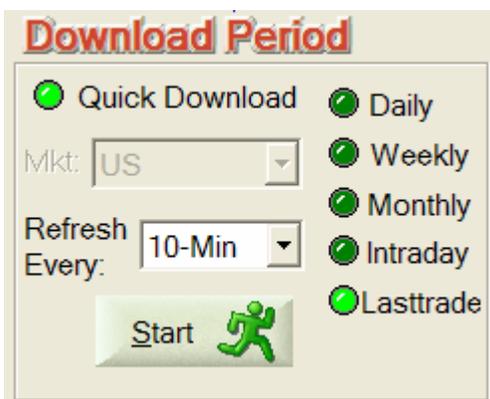
Monthly

Intraday

Lasttrade

Start 

You can select 'Lasttrade' to retrieve almost current real-time data, with about 20-minute delay. Always try with the 'Quick Download' option first to see if data are available for your countries. If it fails, then select specific Market. If a country is not in the list, try to select 'US' or one nearby country (you will need to check whether it works). This last trade data will always overwrite the previous record on the same day in the internal MetaStock database. This alternative may be used when you need End-of-Day data soon after the market closes.



**Download Period**

Quick Download

Mkt: US

Refresh Every: 10-Min

Daily

Weekly

Monthly

Intraday

Lasttrade

Start 



**Download Period**

Quick Download

Mkt: Italy

Refresh Every: None

Daily

Weekly

Monthly

Intraday

Lasttrade

Start 

## 5.4 Indicate Refresh Rate

You can get HSQuote to repeatedly download Intraday or Lasttrade data at fixed interval. Of course, you do not need to update more frequently than necessary. For example, if the Intraday interval is 10-min, you can choose 10-min for the Refresh Rate as well.



You will notice that when auto-refresh is selected, the 'Start' button will read 'Stop Refresh' to allow you to stop the Refresh. Note that this is to stop the Refresh and not the Download process. Use the 'Pause' button below (the same 'Exit' button) to stop the download process.

After the first pass download, the status line will show how many more seconds remaining before the next download. You can actually start both Intraday and Lasttrade auto-refresh at the same time. The status line will show both count-downs. When a refresh cycle is supposed to be starting, but the current download process is still in progress, the refresh will simply be delayed till the next cycle.

The auto-refresh feature is particularly useful when a local Medved QuoteTracker Server is being used, to regularly collect real-time Tick data and convert them to OHLC Intraday data. [See Section 12.6: Download from Local Medved QuoteTracker Server.](#)

When "HSQ As Intraday Server" is selected, the Last-trade auto-refresh feature is used to collect and generate Intraday data for non-US stocks ([See Section 12.7: Download Intraday data for Non-US Stocks.](#)) Note that for US stocks, you need not use this feature as most recent Intraday data are available with normal Intraday download.

## 6. Simple Download Procedure

### 6.1 Simple Download Procedure

1. Make sure you are connected to the Internet. It does not matter how you are connected to the Internet, and whether you are behind a firewall or not, as long as you can surf the Internet. So just connect to the Internet in your usual way.
2. Select a Ticker file from the 'Portfolio' section.
3. Select the Output Format.
4. Select the Download Period.
5. Click the 'Start' button. The download process will start. When data for a stock is being downloaded, the corresponding ticker symbol will be highlighted.
6. When successfully executed, a dialog box will appear, announcing the successful completion. If the connection is bad, after a minute or so, the program will time out, and a warning message will appear. If you are already in the middle of data download, this phenomenon may happen while the data server is too busy. You can choose to continue the download process from where it stopped.
7. You may abort the download process by pressing the Pause button. You may double-click the next ticker and then the 'Start' button again to continue downloading. (Note that the abort process may take longer time if higher number of parallel processing threads is chosen.)
8. Select the next Ticker file, and click the 'Start' button again to download.

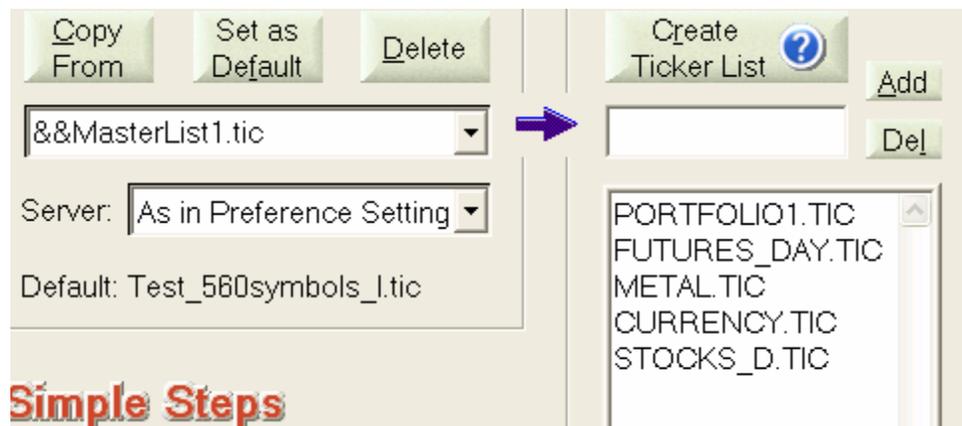
#### Link ticker lists for single download:

##### Method 1 (Linked Ticker Lists):

You may link several ticker files together so as to auto-download all of them at one go. For example, appending 'PORTFOLIO2.TIC' to the end of the list of ticker symbols in portfolio1.tic file will continue the download to tickers in portfolio2.tic. Each ticker file can have its own data server. If 'As in Preference Setting' is selected, the 'EOD Data Server' in Preference will be used. For details, please see [Section 11.1 Preference Setting – Linking Portfolios for Single Download](#).

##### Method 2 (Master List):

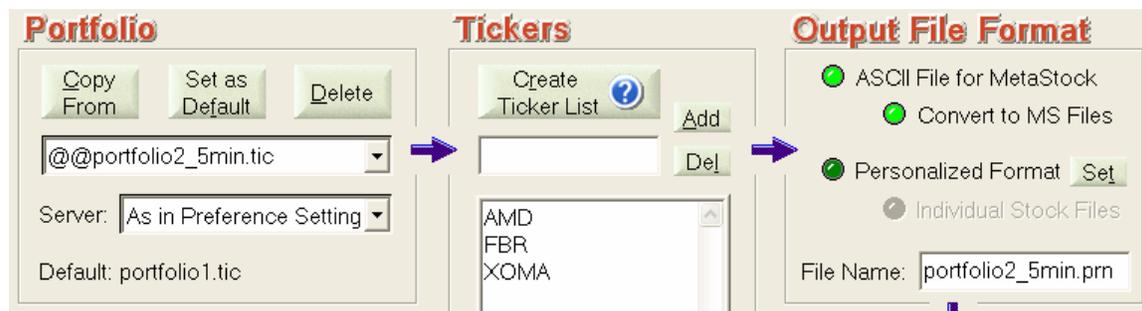
Alternatively, you can assign one master portfolio file to contain all the ticker lists that you want downloaded consecutively. You can have several master portfolio files, but each must have a prefix of "&&", such as &&MasterList1.tic.



Note that the master list can also contain the first ticker file of a set of linked lists. The whole linked ticker lists will be executed first before the next one on the master list.

### Download from incomplete-download ticker list:

After a ticker list or chained ticker lists are downloaded, if there are tickers with no data downloaded (quite often in Intraday download), a corresponding 'incomplete-download' ticker list will be generated. This list has all the same attributes and the same name as the original ticker list but with a prefix of '@@'. For example, the 'portfolio2\_5min.tic' will have the corresponding '@@portfolio2\_5min.tic' generated, if some of its tickers have no data downloaded. HSQuote will automatically re-download for this incomplete-download list one more time, if 'No message prompting during download' option has been selected in Preference. After which, if there are still incomplete download tickers left, the @@portfolio2\_5min.tic file will remain in the portfolio and a prompt appears to ask if you want to download again. You can come back later to download for this list. When the next time this @@portfolio2\_5min.tic file is used for download and all tickers have data downloaded, portfolio2\_5min.tic file will appear in the portfolio instead, and the @@portfolio2\_5min.tic will be deleted. Note that all the @@ ticker files are stored in the same folder as the original ticker files (in the data file folder), and that the @@ticker lists are also chained together when they have incomplete download.



### Download from middle of ticker list:

Note that when a symbol in the ticker list is highlighted (use the mouse to double-click it or drag over it) and you press the 'Start' button, the download process will start from this symbol, and proceed to the end of the list. If you want to add a few new symbols to the portfolio, and download for a long period just for these newly added symbols, you can add them to the end of the list, highlight the first one (or all of them), then download as normal.

### Download just for a few newly added symbols:

You can make use of the feature that the download always starts from the first highlighted symbol to the end. If you want to add a few new symbols to the portfolio, and download for a long period just for these newly added symbols, you can add them to the end of the list, highlight the first one (or all of them), then download as normal.

**More about @@incomplete ticker lists:**

There are at least 5 situations whereby tickers can get onto the incomplete lists. But HSQuote will help you determine which type and you should follow the instructions to clean up the ticker list

- When a ticker symbol has just been changed, a prompt may appear during download and suggest the new ticker symbol. You are advised to let the software automatically change it.
- When you manually enter tickers, there may be several invalid symbols due to typo errors. You can accept the suggestion to remove all of the invalid tickers.
- Many tickers become inactive because the companies are no longer trading or existing. You should also accept the suggestion to remove all of them.
- When you choose a wrong server or forget to run the local QuoteTracker server, sometimes, you will receive prompting messages as well. You should correct the situation first.
- The **ONLY** time you actually allow incomplete ticker lists is when the traffic is heavy and some of the tickers do not fetch data while most of the rest do. You want to know which ones do not have data, get the software to auto-download one more time, or manually re-download.

**HSQuote takes care of most of the situations for you during download. You can also do a preliminary cleanup using 'Open Menu/File/Cleanup Ticker Lists' feature [\(Section 14.5\)](#).**

## 6.2 One-Click or No-Click Process

If you always select a default Ticker file, and always want to continue downloading from when you last downloaded until the present day, you just need to click the 'Start' button. The data from the Start/From Day are downloaded again, but it is OK as duplicated data will be discarded.

You may also use the feature of consecutive download for linked ticker lists. Please see [Section 11.1 Preference Setting – Linking Portfolios for Single Download](#).

### **Auto-download data from the default portfolio:**

You can enable the 'Auto download at startup' setting in Preference. Upon startup of HSQuote, download process will automatically start from the default portfolio. Remember you can link all your ticker lists as mentioned above. You should also set 'No message prompting during download' in the Download section in Preference, to totally avoid user intervention.

If you like, you can use the Microsoft Task Scheduler (Start/ Settings/Control Panel/Scheduled Tasks) to start HSQuote at fixed schedule, and auto-download data without intervention.

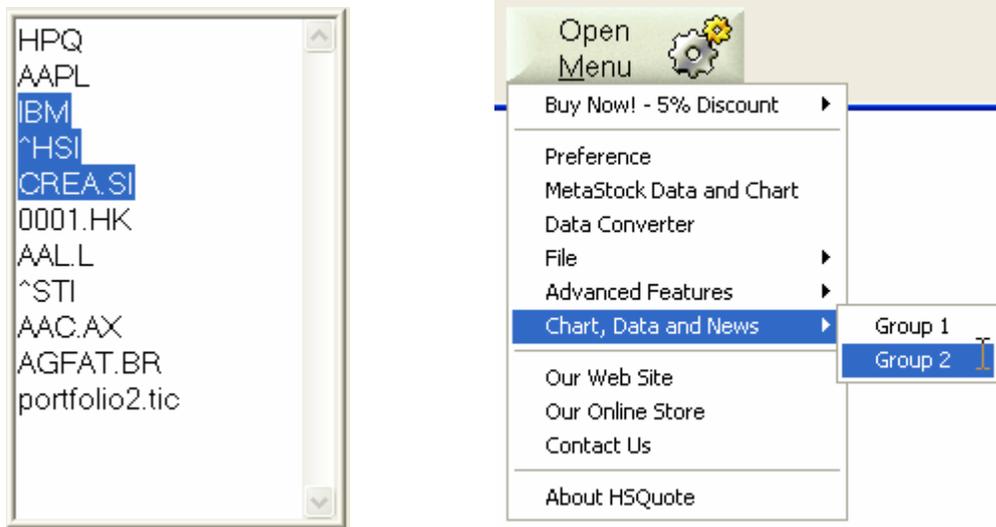
For the computer-savvy users, command line execution may be used with the Microsoft Task Scheduler to further customize the auto-download process. Please see [Section 16.1 Command Line Execution or Batch File Processing](#).

## 7. User-Defined URLs

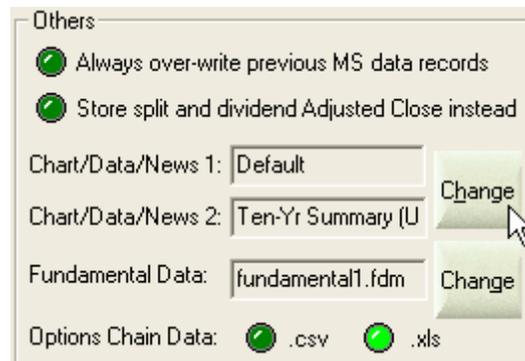
### 7.1 User-Defined URLs for Charts, News, and Data

HSQuote provides 10 user-defined website URLs, so that users can quickly browse to their favorite websites for the selected ticker(s) or automatically download zip data files for all the tickers from the user-defined websites. Note that no data are extracted from these websites, nor any new output files are generated, however.

The 10 user-defined URLs are grouped, rather arbitrarily, into two groups. One of the first 5 URLs will be activated by 'Chart, Data and News 1', and one of the last 5 URLs by 'Chart, Data and News 2'. To browse to these URLs, you first need to select the ticker or a block of tickers, before clicking the Menu.



To enter the URLs, go to the Preference Setting screen, and click on the 'Change' button in the 'Others' section.



The following screen will be presented. You can cut and paste the URL address from the browser, and use SSSS in place of the ticker symbol. Give it a Name, which will be displayed on the Preference screen if selected. Remember to 'Save Changes' after modifying the contents or changing the selection.

**Customized URLs for Charts, Data, and News**

Put your favorite URL addresses with customized parameters in either of the Chart/Data/News groups below. Use SSSS in place of a ticker symbol. You can select one URL in each group for quick access. Just highlight a block of tickers on the Main Screen, click on 'Open Menu/Chart, Data and News 1' or 'Open Menu/Chart, Data and News 2' to quickly go to the corresponding URLs.

Selection	Name	URL Address	User Notes
[ Chart / Data / News - Group 1 ]			
<input checked="" type="radio"/> 1.	Default	http://stockcharts.com/gallery?SSSS	
<input checked="" type="radio"/> 2.	Technical Charts	http://finance.yahoo.com/q/ta?s=SSSS&t=1y&on&z=l&q=l&p=b,m20&a=m26-	Range:1year, Type:line, Scale:Log, Size:L, M/
<input checked="" type="radio"/> 3.	Singapore Stocks	http://esite.sgx.com/chartdata/SSSS.zip	Use symbols from http://www.uobkayhian.com
<input checked="" type="radio"/> 4.	Advance/Decline	http://finance.yahoo.com/advances	
<input checked="" type="radio"/> 5.			
[ Chart / Data / News - Group 2 ]			
<input checked="" type="radio"/> 6.	Default	http://finance.yahoo.com/q/ks?s=SSSS	Key statistics
<input checked="" type="radio"/> 7.	Valuation Ratios	http://yahoo.investor.reuters.com/MG.aspx?target=/stocks/financialinfo/ratios	
<input checked="" type="radio"/> 8.	Financial Ratios	http://yahoo.investor.reuters.com/MG.aspx?ticker=SSSS&target=%2fstocks%2	
<input checked="" type="radio"/> 9.	Ten-Yr Summary (l	http://moneycentral.msn.com/investor/invsub/results/compare.asp?Page=Ter	Ten-year summary of key ratios for US stocks
<input checked="" type="radio"/> 10.			

Save Changes  Exit 

## 8. MetaStock Data and Chart

### 8.1 View and Repair MetaStock Data (Text and Chart Views)

You may view MetaStock data and security information directly from the program without using MetaStock software. Click the 'Open Menu' button, select 'MetaStock Data and Chart'. The selected portfolio will be shown. For Intraday data portfolios, a Time column appears to the right of the Date column, and Open-Interest (O/I) column is removed.

You can view the stored MetaStock data in either Text or Chart view. The Text view provides more data manipulation functions as described below. For HSQuote, there is a simple Chart view which provides better visual aid to spot abnormal data, besides the obvious benefit of seeing any trends and patterns. For HSQuote Plus, the charting capability is much more comprehensive, including indicators, line study with drawing, several chart styles and use of chart templates. [See Section 9: More Charting Features in HSQuote Plus.](#)

#### Text View:

This is the initial view when entering the 'View MetaStock Data' screen in HSQuote. Note that the data view is displayed quickly and moving data view from one ticker to another is faster, because only the first few pages of data are fetched. As you move the slider down, more data will be fetched and displayed.

You may browse to other portfolios by clicking on the 'Browse for Portfolios' button. Selecting a ticker name will display the last two pages of previously downloaded data for the corresponding ticker. Double-clicking the ticker name will provide other information, such as data file name and file location, first date and last date, etc. Ticker name and symbol may be manually changed here.

Symbol	Name	Date	Time	Open	High	Low	Close	Volume
A	Agilent Technologies, In...	10/21/2005	155500	31.139999	31.15	31.1	31.1	81300
AAPL	Apple Computer Inc - AA...	10/21/2005	155000	31.129999	31.15	31.120001	31.139999	106700
ALA	Alcatel - ALA	10/21/2005	154500	31.15	31.15	31.120001	31.120001	35900
AMD	Advanced Micro Device...	10/21/2005	154000	31.209999	31.209999	31.139999	31.15	33800
ARBA	Ariba Inc - ARBA	10/21/2005	153500	31.18	31.200001	31.18	31.200001	13400
COMS	3Com Corp - COMS	10/21/2005	153000	31.16	31.209999	31.16	31.18	14700
CSCD	Cisco Systems Inc - CSCD	10/21/2005	152500	31.1	31.190001	31.1	31.16	26700
DELL	Dell Inc - DELL	10/21/2005	152000	31.110001	31.120001	31.08	31.110001	17100
EMC	EMC Corp - EMC	10/21/2005	151500	31.110001	31.120001	31.1	31.110001	16200
FBR	Friedman, Billings, Rams...	10/21/2005	151000	31.1	31.15	31.1	31.110001	15000
FDX	Fedex Corp (Federal Expr...	10/21/2005	150500	31.129999	31.129999	31.1	31.1	12800
HPQ	Hewlett-Packard Co - HPQ	10/21/2005	150000	31.139999	31.15	31.110001	31.129999	20900
IBM	International Business M...	10/21/2005	145500	31.18	31.190001	31.15	31.15	14800
INTC	Intel Corp - INTC	10/21/2005	145000	31.17	31.18	31.15	31.17	15400
MO	Altria Group Inc - MO	10/21/2005	144500	31.15	31.190001	31.15	31.17	11600
MDT	Motorola Inc - MDT	10/21/2005	144000	31.200001	31.209999	31.139999	31.15	22500
MSFT	Microsoft Corp - MSFT	10/21/2005	143500	31.23	31.25	31.18	31.18	8700
MU	Micron Technology Inc - ...	10/21/2005	143000	31.309999	31.370001	31.219999	31.219999	157700
ORCL	Oracle Corp - ORCL	10/21/2005	142500	31.370001	31.379999	31.309999	31.309999	22800
TXN	Texas Instruments Inc - ...	10/21/2005	142000	31.33	31.370001	31.33	31.370001	10000
YHOO	Yahoo! Inc - YHOO	10/21/2005	141500	31.360001	31.360001	31.32	31.33	36000
TMTA	Transmeta Corp (Santa C...	10/21/2005	141000	31.34	31.379999	31.34	31.370001	29400
ASTM	ASTM	10/21/2005	140500	31.35	31.360001	31.34	31.35	44100
XOMA	XOMA Ltd - XOMA	10/21/2005	140000	31.299999	31.35	31.299999	31.35	73300
DX00Y	DX00Y	10/21/2005	135500	31.290001	31.309999	31.27	31.299999	41200
		10/21/2005	135000	31.33	31.33	31.27	31.290001	19200
		10/21/2005	134500	31.290001	31.33	31.27	31.33	8300
		10/21/2005	134000	31.34	31.35	31.280001	31.280001	10900

The securities may be displayed in the order of the original MetaStock database order (order that you have created them) or in alphabetical order, by selecting the 'Sort by Symbol'.

You may delete an unwanted security by selecting it, and then press the 'Delete Security' button. The ticker will also be removed from the Ticker list. This process may take a few minutes depending on number of securities in the portfolio.

While viewing data, you may want to repair data that look suspicious. You can press and hold the 'Shift' key, then select two dates to indicate the starting and ending period that you want to 'Re-download' or 'Delete Data'. The dates appear in the Fr. and To. windows. Then press the 'Re-download' or 'Delete Data' button. HSQuote will use the same download server associated to this portfolio for the re-download.

### Chart View:

Clicking on the 'Switch to Chart' button will toggle to the Chart view (the button will be changed to 'Switch to Data' and you may toggle back to the Text view.) You may hit the 'Maximized Window' icon on the top right corner to view the chart in full screen.

3-D OHLC candlestick charts are shown together with a line chart for the Close price, and a histogram for the Volume. If you prefer the more conventional Candle charts, click on 'View/Panel Type/2-Panel 2D Candle Chart' as shown below.

By default, a yellow line chart for the Close prices is plotted. You may turn it off in the 'Preference/Other Options'.



Holding down the left button of the mouse while moving it will display the detailed data of the pointed record. As you move the mouse, the text-box shows the location of the mouse and the record number.

To delete a series (bar or line), click to select it, then right click around it until 'Delete Series' shows up. Click on it to delete the selected series.



Note that for speed reason, only the latest 500 data records are fetched and last 80 are displayed. If you prefer to view 500 records as default, select 'File/Show Last 500 Records', or select 500 records as default in the 'Preference/Other Options'.

To view all the stored data, click on the 'All Record' button. You may use the 'Zoom Icon' to zoom into a selected range; use '<' and '>' buttons or the bottom scroll bar to scroll left and right; use the '++' and '--' to zoom in and out of data view.

When a data record looks abnormal, you may right-click the mouse button to display a list of options, and select 'Re-download for This Data Record'. When new data is fetched, the chart will be updated.

To manually change a data record, you may select 'Manually Change This Data Record' from the list, or just double-clicking the left mouse button at the record location. This will bring up a dialog window as shown in section [8.5](#).

You can also check for stock split just for the stock being shown on the chart by selecting the 'Check Splits For This Stock'.



To get more charting features, please upgrade to HSQuote Plus ([see Section 9](#)).

## 8.2 Other Repair – Repair Incomplete Data Online

Regularly you may want to let the program check the MetaStock Database to see whether there are incomplete data that need re-download. The program will search for zero Opens, zero Volume, compare Open, High, Low, and Close data to find any abnormalities. If one is found and Internet is connected, an attempt will be made to re-download the particular data.

Click the Other Repair button and select 'Repair Incomplete Data Online'. The following window will pop up requesting for your choice. You can auto-repair for ALL securities in the selected directory or just repair for the selected security, or 'Cancel' to abort the process.



The data View window may flicker as the data are being presented and scanned. No cause for alarm.

### 8.3 Other Repair – Repair Hi/Lo/Op/CI Data Offline

If data stored in the Yahoo servers are incorrect and continue to be not updated, going online to re-download the data again does not help. Sometimes you may want to speed up the data repair process, and just need to ensure that Open and Close numbers are in between High and Low numbers for charting purposes. In these cases, you may choose to repair Hi/Lo/Op/CI data offline.

Click the Other Repair button and select 'Repair Hi/Lo/ CI Data Offline'. The following window will pop up requesting for our choice. You can auto-repair for ALL securities in the selected directory or just repair for the selected security, or 'Cancel' to abort the process.



The data View window may flicker as the data are being presented and scanned. No cause for alarm.

## 8.4 Other Repair - Adjust for Splits

HSQuote software faithfully downloads data from the Yahoo! servers. It does not modify the data in the download process, except when indicated to repair abnormal data during download in Preference. Yahoo! sites currently do not always adjust the stock values before the split date. You may use this 'Adjust for Splits' feature under 'Other Repair' to automatically scan for possible splits, and make the necessary changes. Another way to get here is from 'Open Menu/Advanced Features/Search and Adjust for Splits'.

You need to select a portfolio either in the main screen or on the Data View screen first.

**Split Data**

1. Search and Confirm for Splits  
Press the 'Search' button to find and confirm splits.

Possible Splits	Status
HPQ : 2 for 1 split on 10/30/2000	Confirmed
AAPL : 2 for 1 split on 6/16/1987	Confirmed
AAPL : 2 for 1 split on 6/21/2000	Confirmed
AAPL : 2 for 1 split on 9/29/2000	
AAPL : 2 for 1 split on 2/28/2005	Adjusted
IBM : 5 for 4 split on 5/18/1964	Confirmed

Buttons: Search, Save To File, Open File, SPLITS.TXT

2. Split Data (Click on a Possible Split Item Found Above)  
Confirmed splits can be adjusted together with the 'Adjust All Confirmed' button. Otherwise, select and adjust one at a time.

Ticker:  Split Date:

Ratio:  New Shares for  Old Shares

Buttons: Adjust All Confirmed, Adjust Selected

3. Check Unconfirmed Splits  
For unconfirmed splits, highlight them (hold shift key down and select), press the 'Check' button to see Yahoo charts.

Buttons: Check

**Split data have been adjusted.**

Buttons: Exit

HSQuote also detects the EURO currencies switch on the 1<sup>st</sup> January 1999. The split-adjust feature can automatically adjust for the appropriate conversion rates (you don't need to indicate the rate). The process is very similar to the stock splits, except that the volume and open-interest remain the same after adjustment.

### **Step 1: Search for Splits**

When you first come to this Split Data screen, all the stocks in the portfolio database have been checked once without connecting to Internet for confirmation (You may turn off this pre-search feature in Preference/Other Options.) If you have Internet connection, you should press the 'Search' button. The selected portfolio will be automatically scanned for possible data splits again, and then automatically check at Yahoo! Finance site to confirm the stock splits. This Search step also automatically determines whether Volume data need to be adjusted or not. Otherwise volume is always adjusted, and to always turn it off, select in Preference/Other Options. Suggestions are presented in the Possible Splits window. Those that can be automatically confirmed are marked Confirmed in the Status column. Clicking any of the possible split items will copy the symbol, ratio, and split date to the Split Data fields below.

This step also automatically confirms EURO currency conversion on 1<sup>st</sup> Jan 1999 for stocks of European Monetary Union countries. The conversion rate is provided as well.

### **Step 2: Adjust Split Data:**

Generally, you can adjust all the 'confirmed' splits, you can press the 'Adjust All Confirmed' button to complete the task at one go. That is it.

Alternatively, you may click on a confirmed split item from step 1 will automatically fill the fields. You may manually enter the relevant information as well. Note that the split date is the actual split date reported, and not the date that you want to start changing the data. Press the 'Adjust Selected' button and data will be adjusted and stored back in the MetaStock database, text view or chart view will also reflect the new data. The item will be marked as 'Adjusted' in the Status column.

If you make a mistake and want to revert back to the original data, you just need to select the same split item, and reverse the ratio (say from 2:1 to 1:2), then click the 'Adjust Selected' button again.

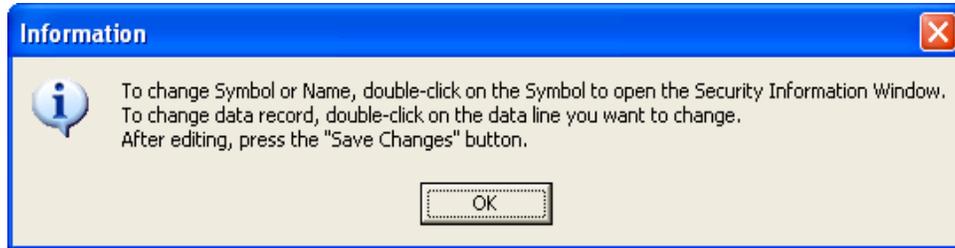
If you have a long list of possible splits and you cannot complete confirming and adjusting in one session, you can save the results to a file in the same directory as the portfolio. First, type in the file name in the space (default is SPLITS.TXT) before the 'Open File' button. Press the 'Save To File' button to save. To retrieve this file in future, just click on the 'Open File' button to refresh the Possible Splits screen with the previously stored results.

### **Step3: Check Splits (Optional)**

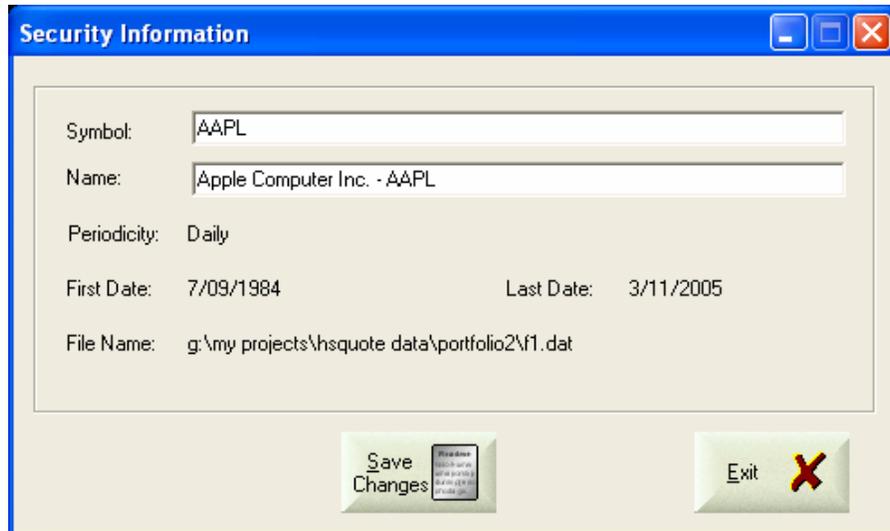
Some times, a stock might drop by 33% in price at the Open, but it was not a 3 for 1 split. The 'Search' in step 1 will not confirm this split. If you want to see more information with a stock chart, you can press the 'Check' button, the software does two things – firstly confirm at the Yahoo! Finance site as in 'Search', and secondly for those possible splits that cannot be confirmed, open an Internet Explorer window to show a stock chart with known splits indicated. You can check whether there was an indication of data split. If you just want to check for a block of possible spit items instead of all of them, just hold down the Shift key and select that block of possible split items, then click the 'Check' button. Note that when no stock is selected/ highlighted, all the possible splits without comments in the Status column will be checked.

## 8.5 Other Repair - Change Name, Symbol, or Data

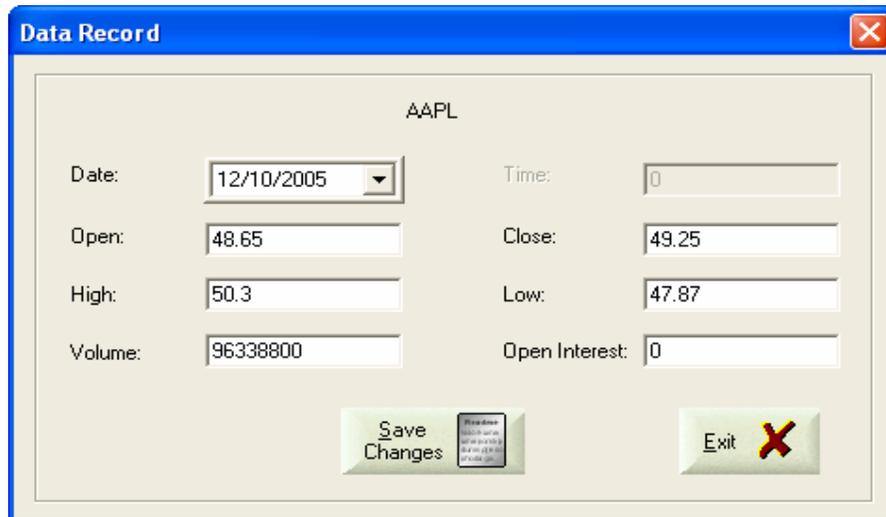
Clicking on 'Other Repair – Change Name, Symbol or Data' only brings up an Information message below.



To actually change the Name or Symbol, just click on the Symbol to select it first, then double-click it again to bring up the following screen. Make the changes and click the 'Save Changes' button.



To change the data record, double-click on the data line that you want to change.



## 8.6 Print MetaStock Database

You may print the stored MetaStock data records. Go to the Data View screen, select the security. Right click on the data, and select 'Print Data View'.

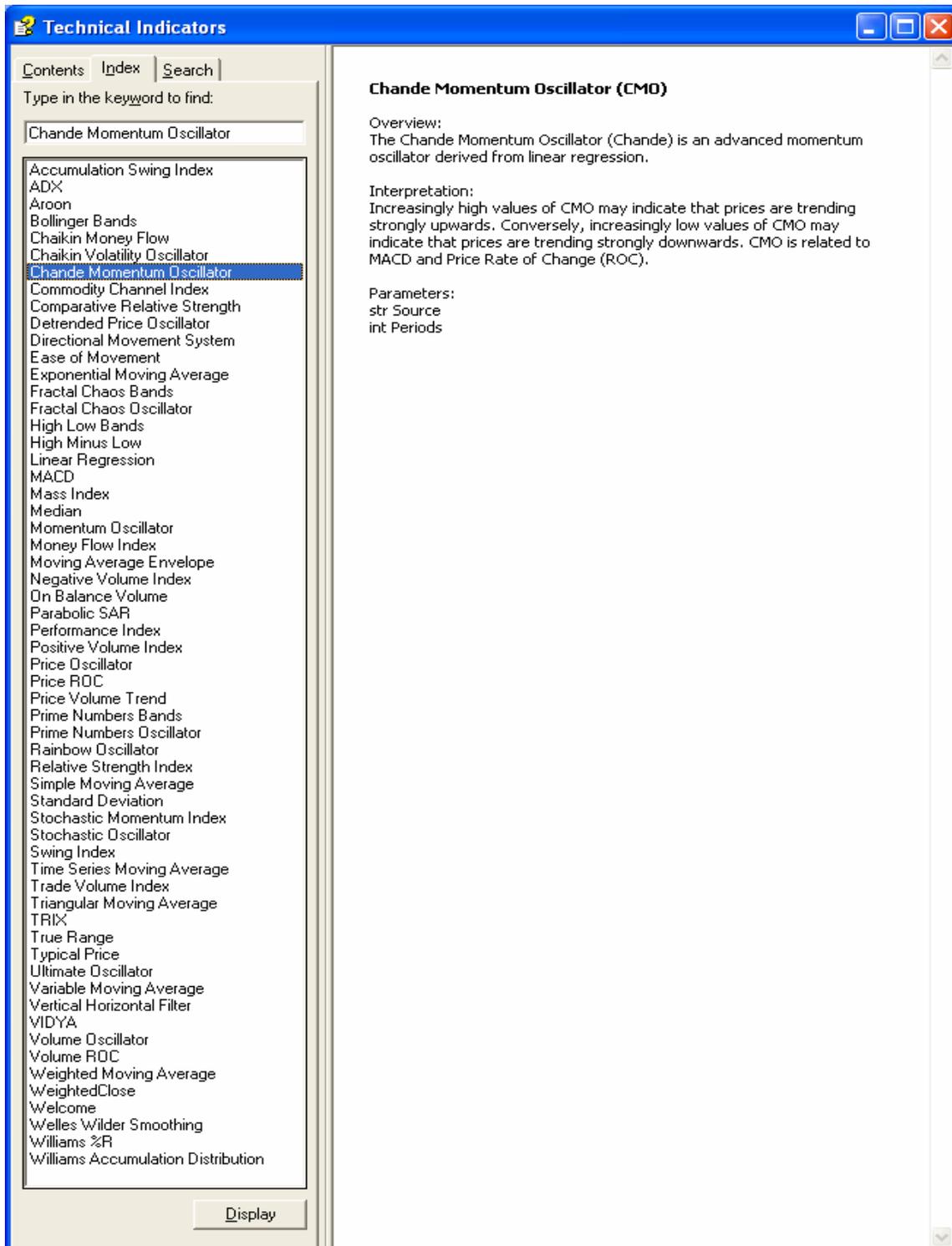
Date	Open	High	Low	Close	Volume	O/I
10/21/2005	56.84	56.98	55.360001	55.66	28454500	0
10/20/2005	54.470001	56.5	54.349998	56.139999	48491500	0
10/19/2005	52.07	54.959999	51.209999	54.939999	36024400	0
10/18/2005	53.25	53.950001	52.200001	52.209999	21771000	0
10/17/2005	53.98	54.23	52.68	53.439999	22029800	0
10/14/2005	54.029999	54.349998	52.790001	54	36984000	0
10/13/2005	49.439999	53.950001	49.27	53.740002	66627700	0
10/12/2005	48.650002	50.299999	47.869999	49.25	96338800	0
10/11/2005	51.23	51.869999	50.400002	51.59	43781600	0
10/10/2005	51.759998	51.91	50.279999	50.369999	18125200	0
10/07/2005	51.720001	51.93	50.549999	51.299999	24210100	0
10/06/2005	53.299999	53.499999	52.899999	51.700001	27054900	0
10/05/2005	54.3	54.499999	53.68	52.779999	21813200	0
10/04/2005	54.9	54.999999	53.68	53.75	19266400	0
10/03/2005	54.16	54.540001	53.68	54.439999	18126900	0

Print Data View  
Manually Change Data Records

## 9. More Charting Features in HSQuote Plus

### 9.1 Technical Indicators

HSQuote Plus provides close to 60 commonly used technical indicators as shown below, with overview, interpretation and parameters for each indicator, given in the Help file.



**Technical Indicators**

Contents Index Search

Type in the keyword to find:

Chande Momentum Oscillator

- Accumulation Swing Index
- ADX
- Aroon
- Bollinger Bands
- Chaikin Money Flow
- Chaikin Volatility Oscillator
- Chande Momentum Oscillator**
- Commodity Channel Index
- Comparative Relative Strength
- Detrended Price Oscillator
- Directional Movement System
- Ease of Movement
- Exponential Moving Average
- Fractal Chaos Bands
- Fractal Chaos Oscillator
- High Low Bands
- High Minus Low
- Linear Regression
- MACD
- Mass Index
- Median
- Momentum Oscillator
- Money Flow Index
- Moving Average Envelope
- Negative Volume Index
- On Balance Volume
- Parabolic SAR
- Performance Index
- Positive Volume Index
- Price Oscillator
- Price ROC
- Price Volume Trend
- Prime Numbers Bands
- Prime Numbers Oscillator
- Rainbow Oscillator
- Relative Strength Index
- Simple Moving Average
- Standard Deviation
- Stochastic Momentum Index
- Stochastic Oscillator
- Swing Index
- Time Series Moving Average
- Trade Volume Index
- Triangular Moving Average
- TRIX
- True Range
- Typical Price
- Ultimate Oscillator
- Variable Moving Average
- Vertical Horizontal Filter
- VIDYA
- Volume Oscillator
- Volume ROC
- Weighted Moving Average
- WeightedClose
- Welcome
- Welles Wilder Smoothing
- Williams %R
- Williams Accumulation Distribution

Display

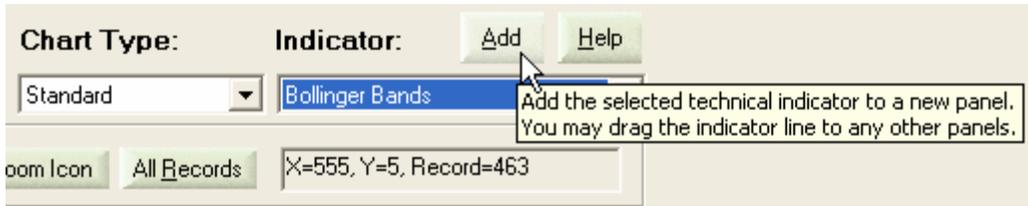
#### Chande Momentum Oscillator (CMO)

**Overview:**  
The Chande Momentum Oscillator (Chande) is an advanced momentum oscillator derived from linear regression.

**Interpretation:**  
Increasingly high values of CMO may indicate that prices are trending strongly upwards. Conversely, increasingly low values of CMO may indicate that prices are trending strongly downwards. CMO is related to MACD and Price Rate of Change (ROC).

**Parameters:**  
str Source  
int Periods

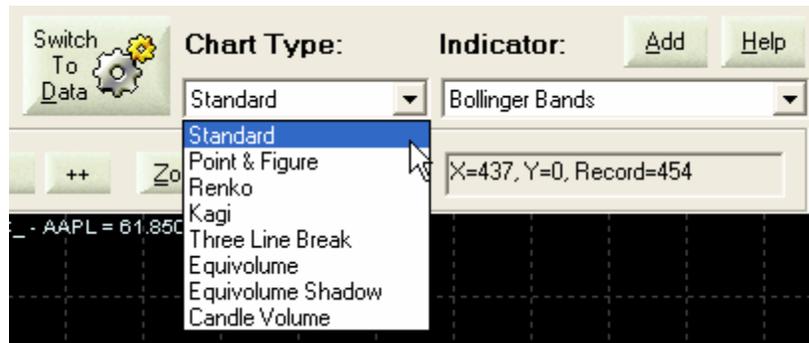
Select an indicator and click on the 'Add' button, you can then modify the default parameters and color, if necessary, in the dialog box that pops up. The indicator will be plotted in a new window just above the Volume Panel. Some indicators are best plotted together with the OHLC chart (top panel), you can select it and drag it to the top panel.



## 9.2 Chart Styles

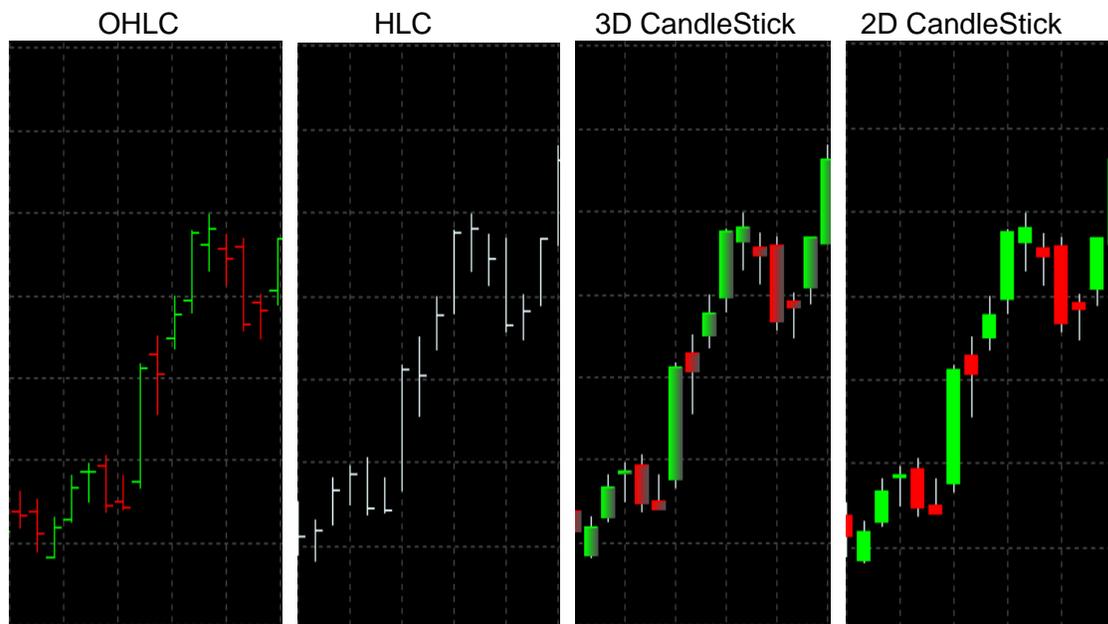
### Chart Type:

There are 6 chart types, namely, Standard, Point & Figure, Renko, Kagi, Three Line Break, Equivolume, Equivolume Shadow and Candle Volume.



### Bar Style:

For Standard Chart Type, there is a further selection in the menu 'Style / Bar Style' to pick either Standard OHLC Bar, HLC Bar, or CandleStick. For CandleStick, you can show in 2D or 3D style in menu 'Style / 3D Style'.



Some users may prefer the conventional CandleStick charts, when the real body is filled in (black body), the close of the session was lower than the open; and when the real body is empty (white body), the close was higher than he open. HSQuote Plus provides silimar thing, but adds more color information to the candlesticks. In 2D CandleStick charts, separate outlined colors are used for filled body (red) and empty body (green). In addition, you can turn on an option in 'Preference/Other Options' to display the filled body with session up/down colors (compare close price with the previous session.)

If you prefer the conventional black and white bodies, you can go to the Color tab, and change 'Up Tick Color', 'Down Tick Color', and 'Series and Candle Wick Color' to black, and 'Background Color' to white. Save it as a Template (File / Save General Template). You can then Load this Template for use.

2D Filled/Empty Body Candlesticks

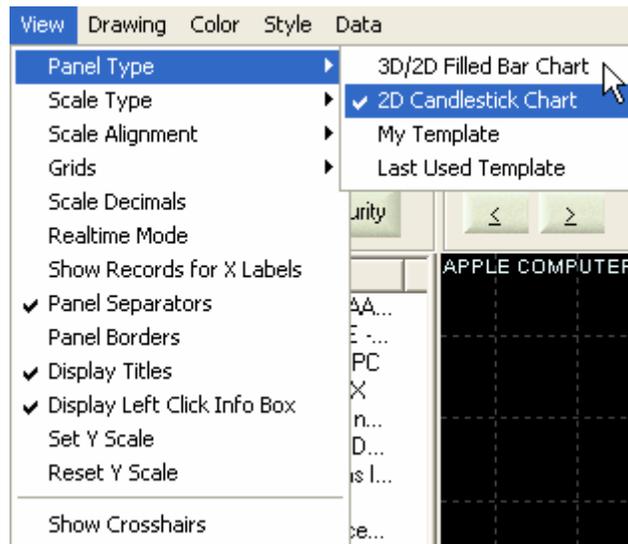


2D Black/White Body Candlesticks



**Panel Type:**

To make things even more convenient, four panel types are provided in the View tab.



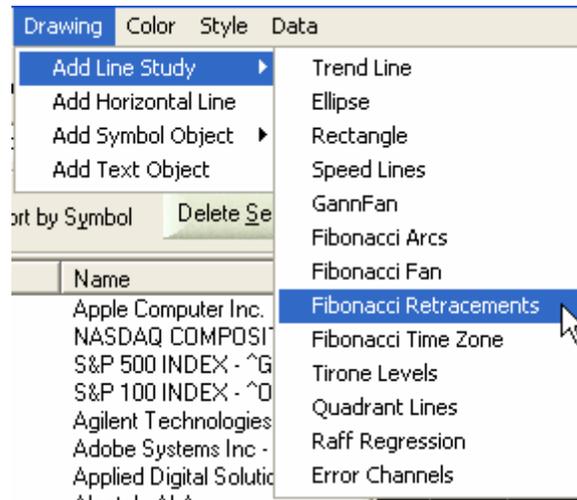
The first two panel types, **3D/2D Filled Bar Chart** and **2D Candlestick Chart**, are what have been described earlier. The last two relate to the User Templates (See [Section 9.4](#) on how to create and use Templates).

#### **Recommended Books**

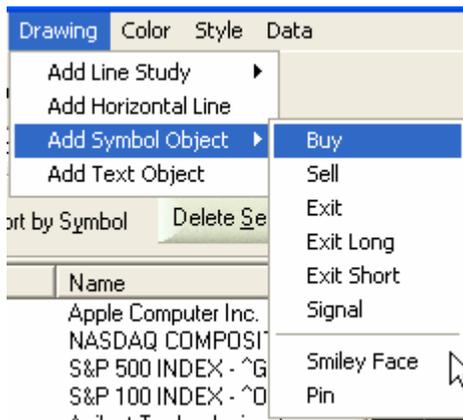
- Beyond Candlesticks, New Japanese Charting Techniques Revealed, by Steve Nison, published by John Wiley & Sons, Inc. (including a good coverage of Three-Line Break charts, Renko charts, and Kagi charts)
- Point & Figure Charting, The Essential Application for Forecasting and Tracking Market Prices, by Thomas J. Dorsey, published by Wiley & Sons, Inc.
- Schwager On Futures Technical Analysis, by Jack D. Schwager, published by Wiley & Sons, Inc.

### 9.3 Drawing and Line Study

HSQuote Plus provides simple drawing tool and commonly used analysis tool. The screenshot below captures the set of line study tools. Users are assumed to have the knowledge of how to use and interpret them.



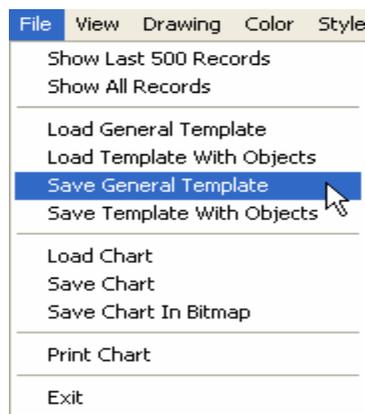
Other drawing tools include adding horizontal line, text, and symbols. Several symbols are provided to indicate Buy, Sell, Exit, Exit Long, Exit Short and special signals, and Smiley Face and Pin for general use. To move an object around after adding it, just click to select it, then drag it to where you want to place it. To delete an object, click to select it, and right click to see the 'Delete Object' box. Click on it to remove the object.



## 9.4 Templates

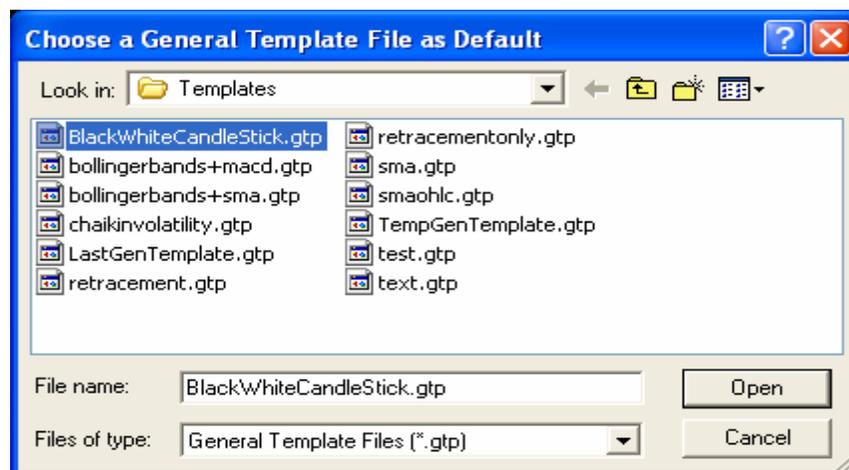
Different markets may require different technical analysis tools. You may want to combine several technical indicators to get bullish or bearish confirmation signals. Or you may simply want a different color scheme, say a black and white body candlestick chart with white background, etc. The best way is to create your own Templates and store for later use.

After creating your chart, click on 'File / Save General Template'. This saves the style properties and technical indicators to a file. You can later apply the chart style and indicators to another chart that already contains data. Note this feature does not save objects (text, bitmap symbols, trend lines, line studies, etc.). To save the template with objects, use the 'Save Template with Objects' (however, this is not so useful, as the objects are usually applied to the specific stock that was saved with.)



To re-use a template, use the 'Load General Template' or 'Load Template with Objects'.

To choose a particular template as the default display, you can select 'My Template' as the Panel Type, and pick one that has been saved before.



'Last Used Template' option automatically uses the latest template accessed through Save or Load. It assumes that you want to continue using it until you make a change.

## 9.5 Other Chart Features

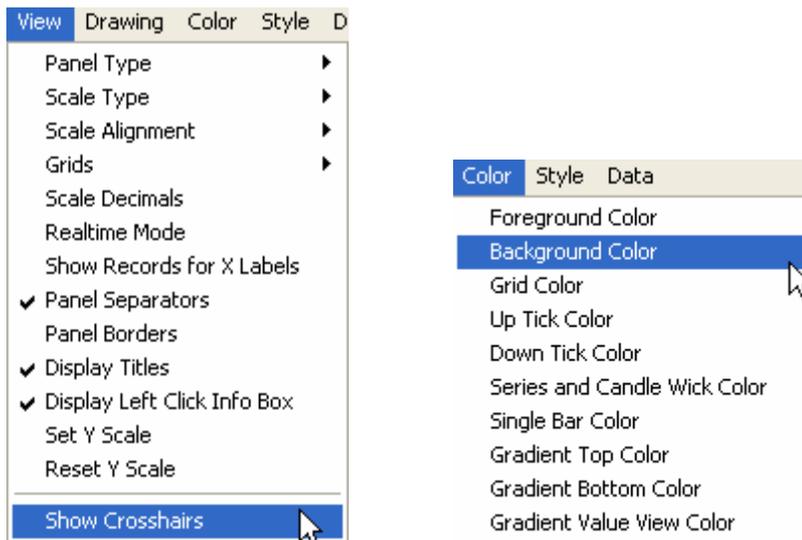
### Load / Save / Print Charts:

Charts can be saved under the 'Charts' subfolder of their corresponding portfolios, and be loaded later on. Charts may be printed as well. These are available in the File tab. To save a bitmap file of a chart, use the "Save Chart in Bitmap" and store it in the 'Bitmaps' subfolder.

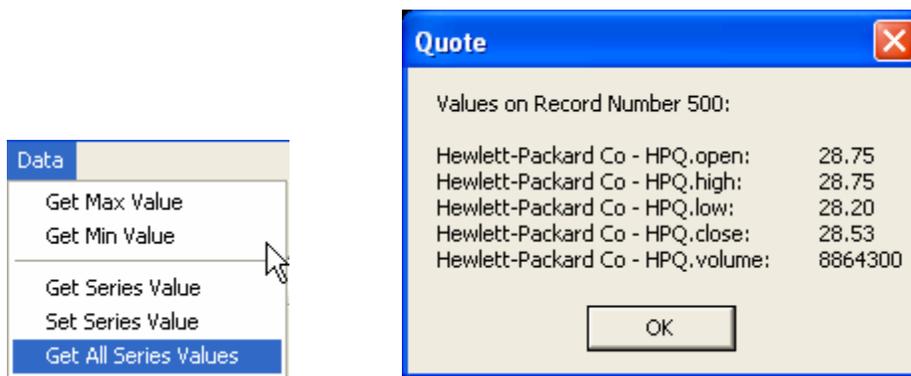
### Display Darvas Boxes:

This is in the 'Style' tab, for those who are familiar with analysis using Darvas Boxes. Darvas boxes are dynamic trading range boxes that have two areas. The bottom part (red rectangle) is a stop loss area and the top part is the "break out" area. When prices broke above the top of the box, Mr. Darvas would buy if the stock was making new 12-month highs on high volume. He would then stay long and add new positions as new boxes developed. When the price of the stock dipped below the stop-loss section of the box (a percentage of the price, just below the bottom of the box), he would take profits and move on to another stock.

### Change View and Color:



### Display and Set Data:

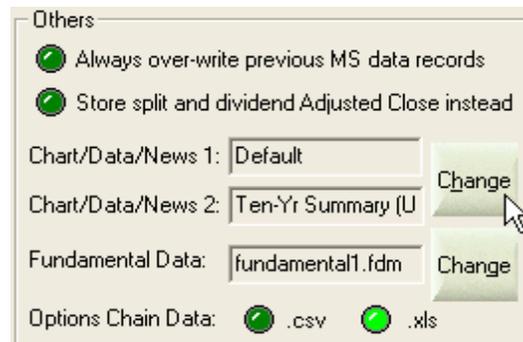


## 10. Advanced Features

### 10.1 Collect Fundamental Data

Some technical analysts also pay attention to fundamental data before trading/investing. HSQuote attempts to facilitate the process of collecting fundamental data from various information sources on the Web.

You can have different configuration files to store different types of information you want to collect for different purposes. To add, edit or set a fundamental data configuration file, go to the Preference screen, and click on the 'Change' button for fundamental data collection.



The following configuration table will be displayed. Two samples configuration .fdm files are provided, one generating a true Excel worksheet .xls file (recommended) and the other generating .csv text files. The key difference is that the .xls file can have many worksheets, with each worksheet for one portfolio and containing all the tickers for that portfolio. So, you can store all the fundamental data on just one single file. On the other hand, individual .csv files will be created for different portfolios. In addition, the .xls file is formatted much better.

**Fundamental Data Collection**

Configuration File:

Click items in Valuation, Financial or Trading Lists in the column order from left to right of your output file. Data may vary as they are fetched from multiple sources.

Abbreviation  
 Ctry: US only or All Countries  
 mrq = Most Recent Quarter  
 ttm = Trailing Twelve Months  
 lfy = Last Fiscal Year

Clear All Columns

Output File:  .csv  .xls

Valuation Measures	Ctry	No.	Financial Highlights	Ctry	No.	Trading Information	Ctry	No.	Column Heading	Ctry	No.
Market Cap (intraday)	All	2	Fiscal Year Ends	US		Beta	US		Symbol	All	1
Book Value Per Share	All	3	Most Recent Quarter	US		52-Wk % Change	US		Market Cap (intraday)	All	2
Enterprise Value	US		Profit Margin (ttm)	US		52-Wk Chg-wrt SP500	US		Book Value Per Share	All	3
Trailing P/E (ttm)	All	4	Operating Margin (ttm)	US		52-Wk High	All	10	Trailing P/E (ttm)	All	4
Forward P/E	US		Return on Assets (ttm)	US		52-Wk Low	All	11	PEG Ratio	All	5
PEG Ratio	All	5	Return on Equity (ttm)	US		50-Day MA	All	12	Price/Sales (ttm)	All	6
Price/Sales (ttm)	All	6	Revenue (ttm)	US		200-Day MA	All	13	Price/Book (mrq)	All	7
Price/Book (mrq)	All	7	Revenue Per Share (ttm)	US		Avg Volume (3-mth)	All	27	EBITDA (ttm)	All	8
Enterprise Value/Rev	US		Revenue Growth (lfy)	US		Avg Volume (10-day)	US		Diluted EPS (ttm)	All	9
Enterprise Value/EBITDA	US		Gross Profit (ttm)	US		Shares Outstanding	US		52-Wk High	All	10
			EBITDA (ttm)	All	8	Float Shares	US		52-Wk Low	All	11
			Net Income Avl to Common	US		Insiders Held %	US		50-Day MA	All	12
			Diluted EPS (ttm)	All	9	Institutions Held %	US		200-Day MA	All	13
			EPS Estimate Current Year	All		Short Shares	US		Short Ratio	All	14
			EPS Estimate Next Year	All		Short Ratio	All	14	Dividend	All	15
			EPS Estimate Next Quarter	All		Short % of Float	US		Dividend Yield	All	16
			Earnings Growth (lfy)	US		Shares Short-prior mth	US		Dividend Pay Date	All	17
			Total Cash (mrq)	US		Dividend	All	15	1 Year Target	All	18
			Total Cash Per Share (mrq)	US		Dividend Yield	All	16	Day's Open Price	All	19
			Total Debt (mrq)	US		Dividend Pay Date	All	17	Day's High Price	All	20
			Total Debt/Equity (mrq)	US		Ex-Dividend Date	All		Day's Low Price	All	21
			Current Ratio (mrq)	US		Last Split Factor	US		Last Trade Price	All	22
			Cashflow From Operations	US		Last Split Date	US		Day's Volume	All	23
			Free Cashflow (ttm)	US		1 Year Target	All	24	1 Year Target	All	24
						Stock Exchange	All	25	Stock Exchange	All	25
						Ticker Name	All		Ticker Trend	All	26

Different data are grouped into four sections for easy search – Valuation Measures, Financial Highlights, Trading Information, and Last Trade Data. To start, you may enter a new name for your configuration file, or click on the ‘Clear All Columns’ to start anew. You can click the items you want to collect data for, in the order you want them to appear from left to right columns on the worksheet. The list on the right with the ‘Column Heading’ displays the items selected, and the number shows the corresponding column number. You can press the ‘Undo’ button to undo the selections.

Note the ‘Ctry’ (or Country) column, you see ‘US’ only or ‘All’ Countries. The ‘All’ items are generally applicable to all countries, but you should not be surprised that information still can be non-available. ‘US’ only literally means for US securities only. One key difference is that the ‘All’ items are fetched collectively and thus a lot faster. The sample ‘fundamental1.fdm’ contains only ‘All’ items, and the processing is faster.

The selections will be automatically saved to the configuration file. However, when you change the default configuration file which is to be used, you need to click on the ‘Set Default’ before exiting this screen. The default configuration file will be shown on the Preference screen.

To start the fundamental data collection, on the main screen, click on the ‘Open Menu/Advanced Features/ Collect Fundamental Data’. Similar to data download, all the ticker lists can be chained together for one-step download. Note that ticker lists using the Oanda and Brite Futures servers will be ignored.

When all is done, the Excel sheet generated will be displayed if the .xls output file format is selected in the configuration file. For .csv format, since there can be many files generated, only a message saying successful completion is displayed instead. These files are stored in the ‘Fundamental Data’ subfolder in the Data File location.

## 10.2 Download Options Chain

Downloading Options Chain is no different than the other downloads, except that you start the download in 'Advanced Features/Download Options Chain'. You may choose the .csv or .xls format on the Preference screen. The generated files are labeled with the current date automatically, such as Opt\_20051023, etc, and will be stored in the 'Options Data' subfolder in the Data File location. If .xls format is chosen, the spreadsheet will be open when the download is completed. Note that each portfolio has its own worksheet.

	Underlying Symbol	Underlying Price	Exchange	Option Root	Option Ext	Type	Expiration	Data Date or Time	Strike	Last	Bid	Ask	Volume	Open Interest
2	AAPL	55.66	*	AAQ	KZ	call	11/18/2005	Oct 21	32.5	23.5	23.1	23.4	10.0	180.0
3	AAPL	55.66	*	AAQ	WZ	put	11/18/2005	Oct 21	32.5	0.05	0	0.05	20.0	21.0
4	AAPL	55.66	*	AAQ	KG	call	11/18/2005	Oct 21	35.0	20.8	20.6	20.9	20.0	132.0
5	AAPL	55.66	*	AAQ	WG	put	11/18/2005	Oct 21	35.0	0.05	0	0.05	103.0	104.0
6	AAPL	55.66	*	AAQ	KU	call	11/18/2005	Oct 21	37.5	18.4	18.1	18.4	51.0	207.0
7	AAPL	55.66	*	AAQ	WU	put	11/18/2005	Oct 21	37.5	0.05	0	0.1	25.0	105.0
8	AAPL	55.66	*	AAQ	KH	call	11/18/2005	Oct 21	40.0	15.7	15.6	15.9	77.0	411.0
9	AAPL	55.66	*	AAQ	WH	put	11/18/2005	Oct 21	40.0	0.05	0	0.1	30.0	15946.0
10	AAPL	55.66	*	QAA	KV	call	11/18/2005	Oct 21	42.5	13.7	13.2	13.5	11.0	353.0
11	AAPL	55.66	*	QAA	WV	put	11/18/2005	Oct 21	42.5	0.1	0.05	0.1	150.0	7458.0
12	AAPL	55.66	*	QAA	KI	call	11/18/2005	Oct 21	45.0	10.8	10.8	11.0	190.0	1915.0
13	AAPL	55.66	*	QAA	WI	put	11/18/2005	Oct 21	45.0	0.1	0.1	0.15	363.0	14843.0
14	AAPL	55.66	*	QAA	KW	call	11/18/2005	Oct 21	47.5	8.6	8.5	8.7	183.0	6492.0
15	AAPL	55.66	*	QAA	WW	put	11/18/2005	Oct 21	47.5	0.3	0.25	0.3	6277.0	10583.0
16	AAPL	55.66	*	QAA	KJ	call	11/18/2005	Oct 21	50.0	6.3	6.2	6.3	5397.0	26478.0
17	AAPL	55.66	*	QAA	WJ	put	11/18/2005	Oct 21	50.0	0.45	0.45	0.5	3765.0	31902.0
18	AAPL	55.66	*	QAA	KK	call	11/18/2005	Oct 21	55.0	2.65	2.65	2.75	7492.0	42694.0
19	AAPL	55.66	*	QAA	WK	put	11/18/2005	Oct 21	55.0	1.9	1.85	1.95	5645.0	10659.0
20	AAPL	55.66	*	QAA	KL	call	11/18/2005	Oct 21	60.0	0.95	0.85	0.9	7371.0	17072.0
21	AAPL	55.66	*	QAA	WL	put	11/18/2005	Oct 21	60.0	5.1	5.0	5.2	649.0	1225.0
22	AAPL	55.66	*	QAA	KM	call	11/18/2005	Oct 21	65.0	0.3	0.25	0.3	4737.0	6738.0
23	AAPL	55.66	*	QAA	WM	put	11/18/2005	Oct 21	65.0	9.6	9.4	9.6	190.0	456.0

### **10.3 Download Dividend Data**

Historical dividend data are available from Yahoo! Finance web site as well. They can be downloaded by specifying the From and the To dates, and then clicking on “Open Menu >> Advanced Features >> Download Dividend Data”. Linked lists may be used too.

In MetaStock format, the same dividend data will appear on Open/High/Low/Close prices. You can see the dividend trend on the MetaStock chart view.

In Personalized Text format, users may want to select Symbol, Date, and Close, and then check the “My Header Line” with “Symbol, Date, Dividend” indicated.

You may trigger dividend data download from a command line as well with the “-dvd” switch.

### **10.4 Download Ticker Lists**

[Please see Section 3.1 Download Yahoo! Ticker Lists.](#)

### **10.5 Update QuoteTracker Tickers**

[Please see Section 12.7 Download from Local Medved QuoteTracker Server.](#)

### **10.6 Auto-Update MetaStock Names**

The ticker files only contain lists of ticker symbols. When MetaStock data file conversion is chosen, MetaStock index files and data files will be automatically generated. However, the MetaStock Names carry the same ticker symbol labels. If you prefer to see the actual company or index names while browsing MetaStock files, you may use this convenient feature.

First, select the portfolio that you want to update MetaStock names. Click the ‘Open Menu’ button, select ‘Advanced Features/Auto-update MetaStock Names’. The names will be fetched from the Yahoo! sites and automatically modified in the MetaStock index files.

Although this approach takes a little longer time than other alternatives, such as the one gathered by the Fundamental Data Collection process, the names gathered are the more complete and accurate version. The full name will also include the ticker symbol, such as, “Apple Computer Inc. – AAPL” .

## **10.7 Search and Adjust for Splits**

Instead of selecting the ‘Adjust for Splits’ feature in Other Repair, you can choose this short cut directly from the Advanced Features. The selected portfolio in the main window will be searched automatically for possible splits. If you prefer to go to the Search screen without pre-search, disable it in the Preference/ Other Options. [See Section 8.4.](#)

Note that this feature is more accurate for the Daily MetaStock database. For Weekly and Monthly data, please use with caution.

## **10.8 Run PostDownloadProcessing**

PostDownloadProcessing feature will be described in [Section 16](#). For convenience, the post download processing actions specified in the “PostDownloadProcessing.xls” file can be activated without completing a data download. This is activated by “Open Menu >> Advanced Features >> Run PostDownloadProcessing”.

## 11. Preference Settings

### 11.1 Linking Portfolios for Single Download

Please see Section 6.1 for the two methods to link portfolio files – linking and master list. This section provides more details about the linking method.

Although you can theoretically have up to 2000 tickers in one portfolio file, you may not want to do so for several reasons. For example,

- You have stocks, forex and commodity futures data and need different download servers.
- Some charting programs cannot take more than 256 files in one portfolio, forcing you to split your portfolio files into several portions.
- It's a good idea to separate securities for different countries, or separate mutual funds, indices, metals, and stocks.
- Speed for processing MetaStock database is faster.

However it would be time consuming to Start each and every portfolio. HSQuote provides you an easier way to handle this need. You can link several ticker files together so as to auto-download all of them at one go. For example, if you want to start with 'portfolio1.tic', and continue on to portfolio2.tic, you simply append 'PORTFOLIO2.TIC' to the end of the list of ticker symbols in the 'portfolio1.tic' file. Make sure that the 'Enable download of linked ticker files' in Preference is selected. When the last ticker of 'portfolio1.tic' has been processed, the main window will be refreshed with tickers for the 'portfolio2.tic', and download continues. You may append another portfolio files to the end of the ticker lists in 'portfolio2.tic' file. Note that each ticker portfolio has its own Server.

**Portfolio**

Copy From    Set as Default    Delete

portfolio1.tic

Server: Yahoo 1 (Default)

Default: portfolio1.tic

**Tickers**

Create Ticker List ?    Add    Del

HPQ  
AAPL  
IBM  
AAC.AX  
^STI  
MSFT  
^HSI  
0001.HK  
PORTFOLIO2.TIC

**Simple Steps**

1. Connect to Internet in usual way.
2. Choose a Ticker File in the Portfolio. Tickers will appear in the Tickers box. May edit directly inside the box. File will be saved automatically.
3. Select the Download Period, and press 'Start'.

### Preference Setting

#### Linking Portfolios for Single Download

Link several ticker files so as to auto-download all at one go (e.g. append 'PORTFOLIO2.TIC' to the end of the ticker list in portfolio1.tic file will continue the download for tickers in portfolio2.tic.)



Enable download of linked ticker files



Use same Start Date as first ticker file

Note that each portfolio will be handled exactly the same way as if you were downloading for one list at a time. You may pause and continue anywhere. It takes its own last successful download date and downloads from that date, stores data to its own subfolder. If for some reason, you want to enter one Start date (From date) and continue to use the same download period for all consecutive ticker list downloads, you can select the 'Use same Start Date as first ticker file' option.

It is possible to have different download timeframes (daily, weekly, monthly, intraday) for different ticker lists. Each ticker list will have its own associated timeframe stored in the config.cfg file (in installed program folder) when the list has been successfully downloaded once before. So, in order to link portfolios with different timeframes, you need to run individual portfolio ticker list with the timeframe you want at least once.

To allow downloading individual portfolio list again, you need not remove the appended .TIC line from the ticker list. You just need to de-select the 'Enable download of linked ticker files' in the Preference Settings.

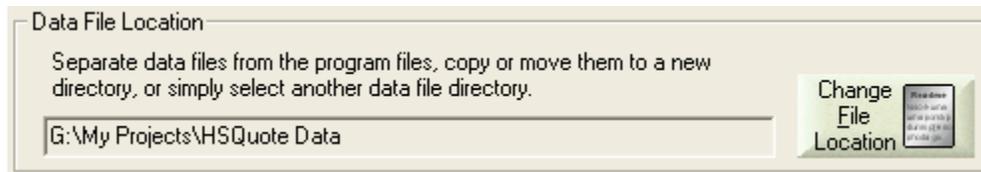
Note that from version 1.89, HSQuote provides an alternative of using a Master List to link ticker files and both methods can be used together. Please see [Method 2 Master List](#) in Section 6.1.

## 11.2 Data File Location

When you first install the program, all the example ticker files are located in the same subfolder as the installed program. Portfolio folders will be generated and stored here as well. Data files generated will be stored in their corresponding portfolio subfolders. This is perfectly fine. But if you have the following needs, you may want to transfer/copy data files to another location.

- Want to separate data files from program files, so as to make the whole data files portable.
- Keep MetaStock data files in different folders.
- Want to temporarily use another data file folder.
- Want to create a backup copy of the data files. Transfer/copy data files without deleting the old data files.

Go to the 'Data File Location' section of the Preference menu, the current data file folder is shown. Click on the 'Change File Location' button. After selecting the new data file folder, you will be asked whether to copy the old data files (don't copy if you just want to point to a different folder). If data are copied, you will also be asked whether to delete the old ones.



When you later update to a new HSQuote version, this same data file location will be automatically used. You do not need to select again.

\*\*\*\* Please note that if you choose to manually move the data files to another location without using the above-mentioned method, you will still need to click on the 'Change File Location' button to indicate the new Data File Location.

## 11.3 Output File Settings

### Personalized Text or Spread Sheet Output Format:

- You may define your own personalized text or spread sheet output format and column sequence. Click the Clear Columns button, and click the column items in left to right order. The .csv format by definition requires Comma Separation, therefore when a non-comma is chosen as the delimiter, the file extension will be switched to .txt. You may also indicate your own extension in the box.
- A **Time** column will be inserted after the Date column for Intraday, and Refresh Quick Download. Downloaded time will be automatically converted to country specific local time and Day-Light Saving adjusted (each list should have tickers for one country only in order for this auto-local-time-adjustment to work properly.)
- You may define your own header line. You may need to use 'Ticker' instead of 'Symbol'.
- Many regional stocks have Yahoo symbols ending with the country suffix. You may remove it in the output text file.
- If 'Individual Stock Files' in the main screen is also selected, you have an option whether to merge newly downloaded data with the existing Metastock database when generating individual stock files. Choose the 'Merge new data in individual stock files'. The 'Output starts fr:' date indicates the beginning date of data pulled from the MetaStock database. The End date is the To: date of the download period.
- **Alias:** You may want to output the local ticker symbol or names instead of Yahoo symbols. You can select Alias in one column, and go to 'Open Menu/File/Edit Alias Table' to enter your alias table in the given spreadsheet. You will need to 'Save' it back to the same file name and folder. Note that you will continue to use Yahoo symbols in ticker lists for download.

Personalized Text or Spread Sheet Output Format

Click in Order

Symbol  
Date + (Time)  
Open  
High  
Low  
Volume  
Close  
Open-Int  
Adj-Close  
Period  
Alias

Append More Columns in Last-trade

Clear Columns

1	2	3	4	5	6	7	8	9	10	11
S	AL	D	O	H	L	C	V			

My Header Line: Ticker,Per,Date,Open,High,Low,Close,Volume,Alias Symbol

Time Format: HH:MM:SS Time auto-inserted after Date column for Intraday and Refresh Quick Download

Date Format: MM/DD/YYYY

Column Separator: Comma  Reverse Date Order

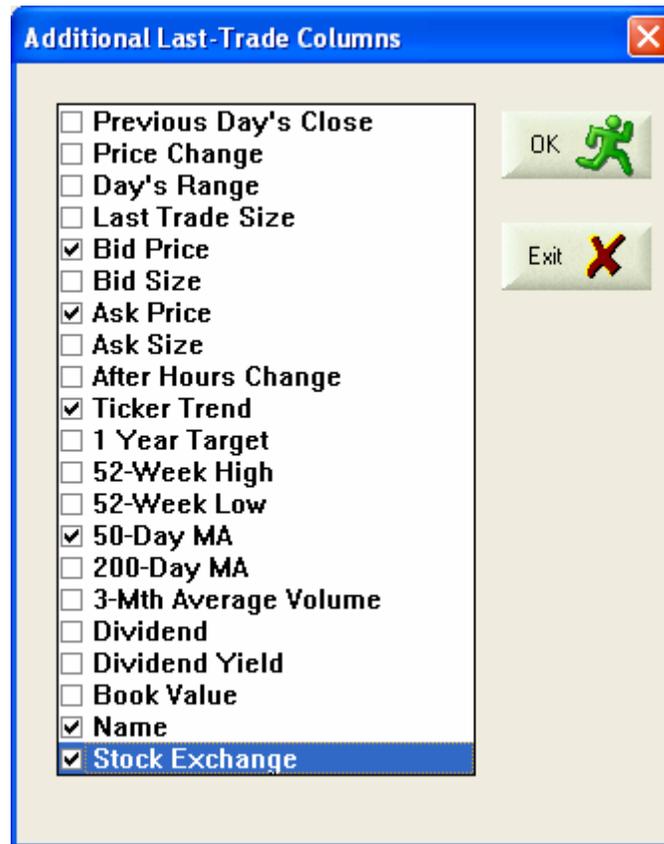
Decimal Separator: Period  Include Header Line

Tickers:  Remove Carets ^  Remove Country Suffix

File Extension:  .prn  .txt  .csv  .XLS

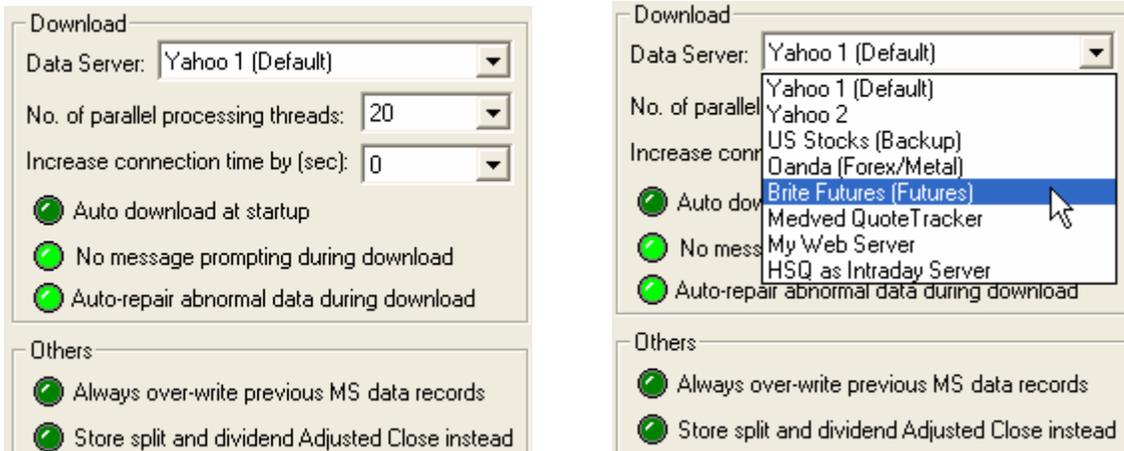
Merge new data in individual stock files - Output starts fr: 1/ 1/1980

- **Append More Columns in Last-trade:** In Personalized Text format, and in Last-trade download only, more columns can be included. Click on the 'Append More Columns in Last-trade' button to select.



## 11.4 Download Settings

As more free historical data download sources become available, they may be added to HSQuote and made available to users.



Normally you should choose Yahoo Server 1 or Server 2 as Yahoo provides the widest range of data. The default Yahoo 1 server usually has the most up-to-date data. For historical currencies data, Oanda.com provides more complete and accurate data (section [12.1](#) and [12.2](#)). Historical commodity futures may be downloaded from the Brite Futures Inc (section [12.3](#)).

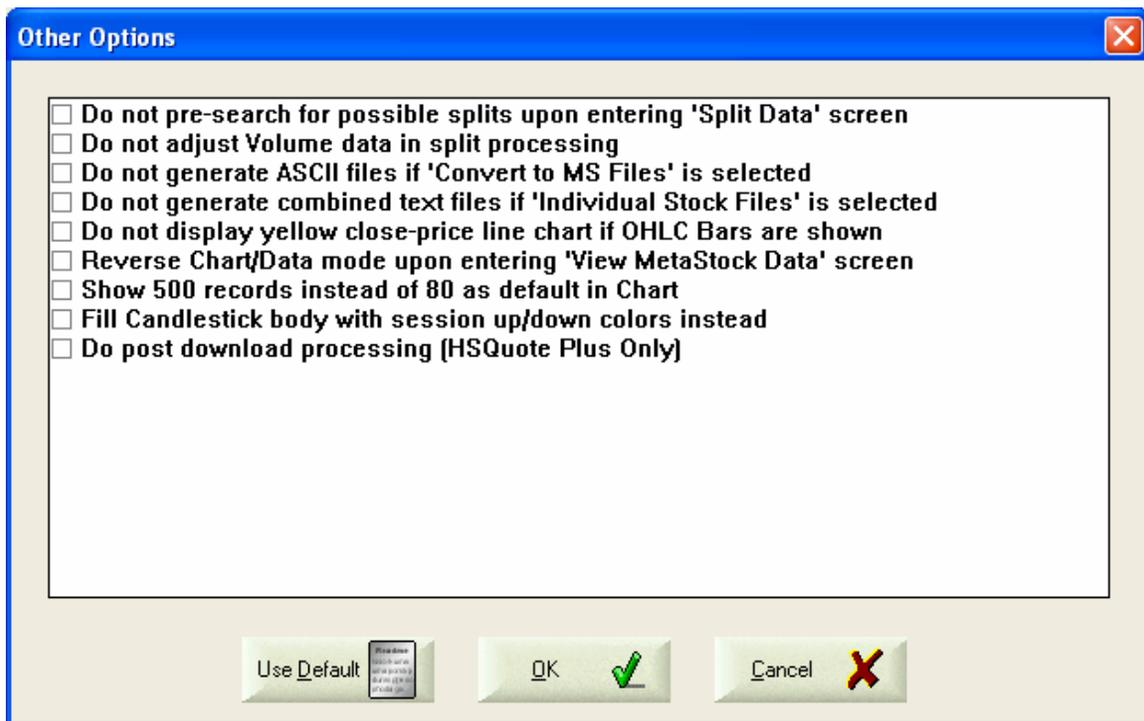
If you have a fast speed Internet connection, you should make full use of the bandwidth by selecting higher number of parallel download processing threads. Up to 60 parallel download paths are possible, but depending on the download period, countries of the data sources, time of download, your computer CPU power, and other applications being run on your computer, the optimal number of threads may differ. You should experiment to see what is best for you. Note that higher number of parallel download processing threads will result in longer time to abort the download process if you want to pause the process.

'Auto download at startup' option, when selected, enables data to be automatically downloaded at startup, starting with the default portfolio file. You can use the Microsoft Task Scheduler (Start/Settings/Control Panel/Scheduled Tasks) to start HSQuote at fixed schedule, and auto-download data without intervention. This feature may be best used together with the selection of 'No message prompting during download' option, so that totally no user intervention may be achieved.

In End-of-Day download, or the 20-min delayed real-time download mode, some stocks may have incomplete data. Open may be zero, or perhaps high, low and open prices are all zero. Most charting programs will have problems dealing with this. You may want to set the 'Auto-repair abnormal data during download' option, so that at least some reasonable data will replace the zero values. Another way is to run the 'Other Repair – Repair Hi/Lo/Op/Cl Offline' as in Sec [8.2](#).

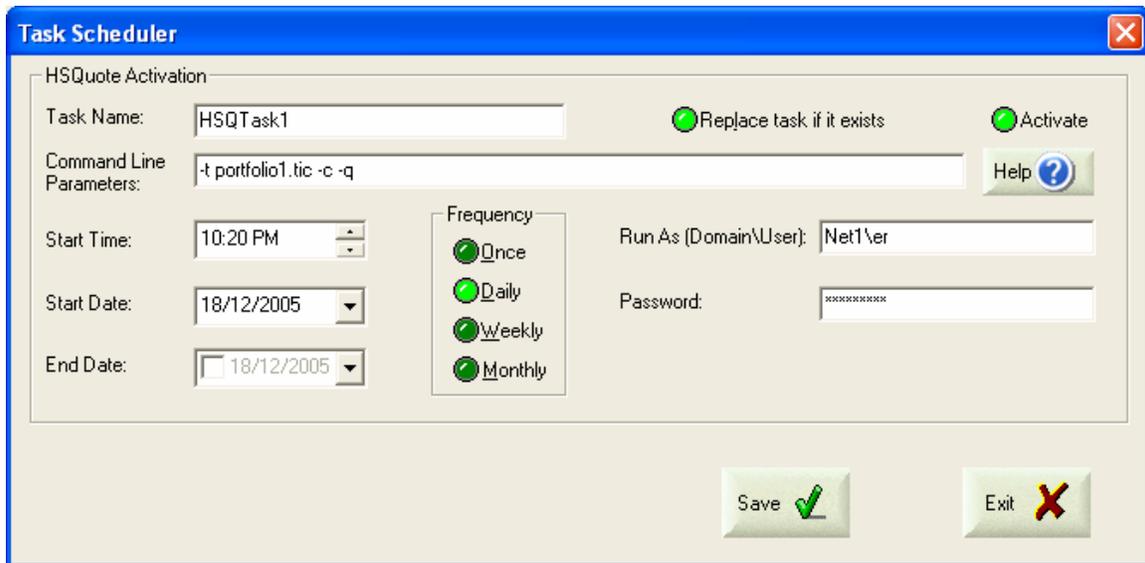
## 11.5 Other Options

- Option to 'Always over-write previous MetaStock data records'. The selection will force newly downloaded historical data to over-write the stored data.
- Option to 'Store split and dividend Adjusted Close' instead of the default Close. However, it is often better to store the normal Close data, and use the auto adjust for split feature to adjust the open, high, low and close prices as well as volume. Choosing Adjusted Close prices does not allow auto-detection for splits, and may be more confusing.
- HSQuote has set several default behaviors in the program. They can be changed with the '**Other Options**' button.



## 11.6 Task Scheduler

Microsoft has provided a Task Scheduler (Start / Control Panel / Scheduled Tasks) to allow executing of tasks at pre-set times. HSQuote facilitates set-up of HSQuote tasks in Microsoft Task Scheduler with the 'Task Scheduler' button on the Preference screen.



The screenshot shows a dialog box titled "Task Scheduler" with a blue header and a close button (X) in the top right corner. The main area is titled "HSQuote Activation" and contains the following fields and controls:

- Task Name:** A text box containing "HSQTask1".
- Replace task if it exists:** A radio button that is selected.
- Activate:** A radio button that is selected.
- Command Line Parameters:** A text box containing "-t portfolio1.tic -c -q".
- Help:** A button with a question mark icon.
- Start Time:** A dropdown menu showing "10:20 PM".
- Start Date:** A dropdown menu showing "18/12/2005".
- End Date:** A dropdown menu showing "18/12/2005" with a checkbox to its left.
- Frequency:** A group box containing four radio buttons: "Once", "Daily", "Weekly", and "Monthly". The "Daily" option is selected.
- Run As (Domain\User):** A text box containing "Net1\er".
- Password:** A text box containing "xxxxxxxx".
- Save:** A button with a green checkmark icon.
- Exit:** A button with a red X icon.

A unique Task Name is required for each task. The Help button shows the command line parameters. To store a scheduled task in Microsoft Task Scheduler, enable the 'Activate' option and use the 'Save' button to save the settings. To remove the Task, specify the Task Name, dis-select 'Activate', and then 'Save'.

Note that the Domain\User and Password may be required for the tasks to be executed.

## 12. Download Data

### 12.1 Download Historical Currencies Data from Oanda

Oanda.com provides wider range and more accurate historical currencies data. HSQuote uses the following symbol format to retrieve data from Oanda.com (same symbols can be used for Yahoo real-time download as well):

SSSDDD=X      where SSS is the three-letter symbol for Source currency  
and DDD is the three-letter symbol for Destination currency

US	USD
Australia	AUD
Austria	ATS
Belgium	BEF
UK	GBP
Canada	CAD
Euro	EUR
France	FRF
Germany	DEM
Hong Kong	HKD
Indonesia	IDR
Italy	ITL
Japan	JPY
Singapore	SGD
Spain	ESP
Sweden	SEK
Switzerland	CHF
Thailand	THB

Please look for other symbols at Oanda's  
Foreign Exchange Currency Converter website:  
<http://www.oanda.com/convert/classic>

Your ticker list may look like:

USDAUD=X  
USDJPY=X  
USDEUR=X  
USDCAD=X  
USDGBP=X  
USDCHF=X  
AUDUSD=X  
JPYUSD=X  
EURUSD=X  
CADUSD=X  
GBPUSD=X  
CHFUSD=X  
SGDAUD=X  
AUDSGD=X  
SGDUSD=X  
USDSGD=X

Note that for each ticker, only 2000 days of data (or about 5 years of data) are downloaded at a time. To download 10 years of historical data, you will need to download in two times – one for first 5 years, and the other for the previous 5 years.

Note that Oanda only provides daily close data, thus, open, high, low data will be made the same as close data automatically in HSQuote. There is no Intraday data either. This is not a problem with downloader. Also volume is irrelevant and shown as zero.

## 12.2 Download Historical Commodity Futures from Brite Futures Inc.

HSQuote uses the commodity futures symbols at Brite Futures, Inc. to retrieve futures data. Each symbol should end with '=F'. Please look at the symbols at the website:

<http://www.britefutures.com/symbols.asp>

ssmy=F            for Daily data download  
ss=F              for Weekly and Monthly data download

where ss is Symbol, m is Month, y is Year.

If a contract has both Regular Trading Hours (day session) and Composite (day and night sessions combined), the Regular day session contract usually has a prefix 'R'.

Daily, weekly, and monthly symbols should be on separate ticker lists, as Daily, Weekly, and Monthly historical downloads are used respectively.

**Note:** You need the IE browser for this feature to work. If you cannot successfully retrieve data, your browser may be set to block all cookies. You need to have the browser set to accept cookies for downloading data from the BriteFutures. On the IE browserTools menu, click Internet Options. On the Privacy tab, move the slider down to 'High' or below.

If you still cannot download commodity futures, please go to a web-page such as:

<http://www.britefutures.com/BFCharts/BFChart.asp?contract=RCLZ06>

Scroll the page down to the bottom, and check/select "Price Monitor" just on top of the "Printer-Friendly Chart" button, and enter, say, 100 in the \*Days box. Leave the browser open, and try downloading Daily data in HSQuote again.

**Note:** You may like to choose the "Backup (Futures, Stock)" server to download futures data if BriteFutures data are not available. One more advantage of this backup server is that the Daily contracts are Continue contracts, and you don't need to change symbols every month. Weekly and Monthly data are Nearest contracts from the backup server.

### 12.3 Download Historical Metals Data from Oanda or Yahoo!

The following quotes for precious metals are currently supported at Yahoo, using the 20-min delayed Real-Time download only.

XAUUSD=X for Gold

XPDUUSD=X for Palladium

XPTUSD=X for Platinum

XAGUSD=X for Silver

Just type these four symbols in the ticker list box:

XAUUSD=X

XPDUUSD=X

XPTUSD=X

XAGUSD=X

Oanda has historical data for these 4 precious metals. You can use the same symbols above. In addition, you can download to different currencies as well, using the currency symbols in Section [12.1](#). For example, to Euro dollars as in:

XAUEUR=X

XPDEUR=X

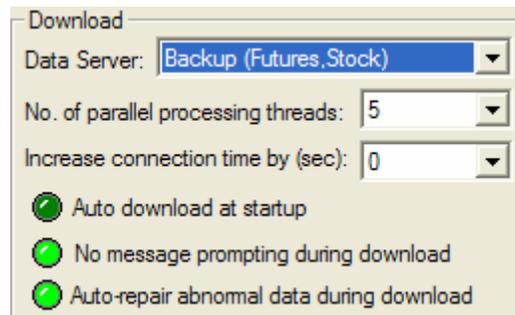
XPTEUR=X

XAGEUR=X

## 12.4 Download from Backup Server

When Yahoo! historical servers or BriteFutures servers are down for maintenance, you may choose the Backup server to retrieve historical US stocks and commodity futures. The current backup server uses the same US stock symbols as Yahoo and the same futures symbols as BriteFutures. So you can use them directly.

Note that you may use the Backup server to download Daily futures contracts instead of using BriteFutures, as the Daily contracts are continue contracts and you do not need to change symbols every month. The Weekly and Monthly contracts are Nearest contracts.



The screenshot shows a 'Download' dialog box with the following settings:

- Data Server: Backup (Futures,Stock)
- No. of parallel processing threads: 5
- Increase connection time by (sec): 0
- Auto download at startup
- No message prompting during download
- Auto-repair abnormal data during download

This server is slow, thus the No. of parallel processing threads is automatically limited to 5.

## 12.5 Download Real-time Data from Local Medved QuoteTracker Server

Many users already have access to some streaming real-time data feed from their own brokerage firms, and have already subscribed to some real-time data feed. Many websites also provide free but delayed real-time tick data. This can be a major data source if you run your own data collection server on your own computer. Then instead of HSQuote fetching data from Yahoo, it can fetch data from this local data server.

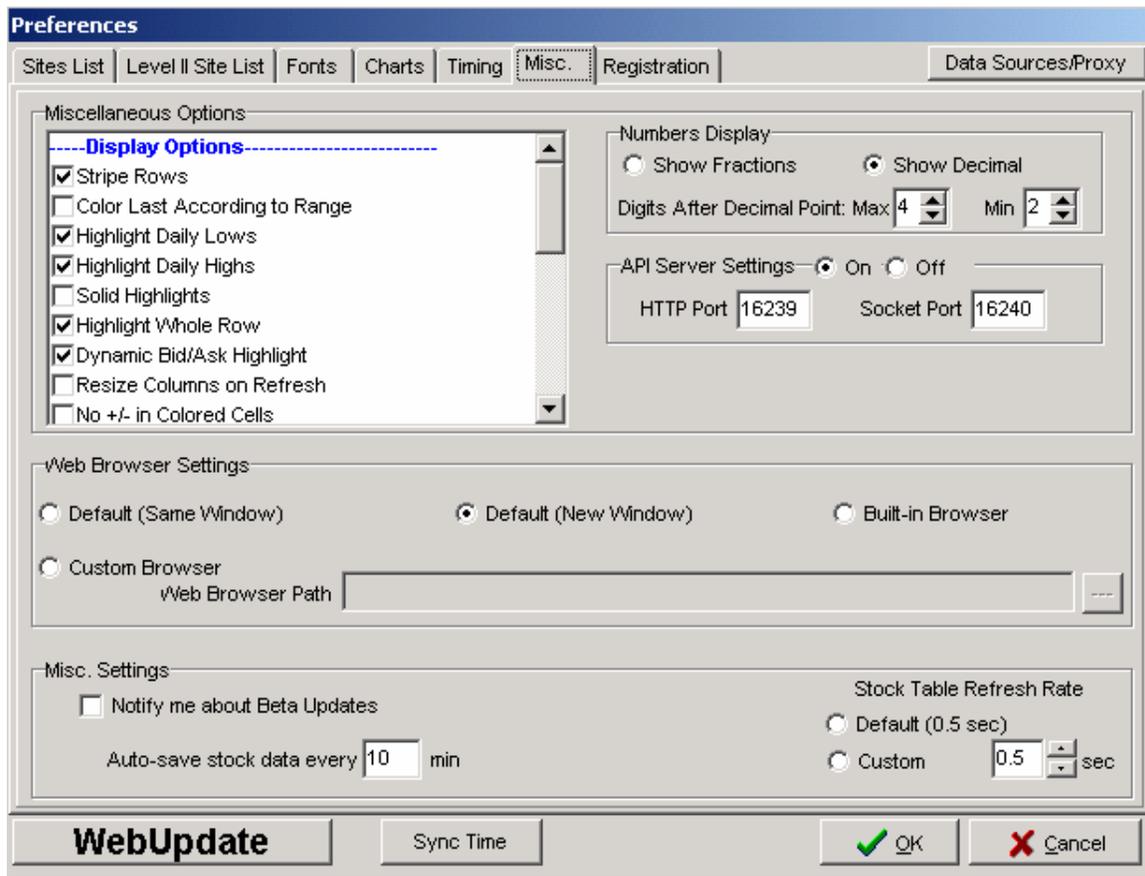
There is a free software, Medved QuoteTracker, which does a good job of collecting data from many real-time data sources. The supported data sources are given in this url:

<http://www.quotetracker.com/qsources.shtml>

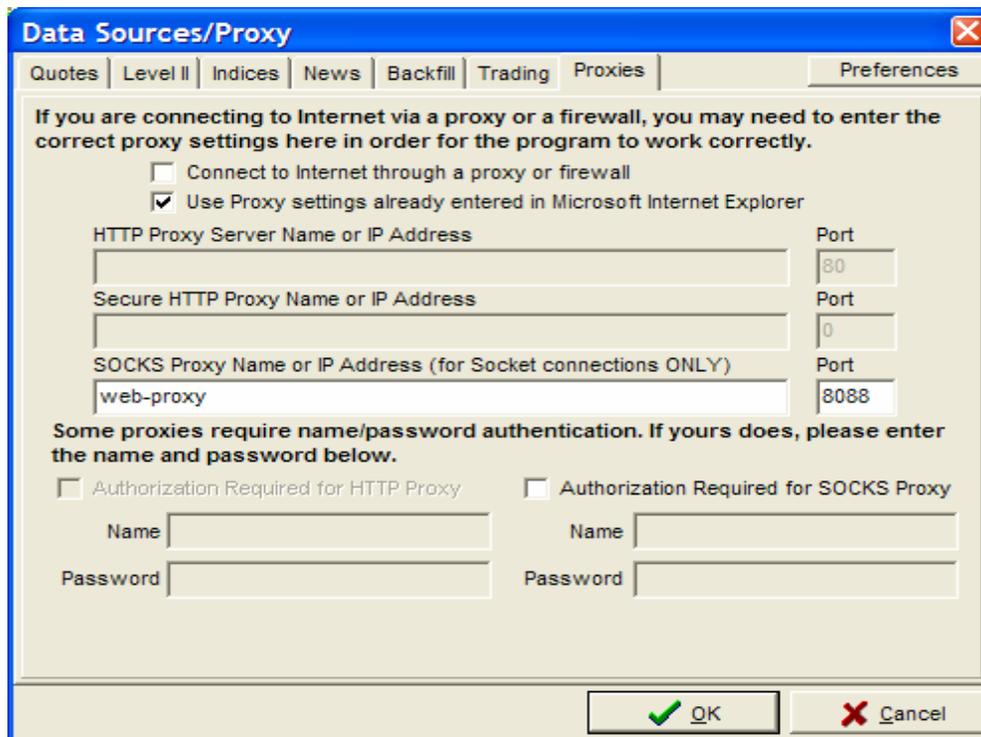
You can download the free software at:

<http://www.quotetracker.com/download.asp>

HSQuote interfaces with QuoteTracker in a seamless manner. You can select the QuoteTracker as the data server and converts the real-time tick data to OHLC/Volume Intraday data in MetaStock. Firstly, you need to remember to turn ON the API Server Settings and enter 16239 for the HTTP Port in QuoteTracker ('Options/Edit Preferences'). Remember also that you will need to run QuoteTracker on the same computer to collect data, otherwise data will not be presented to HSQuote.)



Click on the “Data Sources/Proxy” button and select the Proxies tab. Select the “Use Proxy settings already entered in Microsoft Internet Explorer”, and enter the appropriate Socks Proxy Name or IP Address and Port number.



Now go to the Quotes tab and set up your brokerage site, User ID and Password.

**Several features are provided by HSQuote:**

- **Update portfolio tickers on QuoteTracker:** ‘Open Menu/Advanced Features/Update QuoteTracker Tickers’ automatically transfers and updates the whole selected portfolio to QuoteTracker, and creates a portfolio having the same name but with a suffix of ‘\_RT’. Note that while you can transfer many tickers to QuoteTracker, the number of tickers in a portfolio is limited by the data sources. For example, Ameritrade Streaming limits to 80 tickers, and some others up to 500 tickers.
- Intraday download with no refresh: all the collected tick data by QuoteTracker for the last few days will be fetched to HSQuote and converted to Open/High/Low/Close and corresponding Volume data for the Intraday periods. The converted data are best stored in MetaStock database.
- Intraday download with refresh: for the first pass, all data from 7:00 AM today until present time will be fetched to HSQuote and converted to Open/High/Low/Close and corresponding Volume data for the Intraday periods. Subsequent refresh cycles will just fetch tick data from the previous cycle to speed up download process.
- For Daily download, HSQuote will take the last realtime data for the day, and overwrites any daily data for the day. Only Close and day volume are available.
- HSQuote will ignore Weekly and Monthly downloads when the Medved QuoteTracker server is selected.
- For Lasttrade download, it will be the same as Daily download, except that when a refresh rate is picked, the last trade data will regularly fetched and replace the previously stored daily data. Only Close and day volume are available.

## 12.6 Download Intraday Data for US Stocks and Indices

For Intraday data, only US stocks and several US market indices can be downloaded via the Intraday download. As long as Intraday is selected and Server is not “HSQ As Intraday Server” or “My Web Server”, HSQuote will assume US stocks and market indices.

Symbols used are exactly the same as those for historical data download. For example, Microsoft is MSFT. For indices, please refer to the “translation-table.csv” that comes installed in the program folder. You can use either the Yahoo symbols (those with a caret ^ prefix) or the BusinessWeek symbols.

Yahoo Symbols	Businessweek Symbols	Full Name
^DJI	.DJI	DJ 30 Industrials
^NYA		NYSE Composite
^IXIC	NASD	Nasdaq Composite
^IXQ	NCMPX	Nasdaq National Market Composite
^NDX	LXD.X	Nasdaq 100
^IXFN	OFINX	Nasdaq Financials
^IXF	IXF.X	Nasdaq Financials 100
^IXID	INDSX	Nasdaq Industrials
^IXIS	INSRX	Nasdaq Insurance
^IXK	IXCOX	Nasdaq Computers
^IXTR	TRANX	Nasdaq Transportation
^IXUT	IXTCX	Nasdaq Telecommunications
^NBI	NBI.X	Nasdaq Biotech
^GSPC	NSX.X	S&P 500 Index
^OEX	OEX	S&P 100 Index
^MID	MIA.X	S&P 400 MidCap
^SML		S&P 600 SmallCap
^XAX	XAX.X	AMEX Composite
^NWX	NWX.X	AMEX Networking
^RUI	RY0	Russell 1000
^RUT	RUT.X	Russell 2000
^RUA		Russell 3000
^TYX		30-Year Bond
^TNX		10-Year Note
^FVX		5-Year Note

## 12.7 Download Intraday Data for Non-US Stocks

For Intraday data, only US stocks and several indices can be downloaded via the Intraday download. The rest are not available. One approach is to use the 20-min delayed Last-trade download from Yahoo! Finance site, and refresh the download every minute, convert to local time, then pack these minute tick data into OHLC/Volume Intraday data according to user-defined Intraday interval.

This feature is enabled when 'HSQ As Intraday Server' is selected on the main screen. However, this is at best a poor-man's approach to collect Intraday data. You will need to keep HSQuote running just for this task throughout the whole trading hour in order to collect all data. Any interruption will make the data incomplete and less useful.

**Portfolio**

Copy From Set as Default Delete

Netherlands AEX\_I5.tic

Server: HSQ as Intraday Server

Default: &&MasterList1.tic

**Tickers**

Create Ticker List Add Del

^AEX  
AABA.AS  
AGN.AS  
AH.AS  
AKZA.AS  
ASML.AS  
BHR.AS  
DSM.AS  
REN.AS  
FORA.AS  
GTO.AS  
HGM.AS  
HEI.AS

**Output File Format**

ASCII File for MetaStock  
 Convert to MS Files  
 Personalized Format Set  
 Individual Stock Files

File Name: Netherlands AEX\_I5.

**Download Period**

Today Records  Daily  
 Weekly  
 Monthly  
 Intraday  
 Lasttrade

Interval: 5-Min  
Refresh Every: 5-Min

Start

**Simple Steps**

1. Connect to Internet in usual way.
2. Choose a Ticker File in the Portfolio. Tickers will appear in the Tickers box. May edit directly inside the box. File will be saved automatically.
3. Select the Download Period, and press 'Start'.

- Intraday download with no refresh: all the collected tick data (internally stored in a MetaStock folder with prefix of 'lt\_' to the portfolio name) will be fetched to HSQuote and converted to Open/High/Low/Close and corresponding Volume data for the Intraday periods. The converted data can only be stored in MetaStock database.

- Intraday download with refresh: for the first pass, all stored data from 0:01 AM today until present time will be fetched to HSQuote and converted to Open/High/Low/Close and corresponding Volume data for the Intraday periods. Subsequent refresh cycles will just fetch tick data from the previous cycle to speed up download process.

- Note that Lasttrade refresh cycle is always 1-min, while Intraday refresh cycle is user-selectable (preferably not too frequently so as not to interrupt lasttrade data collection.)

## 13. Download From User-Defined Web-Pages in HSQuote Plus

### 13.1 My Web Server Overview

There are many more websites that provide free and timely data quotes that any downloader can attempt to connect to. Some web pages are only accessible by privileged subscribers who have paid for the rights to access the data. While it is impossible to fetch data from all these web pages, HSQuote Plus attempts a more generic approach to extract data from some of these free data sources. Basically, users specify the URL (*Uniform Resource Locator*, the global address of documents and other resources on the World-Wide Web) for each Portfolio ticker list, and provides a Format File (.fmt) that describes what/where/how to extract the wanted data from this URL. Very often, the same format file may be used for several portfolio lists that access similar web pages from the same web sites.

#### Disclaimer and Legal Issues

Before proceeding, it is important that users understand and acknowledge the following disclaimer and legal issues. A great tool can be dangerous if being abused or associated risks not being understood.

- It is users' responsibility to verify with data source providers the terms and conditions of fetching and using their data. In general, data may be for personal use only, and not allowed to be distributed. The author of HSQuote/HSQuote Plus and his company (HSQ Digital) are not responsible for your use of any websites.
- HSQuote Plus only provides a generic automation tool with some examples of how to create format files. However, the author is not legally obliged to create any format files for users. It is simply impossible to make that commitment as there are millions of web pages that have good and free data sources (see this as good opportunity). Users may purchase and get registered, if they like the tool (make full use of the 21-day trial). Once they have purchased, they cannot expect a refund for any reasons including inability to create format files.
- Users may contact the author, however, if they are willing to pay for the effort to create format files. Each format file will cost US\$30 (subject to change without notice), if it can be created with the existing HSQuote Plus features for that particular web page. It is not refundable once users have accepted the format file, because web-page configurations may change or the free services may no longer exist later. Users are solely responsible for the legal use of the web pages and data, even if the author helps to create the format files as the author will not be verifying the legal rights of the access. Again, users' willingness to pay does not make it obligatory for the author to support it, even though the author will certainly want to, and will do his best to, help as many people as possible to use this useful feature.
- Whether format files are created by the author or users, errors may occur. Web-page configurations and contents may change. The HSQuote / HSQuote Plus tools may have bugs. All these and many other situations can result in fetching wrong data or generating inaccurate data. Users should understand these potential risks when using such data (or any data downloaded from the web sources). HSQ Digital, its employees, the author and data providers will not be responsible for the accuracy of the data and information, and any loss, however arising, from the use of, or reliance on this information.
- Changes and enhancements will be made to HSQuote Plus and the format file definition, to make this generic data downloading feature more robust and cover more types of web pages. It is possible that existing format files may need to be changed accordingly, though the author will attempt to make them backward compatible and minimize the

change if absolutely needed. Users may choose not to update to newer versions, but should not complain about this.

If you have fully understood the above and still like to use the tool, you can now proceed to enjoy the power of the tool!

### Understanding the Components

3 things are added to HSQuote Plus to facilitate this feature.

- You need to select the server 'My Web Server' on the main screen.
- One format file (.fmt) for each similar group of web-pages, located in the \fmt sub-directory under the program installation location, describes the contents and layout of the web-page.
- A file called 'mywebserver.txt' in the program installation folder provides the linkages for each portfolio list, in the following manner:

**Portfolio Name** (without .tic) , **URL** , **Internal Code** , **Format File** (.fmt)

Each portfolio ticker list will need one such line in the 'mywebserver.txt'. The installed program comes with several format files as examples (more will be available on the website instead), and a generic template 'WebsiteFormatTemplate.fmt' to facilitate format file creation. Details of Format File will be described in Section 13.3.

### Internal Code (IC):

IC is used to tell HSQuote Plus the type of URL and download approach. The code consists of one Letter followed by one number. The Letter indicates whether it is applicable to Daily (D), Weekly (W), Monthly (M), Intraday (I), or Last-Trade (L). The number can be one or two digits with the following definition.

The **Last Digit** (or single digit code) represents the **URL type** as follows:

		<b>Date / Time</b> (format defined in format files)			
		One Specified	Range Specified	Fixed Range but Not Specified	One but Not Specified
<b>Symbol</b> (replaced with SSSS in URL)	One Specified	2	2	1	1
	Many Specified	6*	6*	5*	5*
	Many but Not Specified	4	4	3	3
	One but Not Specified	4	4	3	3

\*Place holders only, not yet implemented as few web pages have such formats, which are more commonly used in proprietary stream data downloads.

The **Download Approach** (to be described in Section 13.3 Creating Format Files) is as follows:

Single Digit: Character Search Method

Double Digit with '1' as first digit: Whole Table Download Method (including CSV files)

Double Digit with '2' to '9' as first digit: Reserved for future expansion

### **URL Modification:**

When an URL contains Symbol, dates and intraday interval, they need to be replaced by the following codes when placed in the mywebserver.txt. The purpose is to allow, as far as possible, tickers, download periods and intraday intervals to be programmable and controlled by the information already given on the main screen of HSQuote Plus.

SSSS:	single Symbol
dddd:	Start Day of download period on main screen
mm1m:	Start Month with January represented by 1 (may use mmmm too)
mm0m:	Start Month with January represented by 0
yy2y:	Start Year if 2-digit (may use yyyy too)
yy4y:	Start Year if 4-digit
DDDD:	End Day of download period on main screen
MM1M:	End Month with January represented by 1 (may use mmmm too)
MM0M:	End Month with January represented by 0
YY2Y:	End Year if 2-digit (may use yyyy too)
YY4Y:	End Year if 4-digit
III:	Intraday Interval (minutes)
NNNN:	Multiple pages represented by number (0, 1, 2, etc.)
aaaa:	Multiple pages represented by lower letters (a, b, c, etc.)
AAAA:	Multiple pages represented by upper letters (A, B, C, etc.)
XXXX:	Replaced by corresponding letters in ticker list name (see Example 2 below)

### **Example 1:**

Let's start with a simple example. To get last 6 months of 'aalberts' End-of-Day data from the behr.nl website, you would enter in the Internet browser the url:

<http://www.behr.nl/Beurs/OHLS/aalberts>

The line on the mywebserver.txt may look like this, assuming Table format is used:

NL\_D\_Stocks,http://www.behr.nl/Beurs/OHLS/SSSS.html,D11,NL\_D11.fmt

Here, the position of the symbol 'aalberts' is replaced by 'SSSS', so that any other symbols on this website can all use the same url and format. You just need to put all the symbols in the 'NL\_D\_Stocks.tic' portfolio.

### **Example 2:**

Let's take one example that has most of the components (thus a little more complex) for illustration purposes. Most web pages should be easier than this one, hopefully. Let's download 90-sec Intraday Interval data for the last day or two from BusinessWeek webpage, the line on the mywebserver.txt may look like this:

Bizwk\_XXXX,http://host.businessweek.com/businessweek/Historical\_Quotes.html?Symbol=SSSS&EndDate=MMMM%2FDDDD%2FY2Y&Type=5&Format=0&Button=Get+Quotes,I2,Bizwk\_I2.fmt

You will prepare a portfolio ticker list called 'Bizwk\_XXXX' to represent ticker lists such as 'Bizwk\_5mins' and 'Bizwk\_60mins', etc.. On the main screen, select Intraday, and any Interval you want (say 60-min).

Note the URL needs to be modified in several places. The actual URL for downloading HPQ data with EndDate of 4<sup>th</sup> Nov 2005 is:

[http://host.businessweek.com/businessweek/Historical\\_Quotes.html?Symbol=HPO&EndDate=11%2F04%2F05&Type=5&Format=0&Button=Get+Quotes](http://host.businessweek.com/businessweek/Historical_Quotes.html?Symbol=HPO&EndDate=11%2F04%2F05&Type=5&Format=0&Button=Get+Quotes)

and the generic URL has become:

[http://host.businessweek.com/businessweek/Historical\\_Quotes.html?Symbol=SSSS&EndDate=MMM%2FDddd%2FYy2Y&Type=5&Format=0&Button=Get+Quotes](http://host.businessweek.com/businessweek/Historical_Quotes.html?Symbol=SSSS&EndDate=MMM%2FDddd%2FYy2Y&Type=5&Format=0&Button=Get+Quotes)

Note that the EndDate is taken from the To Data on the HSQuote main screen, which is usually the current date (you may click on Daily to see the To Date and change it if necessary).

Internal Code is just I2 – Intraday, one Symbol and one Date specified in URL.

Of course, the whole trick is in the format file, Bizwk\_I2.fmt (see Section 13.3).

### **Example 3:**

Many websites provide data grouped by Alphabetical order of Symbols or Names. Often, they also make one web-page (one URL) display all Symbols or Names that start with same character. For example,

[http://finanza.kataweb.it/scripts/cligipsw.dll?app=KWF&tpl=kwfinanza\borsaita\\_hp.tpl&from\\_name=A&to\\_name=AZZZZ&letter=A](http://finanza.kataweb.it/scripts/cligipsw.dll?app=KWF&tpl=kwfinanza\borsaita_hp.tpl&from_name=A&to_name=AZZZZ&letter=A)

[http://finanza.kataweb.it/scripts/cligipsw.dll?app=KWF&tpl=kwfinanza\borsaita\\_hp.tpl&from\\_name=B&to\\_name=BZZZZ&letter=B](http://finanza.kataweb.it/scripts/cligipsw.dll?app=KWF&tpl=kwfinanza\borsaita_hp.tpl&from_name=B&to_name=BZZZZ&letter=B)

These will show all Italian stocks with Names that start with A, and with B, respectively. We can use a generic URL in the format file as:

[http://finanza.kataweb.it/scripts/cligipsw.dll?app=KWF&tpl=kwfinanza\borsaita\\_hp.tpl&from\\_name=XXXX&to\\_name=XXXXZZZZ&letter=XXXX](http://finanza.kataweb.it/scripts/cligipsw.dll?app=KWF&tpl=kwfinanza\borsaita_hp.tpl&from_name=XXXX&to_name=XXXXZZZZ&letter=XXXX)

and the Portfolio Name something similar to “IT\_Kataweb\_XXXX”. Then create 26 separate Ticker lists “IT\_Kataweb\_A”, “IT\_Kataweb\_B”, ... “IT\_Kataweb\_Z”.

### **Example 4:**

You can extract data from text files that are stored in your hard-disk as well. For example, if you have downloaded several data files and stored with file names such as ‘SSSS0311MG.TXT’, you may write a format file and include in mywebserver.txt file.

I2DCSV,C:\My Projects\HSQuote Data\temp\SSSS0311MG.TXT,DI11,I2DCSV\_DI11.fmt

## 13.2 Types of Web Pages

Most of the web pages that provide free and non-protected data in Text form may be good candidates. Here are some examples, among others:

### Type 1: Tabular data embedded in web pages:

Ex. <http://www.firstinvest.com/actions/historique.asp?sicovam=160.10.AEX>

<http://sca-ap1.sca.ae/scamw/en/mwCompanyTradeHistory.jsp?Company=NBAD.ADSM>

Date	Var.	Change	High	Low	Close	Change	Settlement	Volume	Tr	Open Interest
08/11/2005	0.81%	421.14	421.14	395.14	422.14	395.93				
08/11/2005	45.90%	388.23	388.23	359.84	420.23	386.93				
08/11/2005	0.70%	388.98	388.98	382.03	420.24	386.03				
08/11/2005	0.65%	387.12	387.12	384.03	387.12	393.25				
08/11/2005	0.10%	384.02	384.02	384.03	388.17	393.25				
08/11/2005	2.25%	384.18	384.18	380.52	384.40	386.25				
08/11/2005	-0.04%	385.05	385.05	384.03	385.24	385.24				
08/11/2005	-1.10%	385.09	385.09	385.90	389.08	385.40				
08/11/2005	0.92%	388.17	388.17	389.08	389.28	389.73				
08/11/2005	-0.21%	388.08	388.08	385.41	389.28	387.79				
08/11/2005	0.00%	388.08	388.08	385.41	389.28	388.81				
08/11/2005	0.77%	388.08	388.08	385.36	389.54	389.85				
08/11/2005	0.63%	388.08	388.08	382.86	389.28	389.28				
08/11/2005	-1.24%	387.08	387.08	388.93	389.07	387.08				

Nt'I Bank of Abu Dhabi			
Date	Price	Quantity	
08/11/2005 10:23:02	62.10	851	
08/11/2005 10:58:21	62.50	2,500	
08/11/2005 10:58:21	62.50	195	
08/11/2005 10:58:21	62.10	2,149	
08/11/2005 10:58:21	62.10	10,000	
08/11/2005 10:58:21	62.00	50,156	
08/11/2005 10:58:29	62.00	49,844	
08/11/2005 11:07:19	62.80	4,500	

### Type 2: CSV file download:

Ex. <http://www.afet.or.th/download/historicaldata.csv>

[http://www.fidelity.de/cache/newder\\_FID.csv](http://www.fidelity.de/cache/newder_FID.csv)

1	A	B	C	D	E	F	G	H	I	J	K	
2	Date	Contract	Previous S	Open	High	Low	Close	Change	Settlement	Volume	Tr	Open Interest
3	20/5/2004	RSS3 SEP 04	54.2	54.1	55.2	54.1	54.0	0.6	54.0	31	19	
4	20/5/2004	RSS3 OCT 04	54						54	0	0	
5	20/5/2004	RSS3 NOV 04	54	54.9	55	54.7	54.7	0.7	54.7	13	9	
6	31/5/2004	RSS3 SEP 04	54.8	54.8	54.8	54.1	54.3	-0.5	54.3	32	37	
7	31/5/2004	RSS3 OCT 04	54	54.3	54.3	54.2	54.2	0.2	54.2	6	6	
8	31/5/2004	RSS3 NOV 04	54.7	54.7	54.7	54	54	-0.7	54	19	13	
9	1/6/2004	RSS3 SEP 04	54.3	54.3	54.3	53.8	53.8	-0.5	53.8	40	67	
10	1/6/2004	RSS3 OCT 04	54.2	54	54	54	54	-0.2	54	1	6	
11	1/6/2004	RSS3 NOV 04	54						54	0	13	
12	3/6/2004	RSS3 SEP 04	53.8	53.9	54.1	53.9	54.1	0.3	54.1	8	67	
13	3/6/2004	RSS3 OCT 04	54	54.1	54.2	54.1	54.2	0.2	54.2	2	7	
14	3/6/2004	RSS3 NOV 04	54	54.1	54.1	53.9	53.9	-0.1	53.9	0	10	
15	4/6/2004	RSS3 DEC 04	54	54.5	54.5	54.4	54.4	0.4	54.4	2	2	
16	4/6/2004	RSS3 SEP 04	54.1	54.1	54.2	53.7	53.7	-0.4	53.7	36	94	
17	4/6/2004	RSS3 OCT 04	54.2	53.9	54.4	53.5	53.6	-0.6	53.6	30	32	
18	4/6/2004	RSS3 NOV 04	53.9	53.9	54.1	53.7	53.7	-0.2	53.7	30	45	
19	4/6/2004	RSS3 DEC 04	54.4						54.4	0	2	
20	7/6/2004	RSS3 SEP 04	53.7	53.8	53.9	53.7	53.9	0.2	53.9	15	97	
21	7/6/2004	RSS3 OCT 04	53.6	53.9	53.9	53.8	53.8	0.2	53.8	2	33	
22	7/6/2004	RSS3 NOV 04	53.7	53.8	53.8	53.8	53.8	0.1	53.8	1	45	
23	7/6/2004	RSS3 DEC 04	54.4	53.9	53.9	53.4	53.7	-0.7	53.7	6	0	
24	8/6/2004	RSS3 SEP 04	53.9	53.9	53.9	53.9	53.9	0	53.9	9	100	
25	8/6/2004	RSS3 OCT 04	53.8	53.7	53.7	53.7	53.7	-0.1	53.7	6	31	
26	8/6/2004	RSS3 NOV 04	53.8	53.7	53.8	53.7	53.8	0	53.8	6	42	
27	8/6/2004	RSS3 DEC 04	53.7	53.3	53.5	53.3	53.5	-0.2	53.5	4	3	
28	9/6/2004	RSS3 SEP 04	53.9	53.4	53.4	53.2	53.2	-0.7	53.2	14	97	
29	9/6/2004	RSS3 OCT 04	53.7	53.4	53.4	53.3	53.3	-0.4	53.3	10	32	
30	9/6/2004	RSS3 NOV 04	53.8	53.4	53.4	53.1	53.1	-0.7	53.1	5	43	
31	9/6/2004	RSS3 DEC 04	53.5	53	53.2	53	53.1	-0.4	53.1	7	7	
32	10/6/2004	RSS3 SEP 04	53.2	53.1	53.2	52.9	52.9	-0.3	52.9	20	96	
33	10/6/2004	RSS3 OCT 04	53.3	53.1	53.2	52.8	52.8	-0.5	52.8	25	34	
34	10/6/2004	RSS3 NOV 04	53.1	53	53.1	52.9	52.9	-0.2	52.9	21	41	
35	10/6/2004	RSS3 DEC 04	53.1	52.4	52.8	52.4	52.8	-0.3	52.8	5	7	
36	11/6/2004	RSS3 SEP 04	52.9	53.3	53.3	53.1	53.1	0.2	53.1	5	96	
37	11/6/2004	RSS3 OCT 04	52.8	53.1	53.1	53	53.1	0.3	53.1	9	39	
38	11/6/2004	RSS3 NOV 04	52.9	53	53.2	53	53.1	0.2	53.1	9	46	
39	11/6/2004	RSS3 DEC 04	52.8	53	53	52.9	53	0.2	53	7	13	
40	14/6/2004	RSS3 SEP 04	53.1	53.3	53.5	53.3	53.5	0.4	53.5	12	98	
41	14/6/2004	RSS3 OCT 04	53.1	53.3	53.4	53.3	53.4	0.3	53.4	7	36	
42	14/6/2004	RSS3 NOV 04	53.1	53.2	53.3	53.2	53.3	0.2	53.3	18	55	

1	Fonds	A	B	C	D	E	F
2	America Fund	Preis	Wahrung	Stand	Veranderung	seit	
3	America Fund	4.597	USD	7/11/2005	0.015	4/11/2005	
4	America Fund EUR Shares	3.895	EUR	7/11/2005	0.024	4/11/2005	
5	American Diversified Fund EUR	12.29	EUR	7/11/2005	0.06	4/11/2005	
6	American Diversified Fund USD	11.91	USD	7/11/2005	0.03	4/11/2005	
7	American Growth Fund	24.2	USD	7/11/2005	-0.01	4/11/2005	
8	ASEAN Fund	12.71	USD	7/11/2005	-0.03	4/11/2005	
9	Asian Special Situations Fund	14.79	USD	7/11/2005	-0.08	4/11/2005	
10	Australia Fund	35.75	AUD	7/11/2005	0.04	4/11/2005	
11	China Focus Fund (A-USD)	15.22	USD	7/11/2005	-0.15	4/11/2005	
12	Emerging Markets Fund	12.17	USD	7/11/2005	0	4/11/2005	
13	Euro Blue Chip Fund	14.85	EUR	7/11/2005	0.03	4/11/2005	
14	EURO STOXX 50™ Fund	9.954	EUR	7/11/2005	0.021	4/11/2005	
15	European Aggressive Fund	17.16	EUR	7/11/2005	0.05	4/11/2005	
16	European Growth Fund	10.11	EUR	7/11/2005	0.03	4/11/2005	
17	European Larger Companies Fund	31.17	EUR	7/11/2005	0.09	4/11/2005	
18	European Mid Cap Fund	21.2	EUR	7/11/2005	0.09	4/11/2005	
19	European Smaller Companies Fund	20.45	EUR	7/11/2005	0	4/11/2005	
20	Fidelity India Focus Fund EUR	17.68	EUR	7/11/2005	0.13	4/11/2005	
21	Fidelity India Focus Fund USD	17.15	USD	7/11/2005	0.07	4/11/2005	
22	France Fund	32.18	EUR	7/11/2005	0.08	4/11/2005	
23	Germany Fund	22.81	EUR	7/11/2005	0.19	4/11/2005	
24	Global Focus Fund EUR Shares	27.19	EUR	7/11/2005	0.08	4/11/2005	
25	Greater China Fund	68.1	USD	7/11/2005	-0.61	4/11/2005	
26	Iberia Fund	38.81	EUR	7/11/2005	0.1	4/11/2005	
27	Indonesia Fund	7.009	USD	7/11/2005	-0.02	4/11/2005	
28	International Fund	29.21	USD	7/11/2005	0.06	4/11/2005	
29	International Fund EUR Shares	24.78	EUR	7/11/2005	0.12	4/11/2005	
30	Italy Fund	29.45	EUR	7/11/2005	0.03	4/11/2005	
31	Japan Advantage Fund	20365	JPY	7/11/2005	137	4/11/2005	
32	Japan Fund	208.4	JPY	7/11/2005	0.6	4/11/2005	
33	Japan Fund EUR Shares	1.498	EUR	7/11/2005	0.017	4/11/2005	

### Type 3: Data scattered over the page but always in the same locations:

Eg.

<http://www.set.or.th/set/localeswitching.do?language=en&country=US&nextpage=http://www.set.or.th/set/stockquotation.do?symbol=STA>

The screenshot shows the SET website interface. At the top, there is a navigation bar with the SET logo and text in Thai and English. Below the navigation bar, there is a search bar and a 'Quote' button. The main content area is divided into two sections: 'Market Data' and 'Stock Quotation'. The 'Market Data' section contains a table with columns for 'Last', 'Change', '%Change', 'High', 'Low', 'Volume', and 'Value'. The 'Stock Quotation' section contains a table for 'STA : SRI TRANG AGRO INDUSTRY' with columns for 'Last', 'Change', '%Change', 'Par', 'Closing', and 'Floor'. Below the 'Stock Quotation' table, there is a 'Bid' and 'Offer' table, and a 'Price (Baht)' chart.

	Last	Change	%Change	High	Low	Volume ('000 Shares)	Value ('000 Baht)
SET Index	625.20	-5.15	-0.73	703.99	594.52	1,598,370	11,362.27
SET100 Index	1,052.04	-5.97	-0.56	1,073.25	1,066.04	670,040	7,161.25
SET50 Index	457.75	-4.15	-0.90	492.05	486.66	357,364	6,115.57
mai Index	165.84	-0.39	-0.23	165.89	165.42	5,905	12.56

	Last	Change	%Change	Par	Closing	Floor
STA	12.60	-0.10	-0.75	0.00	16.90	0.56

	Prior	Open	High	Low	Avg. Value
STA	12.60	12.60	12.60	12.50	

	Average Price*	Volume (Shares)	Value ('000 Baht)
STA	12.56	186,300	2,365.91

	Bid	Offer	Avg. Value ('000 Baht)
Volume (Shares)	197,400	17,900	2,000
Price	12.56	12.60	14,000

### Type 4: Privileged data for paid subscribers only:

Many paid subscribers of data providers, or brokerage firms can also download data from their members' pages. They will need to find out how to include their authentication code or user passwords to the URL line. If in doubt, check with your data providers.

### Limitations:

Apart from those web pages that do not give you the right to download and use their data, there are also some known limitations at the current stage of development:

- Websites that require users to intervene in the download process. Apparently, they do this to disallow automatic data download in order to limit traffic or other reasons. Since they have intentionally built in protection mechanism, HSQuote will avoid these sites.
- Some web pages that require users to manually fill in data fields may also make it difficult to access automatically. However, some times, we can sacrifice some controls, take the default values and live with the constraints. Alternatively, you may contact the author to customize specific key strokes programming to fill the web pages (fee negotiated).
- Web pages that change the data layouts and formats too frequently are not good sources, as it will be a pain to modify the format file often.

## 13.3 Two Search Methods

### Whole Table Download

When data are tabulated with each column representing one specific data item, the 'Whole Table Download' method is often possible. Usually, users just need to define all the columns, identify a search word to get to the table header and end of the table, find the first column, and define a few other things such as date and time formats (all done in the format files).

Pros:

- Simpler to create format file and it requires only a few lines
- Good for CSV pages, tabular data, and pages having many symbols on each page.

Cons:

- Usually much slower as quite a few intelligent processes need to be carried out to cover different types of tables and data formats.
- Since most things are done automatically, if you don't get the expected outcome, it may be more difficult to debug. Some web-pages may appear like a tabular format, but they are not.

### Sequential Find

This method is applicable to almost all web pages, even though CSV pages may be better handled with the 'Whole Table Download' method. What users do is to right click on a web page, and click on the 'View Source' on the pop-up window. Then use this source in text format as a reference to find the required data items one at a time sequentially. The format file will describe how to find each required item.

Pros:

- Since there is a text source as reference, even if you do not get it right the first time, you can debug to find the errors.
- Usually faster download for shorter pages.
- Only method if data is not in tabular form.
- Good for pages that have many unwanted data columns that can be skipped.

Cons:

- Format file is longer and more tedious to create for new users.
- Often Symbol needs to be the item in the search sequence.

## 13.4 Create Format Files

The format files are created slightly differently for the two search methods. Two template files, located in the 'fmt' folder of the installed program location, are provided to facilitate format file creation. 'FormatTemplate\_Table.fmt' is for the Whole Table Download, and 'FormatTemplate\_Find.fmt' is for the Sequential Find. To set up a format file, you make a copy of the appropriate template file, rename the new format file to the one specified in 'mywebserver.txt' with .fmt extension, and store it in the same 'fmt' folder. You can then delete non-required parameters in the format file (no harm leaving them in the file as default though).

### Format File for Whole Table Download

This method requires the exact count of the columns and what data each column represents. Some tables may have 'hidden' columns as they do not appear on the browser. To be certain, it is better to display the web page, select (high light) the whole table using the mouse, and press ctrl-c (or copy) to copy the contents, then paste it on an empty Excel worksheet. Now you can see how the table appears on the worksheet. The procedure then is:

1. Make a copy of the 'FormatTemplate\_Table.fmt' file, and rename it to be the same as the fmt file name in the mywebserver.txt.
2. Display the webpage, then copy and paste the whole page to an empty Excel sheet to see the contents.
3. Define ALL the columns including those you are going to ignore (indicate them as 'I').
4. Supplementary to Steps 2 and 3, an intermediate processing file called "table.xls" or "table1.xls" in the "temp" folder of the data file location is kept for viewing. It is generated after a download. You can open to see if there has been a table-form similar to that displayed on the webpage, starting in Column B, Row 1. Ignore the blank Column A if any. If there is no table, the Whole Table Download approach may not be appropriate for this web page.

Each parameter in the format file looks like this:

Value@Parameter\_Name#Description (Choices) (Default Value if left blank)

Please reference the 'FormatTemplate\_Table.fmt' file. Here are the current parameters for Table download:

myIntradayVolumeType	Tick volume or Last Trade accumulative data (T, L) (default:L)
myMultipleRecords	Multiple records of the same symbol on the page (default: 0)
myMultiplePages	Multiple pages for one ticker symbol (default: 0)
myLinkToNextPage	Key word in URL to link to next page (default: NULL)
myNumberOfColumns	Number of columns (default: 6)
myColumnDefinition	Column definition to search (SNDdTtOHLcVXBAGI?) (must have one S)
myUserDefinedFieldNames	User-defined field names for ?s in myColumnDefinition, fields separated by comma
myDateFormat	Date format (DD/MM/YYYY) (default:DD/MM/YYYY)
myTimeFormat	Time format (HH:MM:SS) (default:HH:MM:SS)
mySingleLineDate	One date for multiple symbol page, same date format as myDateFormat (default: 0)
myReverseDate	Reverse date sequence (default: 0, latest date first)
myReverseTime	Reverse time sequence (default: NULL, auto-detection, 0: latest time first, 1: earliest time first)
myDecimalSeparator	Decimal Separator (default: .)

myThousandSeparator	Thousand Separator (default:NULL)
myFieldSeparator	Field Separator (usually used for CSV file. If specified, next find starts from the next character after it) (default: NULL)
myLeftSymbolBound	Additional identifier on left of symbol (default: NULL)
myRightSymbolBound	Additional identifier on right of symbol (default: NULL)
myValidPageWord	Word to verify Valid Page (default: NULL)
myStartFindWord	Word to start find (default: NULL)
myRelativeStartFindLocation	Relative Row;Relative Column from myStartFindWord to first column of header row for the table (default: 0;0)
myEndingWord	Ending word of page for myMultiplePages, and locating end of table with myRelativeEndingLocation (default: NULL)
myRelativeEndingLocation	Relative row position of EndingWord to end of table (default: 0)
myReplaceString	Common string replacement for the whole page, separated by ';' (default: NULL)
myContinuedNextFindMethod	Continue next find (1: yes, continue next find, 0: no, use myStartFindWord) (default: 0)
myProcessScripts	Entry URL requires processing of scripts (such as php, default: 0, No)
myAliasSubstitute	Use user-defined alias table instead(default: alias.csv)
mySkipWeekEnd	If date is Saturday or Sunday, change to previous Friday (default: 1, change to Friday)

Some parameters deserve more explanation.

myColumnDefinition: SNDdTtOHLCVXBAGI?

- S: Symbol
- N: Name or any text string
- D: Date
- d: Date portion of the 'Date Time' format
- T: Time
- t: Time portion of the 'Date Time' format
- O: Open
- H: High
- L: Low
- C: Close
- V: Volume
- X: Open Interest
- B: Bid Price
- A: Ask Price
- G: Change
- I: Ignore
- ?: User-defined field

@#End of Parameters. If mySingleLineDate is 1, start Find below for this single date (do not change this line)

zzzz#1:::1st anchor for FirstPosition

zzzz#2nd anchor for FirstPosition

zzzz#3rd anchor for FirstPosition

1#Relative position from 3rd anchor of FirstPosition to first character of date

zzzz#1st anchor for LastPosition

zzzz#2nd anchor for LastPosition

9#Relative position from 2nd anchor of LastPosition to character after the date  
#Replace From  
#Replace To

The last section in the Format file is only needed when we need to find the Single Date on the web page to be used as the common Date for all the records. The method is similar to the Sequential Find, but just to look for this one date. Please see the next section for explanation.

Note that myColumnDefinition only defines what data to be collected from the web page. It does not dictate the sequence of the output text files. The fields are appended in the following sequence:

- Columns defined in Personalized Text or Spread Sheet Output Format (excluding Last-trade columns)
- Name, Price Change, Bid Price, and Ask Price if one of more of NGBA are selected
- All the User-defined Fields (Field Names can be defined in myUserDefinedFieldNames, or take the default 'Field N' names)

Column Separator is defined by the Personalized Text or Spread Sheet Output Format as well.

## Format File for Sequential Find

This method requires the identification of locations of all the needed items on the web page. The procedure is:

1. Make a copy of the 'FormatTemplate\_Find.fmt' file, and rename it to be the same as the fmt file name in the mywebserver.txt.
2. Display the webpage, then right click and select 'View Source'. You need this text file as a reference to locate the needed items. Some times, even the 'View Source' file is not what is exactly being transmitted, either. You may then refer to the intermediate processing file "browser\_source.txt" in the "temp" folder of the data file location, instead.
3. Define the columns (data items) you want to search for. Don't need to include 'S' (Symbol) because this is the Key Word that needs to be searched FIRST. This is the Ticker Symbol on your ticker .tic file. Unlike the Whole Table Download method, you can skip data columns that you do not need. Some times you need to add 'I' (Ignore) when the data to search for is too far away and cannot get it in one step.
4. After the line "@#Start of Column Find Patterns. Repeat for subsequent columns", you indicate how to get to the first column, then to the second column, etc. You just need to indicate the locations for one raw of data.

Each parameter in the format file looks like this:

Value@Parameter\_Name#Description (Choices) (Default Value if left blank)

Please reference the 'FormatTemplate\_Find.fmt' file. Here are the current parameters for Sequential Find method:

myIntradayVolumeType	Tick volume or Last Trade accumulative data (T, L) (default:L)
myMultipleRecords	Multiple records of the same symbol on the page (default: 0)
myMultiplePages	Multiple pages for one ticker symbol (default: 0)
myLinkToNextPage	Key word in URL to link to next page (default: NULL)
myNumberOfColumns	Number of columns (default: 6)
myColumnDefinition	Column definition to search (SNDdTtOHLCVXBAGI?)
myUserDefinedFieldNames	User-defined field names for ?s in myColumnDefinition, fields separated by comma
myDateFormat	Date format (DD/MM/YYYY) (default:DD/MM/YYYY)
myTimeFormat	Time format (HH:MM:SS) (default:HH:MM:SS)
mySingleLineDate	One date for multiple symbol page, same date format as myDateFormat (default: 0)
myReverseDate	Reverse date sequence (default: 0, latest date first)
myReverseTime	Reverse time sequence (default: NULL, auto-detection, 0: latest time first, 1: earliest time first)
myDecimalSeparator	Decimal Separator (default: .)
myThousandSeparator	Thousand Separator (default: NULL)
myFieldSeparator	Field Separator (If specified, next find starts from the next character after it) (default: NULL)
myLeftSymbolBound	Additional identifier on left of symbol (default: NULL)
myRightSymbolBound	Additional identifier on right of symbol (default: NULL)
myValidPageWord	Word to verify Valid Page (default: NULL)
myStartFindWord	Word to start find (default: NULL)
myRelativeStartFindLocation	Relative position after finding symbol, to next start find location (default: 0)
myEndingWord	Ending word to locate end of search (default: NULL)

myReplaceString	Common string replacement for the whole page, separated by ';' (default: NULL)
myContinuedNextFindMethod	Continue next find (1: yes, continue next find, 0: no, use myStartFindWord) (default: 0)
myProcessScripts	Entry URL requires processing of scripts (such as php, default:0)
mySymbolSearchWord	Leading word to search for Symbols, used to auto-fill ticker list in Find method (default: NULL)
myAliasSubstitute	Use user-defined alias table instead(default: alias.csv)
mySkipWeekEnd	If date is Saturday or Sunday, change to previous Friday (default: 1, change to Friday)

Some parameters deserve more explanation.

myColumnDefinition: SNDdTtOHLCVXBAGI?

S: Symbol (not required for Find method, but can be used to represent any text item)

N: Name or any text string

D: Date

d: Date portion of the 'Date Time' format

T: Time

t: Time portion of the 'Date Time' format

O: Open

H: High

L: Low

C: Close

V: Volume

X: Open Interest

B: Bid Price

A: Ask Price

G: Change

I: Ignore

?: User-defined field

The search method starts from ensuring that the page is a valid page by locating the myValidPageWord, then locating the myStartFindWord. From here, it will go down the 'View-Source' text file to find the first Ticker Symbol on the ticker list, even if 'S' is not specified in myColumnDefinition. Since some short symbols are not unique (such as 'A' for Agilent), it is usually necessary to include the character strings surrounding the symbol with myLeftSymbolBound and myRightSymbolBound. After the symbol is found, the locator will move up or down based on the myRelativeStartFindLocation, then continue from here to look for the first item defined in the myColumnDefinition.

@#Start of Column Find Patterns. Repeat for subsequent columns

zzzz#1:::1st anchor for FirstPosition

zzzz#2nd anchor for FirstPosition

zzzz#3rd anchor for FirstPosition

1#Relative position from 3rd anchor of FirstPosition to first character of item

zzzz#1st anchor for LastPosition

zzzz#2nd anchor for LastPosition

9#Relative position from 2nd anchor of LastPosition to character after the item

#Replace From

#Replace To

(Repeat for #2 item, the #3 item, etc).

'zzzz' is to be replaced by a unique character string as close to the needed item as possible. The software will search downward to get to this string, then find the next string indicated by the 2<sup>nd</sup> anchor, then to the string indicated by the 3<sup>rd</sup> anchor. The strings may be blank if the needed item is already reached. The FirstPosition refers to the first character position of the corresponding string. A relative position may be applied to guide the locator to the first character of the needed item. Similar approach is applied to get to the character after the item. After the first item, the search continues to the second item, then to the third item, etc. This goes on until all items for one row of data are found. Then the same routine applies to the next row of data, and so on.

Note that myColumnDefinition only defines what data to be collected from the web page. It does not dictate the sequence of the output text files. The fields are appended in the following sequence:

- Columns defined in Personalized Text or Spread Sheet Output Format (excluding Last-trade columns)
- Name, Price Change, Bid Price, and Ask Price if one or more of NGBA are selected
- All the User-defined Fields (Field Names can be defined in myUserDefinedFieldNames, or take the default 'Field N' names)

Column Separator is defined by the Personalized Text or Spread Sheet Output Format as well.

## 13.5 Auto Generate Ticker Lists

If a page consists of many symbols (or just names), it can be tedious to enter every symbol on the ticker list. HSQuote Plus provides an alternative to fill the ticker list. Just enter #ALL# as the first symbol on the ticker list, the full list of symbols on this webpage will be updated to the ticker list, in the download process. After the list is filled, the download will continue normally, processing from the first symbol. Note that the #ALL# entry has been deleted.

This feature is useful when the symbols can change, eg. Futures contracts, or long names or long list that you don't want to manually type every single symbol. This feature is available for both whole table download and sequential find methods.

For the table download method, there is no additional work, since the Symbol position within the columns of the table is already defined in the format file. HSQuote Plus will use this information to extract the Symbols automatically.

For the sequential find method, additional anchors for search are needed.

@mySymbolSearchWord is used to indicate leading word to search for the individual symbols. In addition, the following section in the format file is needed:

```
@#Auto-fill ticker list with #ALL# on first line, start Find below for symbols
zzzz#1:::1st anchor for FirstPosition
zzzz#2nd anchor for FirstPosition
zzzz#3rd anchor for FirstPosition
1#Relative position from 3rd anchor of FirstPosition to first character of date
zzzz#1st anchor for LastPosition
zzzz#2nd anchor for LastPosition
9#Relative position from 2nd anchor of LastPosition to character after the date
#Replace From
#Replace To
```

Note that while long names are possible to be used in the Ticker list, they will be automatically reduced to no more than 14 characters when stored as MetaStock symbols. HSQuote will use some rules to come up with the symbol names.

## 13.6 Special Characters

Some times, you need to specify special characters while defining the anchor positions or for the:

- myFieldSeparator
- myLeftSymbolBound
- myRightSymbolBound

The special characters supported are:

- [TAB] to indicate a TAB character
- [NEWLINE] to indicate a NEWLINE (carriage return)

## **14.File**

### **14.1 Open Data File Folder**

Data File folder contains all the portfolio files (.tic ticker lists), all the MetaStock folders named after their corresponding portfolio file names, the 'Fundamental Data' folder, the 'Options-Chain Data' folder, and the 'Downloader Tickers' folder. This folder can be changed within the Preference screen.

### **14.2 Open Fundamental Data Folder**

'File/Open Fundamental Data Folder' provides a quick access to the 'Fundamental Data' folder where all the fundamental data files (.csv or.xls files) are stored.

### **14.3 Open Downloaded Ticker Folder**

After downloading ticker lists from the Yahoo! Finance website, all the .tic files are stored in the 'Downloaded Tickers' folder under the Data File Folder. They do not appear immediately in the Portfolio selection. Use the 'Copy From' button on the main screen to copy a downloaded ticker file to the Data File folder, and make it appear in the Portfolio selection box.

### **14.4 Create Ticker Lst from MetaStock Database**

[Please see Section 3.3.](#)

### **14.5 Clean Up Ticker List**

If you used method 2 to download Yahoo ticker lists ([Section 3.1](#)), the lists would have been cleaned up at the end of the download process. Also, when the list is used in normal quote download, the symbols will also be corrected or removed if prompts are being followed. However, if you can a ticker list from other means, there may be invalid symbols for companies that no longer trade or symbols that have changed names. You can use this 'File/Clean Up Ticker List' feature to clean up the lists.

### **14.6 Split Ticker List**

When a MetaStock database gets too big, the speed performance will be poor. It is advisable to keep each ticker list small. You can see this feature to split a ticker list. The smaller lists will be linked together automatically for single download.

## 14.7 Edit Alias Table

If Yahoo is your primary source for data download, you should keep symbols recognized by Yahoo! Finance in your ticker lists. However, sometimes you have third party sources that provide alternative or backup to Yahoo sites (such as 'My Web Server' feature in HSQuote Plus). If these third parties use different symbols, usually the case for non-US stocks, you may want to edit the 'Alias.csv' file located in the program installation folder. An example is shown below.

With this table, you can use the Data Converter to convert between MetaStock data files and ASCII text files that contain Aliases and/or Symbols.

In Personalized Text Format download, this same table is also used when Alias is defined in the Column header.

In the Data Converter, when converting from an existing MetaStock database to a new MetaStock database while they use different symbols (just one set having a fixed suffix), you can also fill this 'Alias.csv' file, then select 'Use Alias' for the Destination in Data Converter.

	A	B	C	D
1	Download Symbol (Yahoo)	Alias (Local Symbol)	Full Name	
2	PHG.AS	PHI	KONINKLIJKE PHILIPS ELECTRONICS	
3	HPQ	HP	HEWLETT-PACKARD	
4	AAPL	APPLE	APPLE COMPUTER	
5	PDC	TEST	Sopheon	
6	CSM.NC.AS	CSM	CSM	
7	ELSN.AS	ELS	Elsevier	
8	ECNN.AS	ECONOSTO	ECONOSTO	
9	CS.AS	CORUS	CORUS	
10	VTKHF.PK	WTEST	ACVTECH HLD	
11	^STOXX50E	965814	DJ EURU STOXX50 Index	
12				

## 15.Data Converter

### 15.1 Data Converter

This is a very flexible and generic data converter that can convert among MetaStock, spreadsheet, and almost any text and ASCII formats. It can also extract data from one data source and translate to another data format for use in your charting or analysis program.

#### Some possible uses:

- Download text files from your own data sources and use this converter to convert to MetaStock database. Alias in the Translation Table makes it convenient. This can be very useful if your country securities are not readily available in Yahoo! data source.
- Extract all data from one root folder and its subfolders and regroup them according to their first symbol letter. Or, clean up corrupted database with MS-to-MS conversion.
- Extract from the stored MetaStock database to obtain a combined portfolio '.tic' file. Note that you need to choose a SINGLE date in date range that has MetaStock data in all your selected securities, and choose ASCII text destination with only one Symbol column. Name the destination file xxx.tic.
- Convert from one date format in ASCII text files to another date format, or change the column separators/delimiters, or simply re-arrange the data columns. This may be useful when your data source format does not match the requirements of your analysis program.
- Store all stocks in a portfolio to one single Excel file with multiple worksheets, each for one stock.

The screenshot shows the 'Data Converter' application window. It has a blue title bar and standard Windows window controls. The interface is divided into several sections:

- CONFIG FILE:** A dropdown menu showing 'ms2excel.cvt' with 'Default' and 'Delete' buttons.
- SOURCE:** A dropdown menu showing 'MetaStock' with a 'TO:' dropdown showing 'Excel Sheets'.
- Column Picker:** A vertical list of fields: Symbol, Date, Time, Open, High, Low, Close, Volume, Open-Int, Adj-Close, Name, Period, Zero, Ignore, Alias. A 'Click in Order' button is above the list. Radio buttons for 'Source' and 'Destination' are present, with 'Destination' selected. A 'Clear Columns' button is below.
- Source Section:** Includes a 'Browse' button, 'Folder:' (G:\My Projects\HSQuote Data\portfolio1), 'File Name:' ('HPQ'), 'Date Range:' (4/11/2005), and 'To:' (4/11/2005). Checkboxes for 'All Files', 'Sub-folders', and 'All Dates' are checked. 'Date Format:' is MM/DD/YYYY, 'Delimiter:' is Comma, and 'Periodicity:' has radio buttons for Day, Wk, Mth, and Intraday.
- Destination Section:** Includes a 'Browse' button, 'Folder:' (G:\My Projects\HSQuote Data\portfolio1), 'File Name:' (test.xls). Checkboxes for 'Individual Stock Files' and 'Sub-folders' are checked. Radio buttons for 'Append Data to End of File' and 'Replace Existing File' are present.
- Table:** A table with 16 columns numbered 1 to 16. Below the table, the first few columns contain the letters D, T, O, H, L, C, V, AL.
- Bottom Section:** 'Date Format:' is MM/DD/YY, 'Delimiter:' is Space, 'Time:' is HH:MM:SS PM. Checkboxes for 'Reverse Date Order', 'Header', 'No Country Suffix', and 'No Carets ^' are checked.
- Buttons:** 'Start Conversion' (with a green running person icon) and 'Exit' (with a red X icon) are at the bottom.

### Simple steps to use the data converter:

- Config File: Choose one from the pull-down menu, or simply type your own file name. The file name will automatically have the '.cvt' extension, and be automatically saved when you click any other boxes. You may set it as the default or delete it by clicking the 'Default' and 'Delete' buttons, respectively.
- Source and Destination File Types: Just pull down the menus and pick the file types.
- Column Picker: When Source or Destination contains ASCII Text, a box with many columns will appear in the corresponding boxes. You will use the Column Picker to define the column sequence. First ensure the source or destination is selected, press the 'Clear Columns' button to clear all columns if needed, then click the column definition from left to right order, one by one. You may leave the un-used columns on the right side blank. Note that 'Zero' column will create a column of '0' when output is generated. The 'Ignore' column will give a blank.
- Date Format, Time Format, Delimiter, Periodicity, Reverse Date Order, Include Header Line, Remove Carets^, Remove Country Suffix: Select to match your ASCII text file format.
- For the Source files, you have 3 types of selection. One is to select 'All Files' in the 'Folder' root folder. To optionally select some files (or some securities in Metastock type), you can manually type in the File Names embracing each one with double-quotes, or click the 'Browse' button and hold the Shift or Ctrl key while clicking the selected files. The third selection is 'Sub-folders', which will traverse down the sub-folders from the root folder to search for the indicated file names or include all files if the 'All Files' option is also selected.
- For the Date Range in Source, if the 'All Dates' option is selected, all records will be included. Otherwise, the indicated date range will be used.
- For Destination files in Metastock type, if 'Sub-folders' option is selected, all output data files will be grouped according to their first alphabet, eg. MSFT will be stored in the 'M' sub-folder. If the 'Use Alias' option is selected, Aliases in the "Alias.csv" will replace Symbols in the MetaStock database. In ASCII text type, there are a few more options. The 'Individual Stock Files', if selected, will keep individual output files under their symbol names; otherwise, all stocks will be combined in one file. You may also choose to either Append output data to the selected file or Replace with new data.
- When all the selections are set, click the 'Start Conversion' button, and wait for the processing to complete. If sub-folders are included, the operation may take some time.
- If 'Excel Sheets' is selected for Destination, the file name will automatically have the .xls extension. All the source data will be converted to one single Excel file with multiple worksheets, each for one stock.

## 16. Post Download Processing in HSQuote Plus

### 16.1 Post Download Processing File

In HSQuote Plus, some data processing may be executed automatically after data downloading is completed. For example, a specific Data Conversion config file is to be run, or moving the generated files to some other directories, etc. (More post download processing features will be expanded in future.) All the tasks and their sequencing are indicated in the 'PostDownloadProcessing.xls' file stored in the program installation folder. Note that this file is to be saved as Tab-limited Text file (just Save to the same file name after changes).

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Select	Operation	Processing File Name	Source 1 Folder	Source 1 File	Source 2 Folder	Source 2 File	Source From Date	Source To Date	Destination Folder	Destination File	Action Day	User Comments
2		1 CONVERT	asci2asci_XXX.cvt		Stock YY4YMMMMDDDD.txt			FROM	TO			23456	
3		1 CONVERT	asci2asci_YYY.cvt		Stock YY4YMMMMDDDD.txt			FROM	TO			23456	
4		1 CONVERT	asci2ms_zzz.cvt		Stock YY4YMMMMDDDD.txt			FROM	TO			23456	
5		1 MOVE		D:\HSQuote Dat	Stock YY4YMMMMDDDD.txt					D:\HSQuote Data\i	Stock YY4YMM	23456	
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20	Notes: Only relevant information needs to be filled in, and items in the Processing File requiring modifications need to be indicated.												
21													
22	Choices: Upper-case words are key words to be used unmodified.												
23													
24	0 Not Selected	CONVERT						FROM	FROM			1:Sunday 2:Monday etc.	
25	1 Selected	MOVE						TO	TO				
26	11 Start Row	COPY						TODAY	TODAY				
27		DELETE											
28													

To see the text better, you may select column B to column L, then Format > Columns > AutoFit Selection. Please open the example "PostDownloadProcessing.xls" file when following the following description.

- The only fields that are absolutely required to fill in are Column A (Select) and Column B (Operation). The rest are optional. Of course, some fields are still required for certain operations. For example, the CONVERT operation needs the converter description file, the .cvt file, in the Column C (Processing File Name), but additional optional parameters in Column G (see CONVERT section below).
- Each row controls one operation and operations will be executed in the row order.
- Select: You can put many operations in this file, but use '1' to select the operations to run, or '0' not to run it. If you want to start executing the operations from a particular step, put '11' in place of '1' in the specific row.
- Operation: Listed below are the possible choices currently.
  - CONVERT
  - EXECUTE
  - MOVE
  - COPY
  - DELETE
  - MOVEFOLDER
  - COPYFOLDER
  - CHART1
  - CHART2
  - SAVEZIP

- Action Day: You can indicate on which days the action is to be run. Sunday is 1, Monday is 2, etc. For example, if you want to run the action on every week day, you can indicate '23456' or '65234'. Leaving it blank is the same as '1234567' or running it everyday.
- User Comments: This is not used by the program. So users are free to put comments about the operation step.
- CONVERT: You indicate the .cvt file you have prepared for the Data Converter in the 'Processing File Name' column. You can choose not to modify anything in this .cvt file when it executes. However very often, you may want the file names to change according to the current date, or to change the Date Range in the Data Converter as shown in the example above.
  - Here for the "ascii2ascii\_2.cvt" processing file example, we have shown 'Stock YY4YMMMMDDDD.txt' for the Source 1 File. It uses the same convention as described in 'My Web Server'. The 4-character string DDDD or MMMM or YY4Y will be replaced by the corresponding Day or Month or Year of the 'To Date' on the HSQuote main screen during run time. Note that they are in upper case. For lower case, such as dddd or mmmm or yy2y, they will be replaced by the corresponding Day or Month or Year of the 'From Date' on the HSQuote main screen. If 'To Date' is December 9<sup>th</sup>, 2005, 'YY4Y' will be dynamically replaced by '2005', 'MMMM' by '12' and 'DDDD' by '09' during run time. So the source file becomes 'Stock 20051209.txt' and this file will overwrite whatever Source File Name in the Data Converter. In this way, we can dynamically select the source file by changing the From or To date on main screen.
  - You can also change the Date Range in the Data Converter in run time. Three options are available for the 'Source From Date' and 'Source To Date' – 'FROM' will take the 'From Date' on the HSQuote main screen, 'TO' will take the 'To Date' on the main screen, and 'TODAY' is today's date. Note that the 'To Date' is always the current date, and the 'From Date' is the last successful download date in HSQuote.
  - Enhancement Options: additional flexibilities are indicated in Column G such as:
    - "ADD OHLC by 1.5": In the conversion process, a value of 1.5 is added to the Open, High, Low and Close prices (can be a negative value as well).
    - "MULTIPLY V by 10": In the conversion process, volume values will be multiplied by 10.
    - In MetaStock-to-Excel conversion, you can specify the starting cell where data is placed and the number of rows/records by indicating (column number, row number, number of total rows) in Column G.
    - "INTRADAY DATA IN EOD PROGRAM": Some users may want to use EOD analysis programs for Intraday data, and need to convert Intraday MetaStock data to simulated EOD text output file. This option does it.
- EXECUTE: You can run any executable files (.exe) or files that have been associated with an application, by placing the folder and file name in the "Source 1 Folder" and "Source 1 File" cells. You may even fetch a ZIP file from a website by indicating the URL in the "Source 1 File" cell.
- You may also MOVE, COPY or DELETE a single file after data download.
- MOVEFOLDER, COPYFOLDER: Move or Copy all the specified files (such as \*.prn) in one folder to another and change the file names if necessary (such as \*.txt).
- CHART1, CHART2: Activates "Chart, News and Data" Group 1 and Group 2 respectively.
- SAVEZIP: Simulate key strokes to save .zip files from Internet Explorer.

## 16.2 Set up

Once the 'PostDownloadProcessing.xls' file has been prepared, the rest of the set-up is easy.

- To execute Post Download Processing actions after every data download, you need to select the 'Do post download processing (HSQuote Plus Only)' option in Preference/Other Options. You may indicate '0' in the Select column to skip some actions.
- To execute with a command line or use the Task Scheduler, just provide the '-pp' switch. In this case, you do not need to select the 'Do post download processing (HSQuote Plus Only)' option in Preference/Other Options.
- If you just want to execute the Post Download Processing actions without any data download, indicate '-pp -na' switches on the command line. You can set up a scheduled task just to execute some of the post download processing actions.
- NOTE that you can manually trigger the processing of the Post Download Processing actions from the main screen (just like the above '-pp -na' switches on the command line), by clicking on the "Open Menu >> Advanced Features >> Run PostDownloadProcessing".

## 17. Other Features

### 17.1 Command Line Execution or Batch File Processing

This feature is for advanced users or programmers. Usually, you do not need to use this feature.

HSQuote may be executed in a command line or in a batch file containing the command lines. One benefit of this method is that you can specify different portfolio files to be downloaded from specific data servers in the command line at program startup. This command line may be used with the Microsoft Task Scheduler (Start/Settings/Control Panel/Task Schedule) to activate HSQuote and automatically start the specific download. It may also be used in a batch file.

The command line format can be displayed with the command: Quote -h

Command Line:

**“drive:\dir\_path\Quote.exe” -t PORTFOLIONAME -d -w -m -i -c -q -p PLACE -a -s  
SERVER -ri REFRESH-RATE -rr REFRESH-RATE -nc -ns -na -pp -from FROMDATE  
-to TODATE -f -o -dvd -n -h**

- t PORTFOLIONAME: ticker file name
- d: daily download
- w: weekly download
- m: monthly download
- i: intraday download
- c: 20-min delay realtime download
- q: quick download of last-trade data from a central server
- p PLACE: market place used with -c switch and no -q switch (default is US)
- a: ASCII personalized output format (default is MetaStock output)
- s SERVER: server, 0:Yahoo 1, 1:Yahoo 2, 2:US Backup, 3:Oanda, 4:BriteFutures, 5:Medved QuoteTracker, 6:My Web Server (Plus), 7: HSQ As Intraday Server (default is ticker corresponding server)
- ri REFRESH-RATE: for intraday download, 0:1min, 1:5min, 2:6min, 3:10min, 4:15min, 5:20min, 6:30min, 7:60min, 8:None (default is 8)
- rr REFRESH-RATE: for last-trade download, 0:15sec, 1:30sec, 2:1min, 1:3min, 4:6min, 5:10min, 6:15min, 7:20min, 8:30min, 9:60min, 10:None (default is 10)
- nc: no conversion to MetaStock data file (default is ON)
- ns: no separate individual stock files, used with -a switch (default is ON)
- na: no autodownload at startup (default is ON)
- pp: post download processing (default is OFF, HSQuote Plus only)
- from FROMDATE: download period from FROMDATE in YYYYMMDD format, or TODAY-X
- to TODATE: download period to TODATE in YYYYMMDD format, or TODAY-X (default is today)
- f: collect fundamental data
- o: download options chain
- dvd: download dividend data
- n: auto-update MetaStock names
- h: this help

Other attributes are set in the Preference.

## 18. Other Information

### 18.1 Website Links to Find Yahoo Symbols

You can find Yahoo ticker symbols from the following website links. These symbols can be used directly with HSQuote.

Yahoo! Major World Indices:

<http://finance.yahoo.com/intlindices?e=americas>

Yahoo! Major US Indices:

[http://finance.yahoo.com/indices?e=dow\\_jones](http://finance.yahoo.com/indices?e=dow_jones)

Yahoo! Europe/US Stock Lists:

<http://uk.biz.yahoo.com/p/uk/cpi/index.html>

Yahoo! Asia Pacific Stock Lists:

<http://sg.biz.yahoo.com/i/>

Yahoo! help on exchanges:

<http://help.yahoo.com/help/us/fin/quote/quote-19.html>

You can manually enter the symbols into the Ticker List, or use the following method to create ticker list from the abovementioned websites.

1. Open a blank Microsoft Excel worksheet and a blank Notepad.
2. Click [this link](#), and look for the country that you want to get ticker symbols. Usually you can find the 'Components' link for the index. Click on the Component link.
3. A Yahoo website showing the component stocks will open. Use your mouse to highlight/select the whole table, starting from the first row to the end of the table. Just select the whole table, press ctrl-c to copy it.
4. Now go to the Excel sheet, press ctrl-v to paste the whole table onto it. You just want the column that lists the ticker symbols (usually the first column, not the Name column.) So select the whole column, press ctrl-c.
5. Go to the blank Notepad, press ctrl-v to paste it. Save the list of tickers with an extension .tic.

The 'Create Ticker List' button provides many useful resources and animated help. New users should take a tour on the different topics:

1. Manually enter Yahoo! ticker symbols
2. Download and use pre-packaged ticker lists
3. Assemble tickers from Yahoo! sites
4. Link ticker lists together for one-click download
5. Create Currencies list for use with Oanda server
6. Create Commodity Futures list for Brite Futures server