Help Index

This index lists all Help topics available for reference.   To learn how to use Help, press F1 or choose Using Help from the Help menu.

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For the latest company and product information - including tips, upgrades, and links to other useful Internet sites - please visit our Web Page at http://www.winterra.com.

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Program Keys

The following describes the specific keypress sequences available while running the program.

Key(s)	Function
F1	Displays the Help window.
F2	Copies the active chart to another group.
F4	Shows and hides the popup Data Window.
Ctrl+O	Selects a new chart.
Ctrl +D	Display the active chart as daily information.
Ctrl +W	Display the active chart as weekly information.
Ctrl +M	Display the active chart as monthly information.
Ctrl +A	Displays the "Attachments" dialog box for the current graph.
Ctrl +T	Displays the "Parameters" dialog box for the current graph.
Ctrl +I	Displays the "Indicators" dialog box for the current graph.
Ctrl +Z	Toggles the zoom mode for the active chart.
Ctrl +S	Saves the currently active charts configuration as the default.
Ctrl +P	Print the active chart.
Shift+Ctrl+P	Print all charts in the current group.
Ctrl+Left Arrow	Moves the chart's slide to the left.
Ctrl +Right Arrow	Moves the chart's slide to the right.
Tab	Changes the active graph within a chart.
Shift+Tab	Changes the active graph within a chart
Home	Scrolls to the first page of security information.
End	Scrolls to the last page of security information.
PgUp	Scrolls backwards twenty (20) units of security data.
PgDn	Scrolls forward twenty (20) units of security data.
Up Arrow	Scrolls backwards five (5) units of security data.
Down Arrow	Scrolls forward five (5) units of security data.

The following key sequences are used when drawing lines or placing text onto a graph.

Key(s)	Function
Shift+Left Button	Selects a graph area to zoom.
Ctrl Key Pressed	Holding down the Ctrl key while drawing either freehand or speed resistance lines will extend the line to the edge of the graph.

File Menu Commands

The File menu includes functions for opening and closing charts, exporting chart data, and printing a chart.

Open Chart...

Opens a securities chart using existing financial data in one of the supported file formats.

Close Chart

Closes the active chart, removing it from the current group.

Save Chart As Default...

Allows you to specify default chart configurations which are used when you open new charts (charts which have not been previously saved within a group).

Copy Chart to Group...

Allows you to copy the active chart into another existing financial group.

Export Chart Data...

Exports the active charts price data in various ASCII file formats, including the price import format used by Quicken.

Page Setup...

Allows you to select or set page specific information related to the printing of a chart.

Printer Setup...

Allows you to select and configure the printer that you want to use for printing your securities charts.

Print Active Chart...

Prints the active chart to the printer.

Exit

Exits the program.

Group Menu Commands

The Group menu includes functions used specifically for security groups.

New

Create a new group.

Open...

Open a previously saved securities group.

Save

Save the current group.

Save As...

Save the current group as a new group name.

Print All Charts...

Print all charts contained within the group.

Tools Menu Commands

The Tools menu includes functions used for drawing lines and text to a graph.

Normal

Reset the current drawing mode to normal.

Auto Line Extension

Enables or disables the automatic extension of lines drawn on a chart.   If this selection is checked, lines are automatically extended to the edge of the graph.

Select

Select an area of the graph to zoom into.

Text...

Draw text onto a chart.

Trend Line

Draw a free-hand trendline on the graph.

Parallel Trend Lines

Draws parallel trend lines on the graph.

Vertical Line

Draw a vertical line at a specific location on a graph.

Horizontal Line

Draw a horizontal line at a specific location on a graph.

Speed Resistance

Draw speed resistance lines between two points on a graph.

Options Menu Commands

The Options menu includes functions for configuring your use of the program.

Chart

Allows you to specify various characteristics associated with securities charts; including text display, scrolling limits, chart grid lines, and Point & Figure marker size.   Chart Options

File Import

Allows you to specify the number of most recent financial data units used when opening a chart, and identifying the default ASCII data formats for files lacking the standard header.   File Import Options

Fonts

Use this function to select the style of fonts you want to use for chart labeling, data display, and the status bar.   Font Options

Graph

Allows you to select the default colors and number of grids used for new charts.   Graph Options

Toolbar

Allows you to show and hide the application toolbar.

Status Bar

Allows you to show and hide the application status bar.

Data Window

Allows you to show and hide the popup Data Window.   As the vertical cursor slide is moved back and forth, the Data Window displays the values of all graphs for that day.

Graph Menu Commands

The Graph menu includes selections that control the appearance of a graph; including the type of graph, parameters specific to the graph, the graph's colors, and if the graph should display its data.

Attachments...

Allows the editing and removal of existing graph attachments.

Parameters...

Allows you to change graph-specific data parameters.

Indicators...

Allows you to add or remove indicators from a chart. The availability of specific indicators is dependent upon the data content of the security. For example, if volume information is not available for a security, volume-related indicators will not be provided for selection.

High/Low Bar
Line
Histogram
Candlestick

These menu selections allow you to change the appearance of the current graph. The availability of each option is dependent upon the type of graph (i.e. the High/Low Bar graph is only available on the Price Graph).

Zoom In
Zoom Out

Toggle between the display of all chart data, and the display of a fixed amount of data (scrollable).

Daily
Weekly
Monthly

These menu selections allow you to display the current charts price data as a daily, weekly, or monthly frequency.

List of Technical Indicators

Window Menu Commands

The Window menu provides functions for managing the display of all charts in a group.

Cascade

Displays all charts as cascading windows.

Tile Vertical

Displays all charts as vertically tiled windows.

Tile Horizontal

Displays all charts as horizontally tiled windows.

Arrange Icons

Arranges the display of all minimized charts.

Close All

Closes (removes) all charts from the group.

List of Technical Indicators

The following alphabetic list identifies the available technical indicators. Below you will find brief summaries of each indicator.

Commodity Channel Index (CCI)
Force Index
Moving Average Convergence/Divergence (MACD)
Moving Averages (Exponential, Simple, Weighted)
Multiple Data Graph
Negative Volume Index (NVI)
Negative Volume Trend (NVT)
On-Balance Volume
Open Interest
Point & Figure
Positive Volume Index (PVI)
Positive Volume Trend (PVT)
Price Channel (Trading Band)
Price Momentum
Price Oscillator
Price Performance
Rate of Change (Price and Volume)
Relative Strength
Relative Strength Indicator (RSI)
Stochastic
Volume
Volume Accumulation
Volume Oscillator
Weighted Close
Williams %R

For detailed information on technical indicator theory and practice, we highly recommend that you consider the following publications:

Technical Analysis Explained
Martin J. Pring

Technical Analysis of the Futures Markets
John J. Murphy

The New Commodity Trading Systems and Methods
Perry J. Kaufman

The Encyclopedia of Technical Market Indicators
Robert W. Colby & Thomas A. Meyers

Technical Analysis of Stock Trends
Robert D. Edwards & John Magee

New Concepts in Technical Trading Systems
J. Welles Wilder.

Commodity Channel Index (CCI)

The Commodity Channel Index, originally developed by Donald Lambert, is a tool that assists in identifying when an underlying security's cycle trend is in effect.   The indicator is displayed as an oscillator with major signal lines at +100 and -100.   The general interpretation is that when the oscillator breaks through either of these lines, it is an indication that the security may be starting a new trend.

Force Index

The Force Index, developed by Alexander Elder, seeks to measure the force of day to day movement through use of price and volume information. The force of a move is related to the daily net change of the price multiplied by the daily volume.   If the price moves up, the force is positive.   If the price moves down, the force is negative. The amount of trading volume and amount of net change indicate the degree of force. The greater the volume or net change, the greater the force.

This index is an oscillator and is generally smoothed for trading signals due to the swings of the raw data. A 2-day smoothing can be used for short term signals and a 13-day smoothing for longer term. As with most all oscillators, trading signals are issued when the oscillator crosses the signal line and important trend changes can be seen when top or bottom divergences appear.

Force Index = Today Volume * Today Net Change

Moving Average Convergence/Divergence (MACD)

Developed by Gerald Appel, the MACD is a widely used oscillator derived from the differential of two exponential moving averages; a short term average and a longer term average.

In a trending market, the shorter term average will rise or fall more quickly than the slower long term average, thereby resulting in a larger difference between the two.   By plotting the mathematical difference of the two averages, an oscillator is created that rises and falls around a "zero-line".   The farther away the oscillator is from the zero-line, the greater the strength of the trend.

By calculating an exponential average of the oscillator itself, you have what is described as a "signal line".   The time frame normally used for the signal line ranges from 5-10 days in length. Basic interpretation theory suggests that buy and sell signals are generated whenever the oscillator (MACD) line crosses its signal line.   When the MACD line crosses from below to above the signal line, a buy signal is in effect.   When the MACD line crosses from above to below the signal line, a sell signal is generated.

Experiment with different exponential average periods for the MACD oscillator and look for divergence's between the price action and the MACD oscillator itself to help identify the most profitable trading signals.

Moving Averages

Generally, moving averages are used to smooth out the data values used for technical analysis; helping to eliminate both large and small fluctuations normally found in the data, and to help identify the directional trend of the data being averaged.

Stable supports three different types of moving average calculations; the simple moving average, the weighted moving average, and the exponential moving average.   Any of these moving averages can be applied to the base data associated with almost all graphs found in the product.

The calculation of the simple moving average simply adds together a number of the most recent data values and divides the resulting sum by the total number of values being added together. For example, a ten day moving average is computed as the sum of the ten most recent data values, divided by 10.   In the simple moving average system, all data values are given an equal "weight" - effectively assigning the same importance to each data element used to calculate the average.

Some people feel that it would make more sense to assign greater importance to the more recent

data and criticize the simple moving average for lacking this.

The weighted moving average is similar to the simple moving average except that each value being considered in the average is assigned a specific "weight".   The greatest weight is assigned to the most recent data value, while the least weight is given to oldest value. This has the effect of associating "greater importance" to more recent data when calculating this average.   The assignment of specific data value "weights" is performed automatically by the program.   Stable uses the method of assigning the ordinal value of the data item within the list as the weight. Calculating a 5 day average for example, the first value is multiplied by 1, the second by 2, the third by 3, the fourth by 4, and the fifth by 5.   The five resultant products are then added together and divided by 15 (1+2+3+4+5) to determine the average.

The exponential moving average is somewhat similar to the weighted moving average in that the most recent data is also assigned more importance than data further back in time.   However, instead of "weighting" each individual data value, a "fixed weight" is assigned to today's (the most recent) value, while all of the remaining weight is given to the previous value of the exponential moving average itself.   In calculating this moving average, you begin by first establishing the average as equal to the first day's data, then moving through the series of data - multiplying each new recent value by some fixed weight (like 12%) and the previous value of the average itself by the all the remaining weight (88% in this case).

Negative and Positive Volume Index (NVI / PVI)

Both the Negative Volume and Positive Volume Indexes are indicators based upon the premise that trading volume increases when unsophisticated investors are active in the market, while the so-called "smart money" investors are busy in the market during periods of declining volume. The price direction on days of declining volume may then indicate "smart money" accumulation or distribution if the change is positive or negative respectively.   The primary distinction between these two indicators is simply which volume move is being measured.

The NVI calculation is related to negative, or falling volume.   When the volume decreases from the previous period (rising volume does not affect this indicator), the NVI is adjusted by the percentage change in the price.   Specific to the NVI, long positions are taken when the indicator crosses ABOVE its moving average.

The PVI calculation is related to positive, or rising volume.   When the volume increases from the previous period (falling volume does not affect this indicator), the PVI is adjusted by the percentage change in the price.   Effectively, PVI measures what the "uninformed" masses are doing - and long positions are taken when the PVI crosses BELOW its moving average.

Negative and Positive Volume Trends (NVT / PVT)

The Volume Trend indicators are variations of the basic On-Balance Volume indicator.   The primary difference between these indicators and the OBV is in what portion of the day's volume is used to determine the new indicator value.   Unlike the OBV (which applies the entire day's volume), both NVT and PVT use only a portion of the volume determined as a percentage of the price change from the previous day.   In effect, these indicators consider the magnitude of the period's price change - whereas OBV does not.

The major distinction between the NVT and the PVT is that the NVT theorizes that the LESS volume required to move the price, the more significant is the event.   All things being equal, a period of low trading volume will affect this indicator more than if the same period was driven by high trading volume.   This, in effect, is similar in concept to the Negative Volume Index - where we're looking for "smart money" activity in the market.

On-Balance Volume

The On-Balance Volume Indicator (developed by Joseph Granville) is used to indicate whether an accumulation or distribution of shares for a security is occurring by studying the security's volume activity in relation to the price change.   The basic theory behind the OBV indicator is that it tends

to exhibit trend changes in advance of price changes - therefore look for a change in the OBV trend to suggest a forthcoming change in the price trend.

The OBV indicator is a cumulative total of volume calculated by adding the entire day's volume to the total if the price rises for that day, and subtracting the entire day's volume if the price falls for that day.   (See Volume Trend for a variation of this indicator).

Open Interest

The Open Interest Indicator displays the security's open interest as vertical bars for each day of data.   The base value for the Volume Graph is the lowest value for the current graphing period.

Point & Figure

Point & Figure charting is the study of strictly price movement; time is not considered in the graphing of the price activity.   Bar charts take both time and price into consideration when plotting financial data.   For example, on a daily bar chart, each new day is plotted one "space" to the right of the previous day.

Traditionally, Point & Figure charts are created using alternating columns of X's and O's.   Each column represents only the price movement of the graphed data - X's reflect periods of rising prices while O's indicate periods of falling prices.   Any individual column may represent 1 day, 1 week, 1 month - practically any time frame.

When Point & Figure charts are constructed, you specify a box size and a the number of boxes required to force a change in direction (reversal).

Box size is specified as the dollar amount necessary to create a new box (X or O) on the chart. Whenever the price activity moves at least one box size, a new X or O is added to the chart. Should the price move be at least twice the box size, two boxes would be drawn.

The reversal size (number of boxes) is used to determine when a new column is to be created. A reversal size of 3 boxes in effect says, "If the price moves in the opposite direction at least 3 * box size, begin a new column."

Price Channel (Trading Band)

Available only on Price Charts, the Price Channel or Trading Band is a special indicator used to envelop price activity within a specific trading range.   The Price Channel is created by calculating a single moving average (either simple, weighted, or exponential), and then displaying the moving average line (shifted vertically) an equal percentage both above and below its calculated value.

While the Price Channel can be manually created using two individual moving averages, the Price Channel greatly simplifies the task.

Price Momentum

Price momentum is the ratio between today's price and the price some specified number of units in the past.

High momentum readings sometimes imply that the security is in an overbought condition, while extremely low readings may suggest an oversold situation.

$$(\text{Today's value - N\_units\_ago value}) * 100$$

Price Momentum and Price Rate of Change are essentially the same technical indicator.

Price and Volume Oscillators

The Price and Volume Oscillators are indicators representing the difference between two moving averages of the respective price or volume data.   When plotted, the oscillator rises and falls through a "zero line" - and represents the actual "crossing" of the two moving averages.

As the oscillator crosses and moves above the zero line, this indicates that the first moving average is moving upwards at a faster rate than the second average.   This can be interpreted as

a rising trend and, if the first average is based on a shorter time period than the second, that the short term trend is currently stronger than the long term trend.

If the oscillator crosses and moves below the zero line, this is an indication that the first moving average is falling at a rate faster than the second average. This can be interpreted as a falling trend and, if the first average is based on a shorter time period than the second, that the short term trend is now weaker than the long term trend.

One way to help visualize an oscillator is to create a Stable chart containing both a Price Graph (with two moving averages), and a Price Oscillator Graph based on the same two moving averages. As the moving averages cross each other on the Price Graph, you will see the Price Oscillator line cross its zero line.

You can also use an Oscillator graph to track when a single moving average crosses the data which it is based upon - by setting the first oscillator unit to 1 and the second to the moving average units you want to plot. The resultant oscillator graph then shows when the moving average crosses the underlying data. The higher the oscillator, the greater the data is above its moving average, and conversely on the downside.

Price Performance

The Performance Indicator measures the percentage change on a day by day basis from the most recent date. The very last value (most recent date) on the graph is always zero (0) - indicating that the percentage change from today is 0.

To determine the percentage change in price between the most recent date and a date in the past, turn on the data display for the Performance graph. Move the "slider" so that the hair cursor is positioned on the date in the past, and read the displayed value.

This is the percentage change in price.

Rate of Change (Price and Volume)

The Rate of Change (ROC) is a method used to measure the momentum of a security. Rate of Change is computed as the percentage change between today's value (price or volume) and the associated value some specified number of units in the past.

High Rate of Change readings sometimes imply that the security is in an overbought condition, while extremely low readings may suggest an oversold situation.

$$(Today's\ close - N\_units\_ago\ close) / N\_units\_ago\ close$$

Relative Strength

The Relative Strength graph allows you to compare the price action between two securities or other financial index - typically used to compare a security against its associated "index" or base. For example, you might construct a relative strength graph comparing how IBM is performing against the DJIA as a whole , or how Exxon is performing against Chevron.

Calculated simply by dividing the security's value by the comparative financial item, the Relative Strength measures the relationship between the two. An important point to remember is that this indicator represents the relative relationship between the items, and does not directly reflect individual price action. As a result, even if both securities prices are falling, the Relative Strength line will move upwards if the primary security's prices are falling less than the relative security.

Tip: The Relative Strength indicator must always be based on a chart contained within the group. However, you may not want that particular chart displayed along with the other charts in the group. Try minimizing the chart so that the window is displayed as an icon at the bottom of the program desktop area.

Relative Strength Indicator (RSI)

The Relative Strength Indicator was developed by Wells Wilder in an effort to measure the

internal strength of a security.   Unlike the Relative Strength graph described above which compares two financial items, the RSI oscillator determines the momentum strength within a single security.

The RSI calculation serves to resolve two issues related to the normal determination of a momentum indicator; the smoothing out of erratic price movements, and to provide a normalized trading range for comparison purposes.

The RSI graph presents the indicator as fluctuating between the values of 0 and 100. Traditionally, lines are drawn on the graph at the 70 and 30 levels; representing overbought and oversold points respectively.   Once an overbought or oversold situation presents itself, look for a price trend reversal for an actual buy or sell signal.

Stochastic Indicator

The Stochastic Indicator, developed by George Lane, measures on a percentage basis, where the closing price is in relation to the total trading range during a specified past number of days. The significance of this indicator is based on observations that the closing price generally is closer to the top of the price range during periods of rising prices - and nearer the bottom during downtrends.

When you interpret the graph, values above 70 place the closing price near the top of the range, while values below 30 place the close near the bottom of the range.   High readings might suggest possible sell points while low readings a potential buy indication.

Volume Accumulation Indicator

The Volume Accumulation indicator (devised by Marc Chaikin) is an alternative to the On Balance Volume indicator of Joseph Granville.   It attempts to assign a percentage of the volume based on a more realistic interpretation of the day's trading range.

The primary differences between Volume Accumulation and OBV is:

Volume Accumulation is an intra-day measure of trading volume as it applies to the day's price action.   OBV measures the change between two consecutive days closing values.

Volume Accumulation assigns only a percentage of the day's volume to the calculation of the indicator.   Consider; if a day spends most of the time on the downside, but closes slightly higher than the day before, should all of the day's volume be applied as a positive value towards the indicator (OBV method) or only a percentage (Volume Accumulation method).

In determining the amount of the day's volume that will be applied to the indicator, Volume Accumulation calculates a percentage based on where the close is in relation the average price for the day.   If the close is above the midpoint, a positive amount of the volume is used.   If below the midpoint, a negative amount is used.   Referring to the formula below, the only time the entire volume will be used in the indicator is when the close is equal to the high (positive value) or the low (negative value).

$$VA = (((Close - Low) - (High - Close)) / (High - Low)) * Volume$$

As with the OBV indicator, look for confirmation or divergences between the indicator and price action for possible trend changes.

Volume Data

The Volume Indicator displays the security's trading volume as vertical bars for each day of data. The base value for the Volume Graph is the lowest volume value for the current graphing period.

Weighted Close

The Weighted Close is simply a weighted indicator of the closing values for a security.   It is calculated daily by adding the security's high and low value to the closing value doubled - then dividing the result by four.

Williams %R

Larry Williams %R indicator is based on measuring the most recent close in relation to the price range over a specified number of days. Due to the way the calculation is plotted, the interpretation is reversed such that overbought indications occur when the reading is above 20, and oversold when the reading is below 80. Important to the interpretation of Williams %R are price divergences in overbought and oversold areas.

(Range High - Today Close) / (Range High - Range Low)

Supported Data Formats

The following data formats are directly supported for import into the program.   For further information about these data files, please consult the supplied User's Guide.

> MetaStock
> TeleChart 2000 (TC2000)
> Commodity Systems, Inc. (CSI)
> Technical Tools
> ASCII File Format

ASCII File Format

The general format for all ASCII data files is as follows:

> *Format_String*   ***Optional record***
> Data_Record_1
> Data_Record_2
> -
> -
> Data_Record_N

Format_String is a description of the format of each data record in the file.   This record is optional in the ASCII data file.   See File Import Options for further information on configuring the program to support ASCII files which do not contain the *Format_String*.

If used, the *Format_String* consists of two or more of the characters "**DTVOHLCI**" (**DC** - or Date and Close - is the minimum required for any file), which specifies both the sequence and type of data fields in each record:

D represents a *Date* field

> This entry is actually one of the following; '**D**' for daily data, '**W**' for weekly data, '**Q**' for quarterly data, '**M**' for monthly data, or '**Y**' for yearly data.

> Additionally, a modifier can follow the date specification character to identify a specific date format from the list below:

> > 0   mm/dd/yy   (also the default if '0' is omitted)
> > 1   mmddyy
> > 2   yy/mm/dd
> > 3   yymmdd
> > 4   dd/mm/yy
> > 5   ddmmyy
> > 9   Serialized date format (Lotus-style)

T represents a *Time* field (for intra-day data).

> This field is used to support intra-day data charting where both a date and time value is associated with each unit or record.   The time value is a long integer value representing hour, minute, and second (HHMMSS).

V represents a *Volume* field (or short interest).

O represents an *Open* field.

H represents a *High* field.

L represents a *Low* field.

C represents a *Close* field.

I represents an *Open Interest* field.

Data_Record represents each ASCII record in the file (up to *Record_Count* entries if included in the file). All data records must be of the same field sequence and contain identical types of fields.   Each field in the data record is separated from the next using a comma, tab, or space character.

THE FOLLOWING NOTES APPLY TO ALL IMPORTED DATA:

1.   The program reads and interprets ASCII numeric values in a variety of formats:

Floating point decimal values (i.e., 34.65) for data related to such items as market indexes (i.e., DJIA, SP500), mutual funds, and various currency information.

Standard fractional values (i.e., 64 1/8, 20 1/2) for representing data specific to stocks, options, and corporate bonds.   *NOTE: These fractional formats are not supported unless you check the box Support ASCII Fractional Values (34 7/8) in the* **Options/File Import...** *dialog.*

Special fractional values (i.e., 76:18) for data representing 1/32ths; such as Government Agency Issues (i.e. FNMA, GNMA, World Bank) and Treasury Bonds, Notes and Bills.

2.   Numeric values (i.e. volume, open, close, etc.) may not be formatted with a comma (e.g. Use 12900 instead of 12,900).

3.   Holiday data, data that includes zero (0) numeric values for all fields in a particular data record volume should not be included in any of your data files.

4.   Data is not automatically adjusted for splits or ex-dividends.

Example ASCII Data

The following are examples of the contents of several different ASCII data files supportable by the program.   In each example, the use of the comma to separate individual fields can be replaced by a tab or space character.   *The first record in each example (the Format String) is optional.*

Market Index

        DVHLC
        1/2/92, 238169, 3184.7, 3119.86, 3172.41
        1/3/92, 236228, 3221.38, 3156.31, 3201.48
        1/6/92, 272785, 3230.32, 3166.59, 3200.13
        1/7/92, 255148, 3224.73, 3165.25, 3204.83
        1/8/92, 290369, 3245.53, 3164.58, 3203.94

        D9VHLC
        33605, 238169, 3184.70, 3119.86, 3172.41
        33606, 236228, 3221.38, 3156.31, 3201.48
        33609, 272785, 3230.32, 3166.59, 3200.13
        33610, 255148, 3224.73, 3165.25, 3204.83
        33611, 290369, 3245.53, 3164.58, 3203.94

The above illustrates two examples of files containing 5 data records. Each data record contains five fields identified by the "DVHLC" line.   The sequence of the fields is "D"aily Date (the first example is in *mm/dd/yy* format, the second in *serial date* format), "V"olume, "H"igh, "L"ow, and "C"lose.   Decimal values are used.   Note that 'D0' could have also been used to represent this date format.

Mutual Fund

        W1C
        010389, 14.28
        011089, 14.69
        011789, 14.67
        012489, 14.90
        013189, 15.28

The above illustrates a file containing 5 data records. Each data record contains two fields identified by

the "W1C" line.   The sequence of the fields is "W"eekly Date (in *mmddyy* form) and "C"lose.   Decimal values are used for numerics.

Stock

    D3VHLC
    900102, 3913, 52 7/8, 52 3/8, 52 3/8
    900103, 3628, 53 3/8, 52 1/8, 53 3/8
    900104, 5057, 54 1/4, 53 1/4, 53 7/8
    900105, 4624, 53 5/8, 53 1/8, 53 3/8
    900106, 5203, 53 1/4, 51 5/8, 52 3/4

The above illustrates a file containing 5 data records - each record contains five fields identified by the "D3VHLC" line.   The sequence of the fields is "D"aily Date (in *yymmdd* form), "V"olume, "H"igh, "L"ow, and "C"lose.   Volume information is represented as a decimal value, while fractional values are used for all others. .   *NOTE: These fractional formats are not supported unless you check the box Support ASCII Fractional Values (34 7/8) in the **Options/File Import...** dialog.*

Intra-Day

    DTOHLCV
    05/31/96,160100,5671.250,5671.250,5646.500,5646.500,75
    05/31/96,161100,5644.649,5648.350,5636.899,5647.609,67
    05/31/96,162100,5647.979,5650.189,5647.240,5647.979,31
    05/31/96,163100,5648.350,5648.350,5643.540,5643.910,22
    05/31/96,164100,5643.180,5646.500,5643.180,5645.020,19

The above illustrates a file containing 5 intra-day data records. Each data record contains seven fields identified by the " DTOHLCV " line.   The sequence of the fields is "D"aily Date (in *mm/dd/yy* format), Time, Open, "H"igh, "L"ow, C"lose, and "V"olume.   Decimal values are used for numerics.   *NOTE: The presence of the Time field always indicates intra-day data.*

DDE Command Summary

The following summarizes the available DDE commands supported by the program.   For further details about each transaction or command, refer to the supplied User's Guide.

Application (Service) Name

For all DDE communication connections established with the program, use the name "STABLE" as the application or service name.

Topics

Two classes of topics are supported; the "SYSTEM" topic related to the primary application, and *ChartName* topics associated with the individual chart windows.

Request Transactions

A client can send request (XTYP_REQUEST) transactions to a specific topic in order to receive information about that topic.

Topic	Item
"SYSTEM"	SZDDESYS_ITEM_TOPICS
	Returns a list of the available topics; which includes the "SYSTEM" topic, and the names *ChartName* of all currently open charts.
	SZDDESYS_ITEM_SYSITEMS
	Returns a list of supported items for the SYSTEM topic.
	SZDDESYS_ITEM_FORMATS
	Returns a list of the supported clipboard formats.
	SZDDESYS_ITEM_STATUS
	Returns the *busy* or *ready* status of the server.
ChartName	SZDDESYS_ITEM_ITEMLIST
	Returns a list of supported items for the chart.
	SZDDESYS_ITEM_STATUS
	Returns the *busy* or *ready* status of the chart.
	DATERANGE
	Returns the date range associated with the charts data as two dates of the format YYMMDD. As an example, a chart consisting of data for all of 1993 would return 930104,931231.
	"FIELDDEF"
	Returns a description of the data content associated with the chart (i.e. "DVHLC").

Execute Transactions

A client application can send execute (XTYP_EXECUTE) transactions to a particular topic in order to execute a command or series of commands.

Topic	Command String
"SYSTEM"	"[MINIMIZE]"
	Minimize the application window to an icon.
	"[MAXIMIZE]"
	Maximize the application window to full screen.
	"[SHOW]"
	Redisplays the application window if it was previously an icon.
	"[CLOSE]"
	Terminates the program.
	"[CASCADE]"
	Redisplay all charts as cascaded windows.

"[TILEVERTICAL]"
   Redisplay all charts as vertically tiled windows.
"[TILEHORIZONTAL]"
   Redisplay all charts as horizontally tiled windows.
"[OPEN(*type*,*path*,*file*)]"
   Opens a new technical chart identified by *file* in the directory named *path* of data import type *type*.

ChartName   "[SHOW]"
   Displays the chart if it was an icon.
"[CLOSE]"
   Closes the chart removing it from the desktop.
"[PRINT]"
   Prints the chart to the currently selected printer.   The chart must be shown or maximized before issuing this command.
"[UPDATE]"
   Forces the chart to redisplay its contents.
"[MINIMIZE]"
   Minimize the chart window to an icon.
"[MAXIMIZE]"
   Maximize the chart window.
"[EXPORT(*file,symbol,format,startdate,enddate,header*)]"
   Exports the price data of the chart to an ASCII file.

Poke Transactions

A client application can send unsolicited data to a chart through use of the DDE poke (XTYP_POKE) transaction.   This is the method by which new or real-time data can be submitted to a chart for display and update.

Topic	Item	Data
ChartName	"NEWDATA"	"*ASCII Data Record*"

ASCII Data Record represents an individual day of data formatted to the chart's reported "FIELDDEF" format.   Assuming a reported field definition of "DVHLC", the following would be an example of a valid record:

   12/20/91, 180906, 34 1/2, 32 1/8, 33

Application Toolbar

The toolbar provides an efficient mechanism for performing those operations and functions performed most frequently.
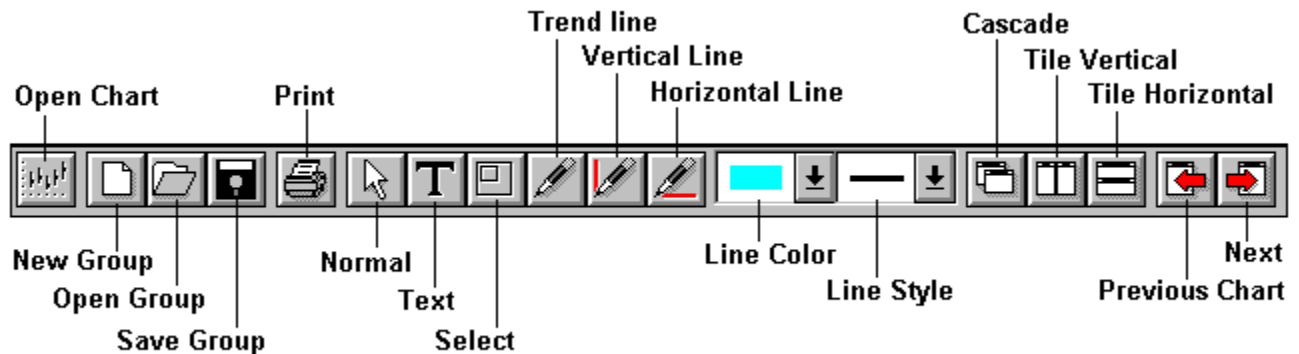
Open Chart

Opens a securities chart using existing financial data in one of the supported file formats.

New Group

Create a new group.

Open Group

Open a previously saved securities group.

Save Group

Save the current group.

Print Chart

Prints the active chart to the printer.

Normal

Reset the current drawing mode to normal.

Text

Draw text onto a chart.

Select

Select an area of the graph to zoom into.

Trend Line

Draw a free-hand trendline on the graph.

Vertical Line

Draw a vertical line at a specific location on a graph.

Horizontal Line

Draw a horizontal line at a specific location on a graph.

Line Color

Select the color to be used for all subsequent line drawing.

Line Style

Select the style to be used for all subsequent line drawing.

Cascade

Displays all charts as cascading windows.

Tile Vertical

Displays all charts as vertically tiled windows.

Tile Horizontal

Displays all charts as horizontally tiled windows.

Previous Chart

Make the previous chart the active chart.

Next Chart

Make the next chart the active chart.

Limited Warranty

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Product Description

Written for experienced and novice users alike, this product provides powerful - yet easy to use - stock market technical analysis capabilities ideal for the technical trader with existing (or access to) historical financial data for stocks, bonds, commodities, mutual funds, indexes, and options.

Along with the many popular technical indicators found in the program, features such as DDE (Dynamic Data Exchange), chart printing, selectable graph styles, various data import/export formats, popup graph menus, enhanced desktop management - and more - are combined into a single, powerful application.

MetaStock, TeleChart 2000 (TC2000), CSI, Technical Tools, and ASCII formatted data files are supported; allowing you to use your existing data more effectively.   All charts support selectable zoom and horizontal scrolling - giving you the ability to study as many as 16,384 units (days, weeks, etc.) of data in a single graph. And when you identify a chart worthy of more attention, simply print it to your system printer.

All charts provide an easy to use "slider" for accurately comparing a specific day's activity across several graphs.   Also available is an application "toolbar" providing single mouse click operation of frequently used charting operations and tools.

Other standard features you will find include the following:

o   Over 20 technical indicators including Williams %R, Point & Figure, Stochastic, Performance, and many more.

o   Financial groups for organizing and collecting any number of individual charts into a common group

o   Multi-data charts for analyzing several underlying securities within the same chart.

o   Interactive chart drawing tools; including trend lines, speed resistance lines, and text attachments can be drawn and saved with any chart.

o   User-selectable graph styles; including Candlestick, High/Low Bar, Line, and Histogram graphs.

o   Daily financial data can be compressed to weekly or monthly chart presentation to filter the day to day noise in the markets.

o   All charts are scalable along the X and Y axis - and include chart zoom and selectable area functionality.   As many as 16,384 days of data are supported for each and every chart.

o   Chart data can be exported to various ASCII file formats; including the price history format used to import into Quicken(TM).

o   As many as eight (8) technical analysis indicators can be created on each chart.

o   Improved desktop chart management has been provided using the standard Microsoft Windows Multiple Document Interface (MDI).

o   Dynamic Data Exchange (DDE) support has been built in - allowing you to communicate directly with any chart through the use of third-party software (such as Microsoft Excel) to open, print, display - *or to dynamically add new data to a chart*.

o   "Drag and Drop" support is available - allowing CSV and Technical Tools data files to be opened simply by "dragging" a file from the File Manager directly to the application window or icon.

o   Popup menu support within any graph allowing you to quickly perform many common graph functions.

o   On-line help documentation using the standard Window's Help program.

o   All chart and graph colors are easily selected and changed to suit your own personal

preference.

Adding and Removing Technical Indicators

You can have as many as eight (8) technical indicators on each chart for analyzing and studying the underlying financial data.   Once you have selected the indicators you want to study, you have the choice of creating the indicators on the individual chart - or on all existing charts within the current financial group.
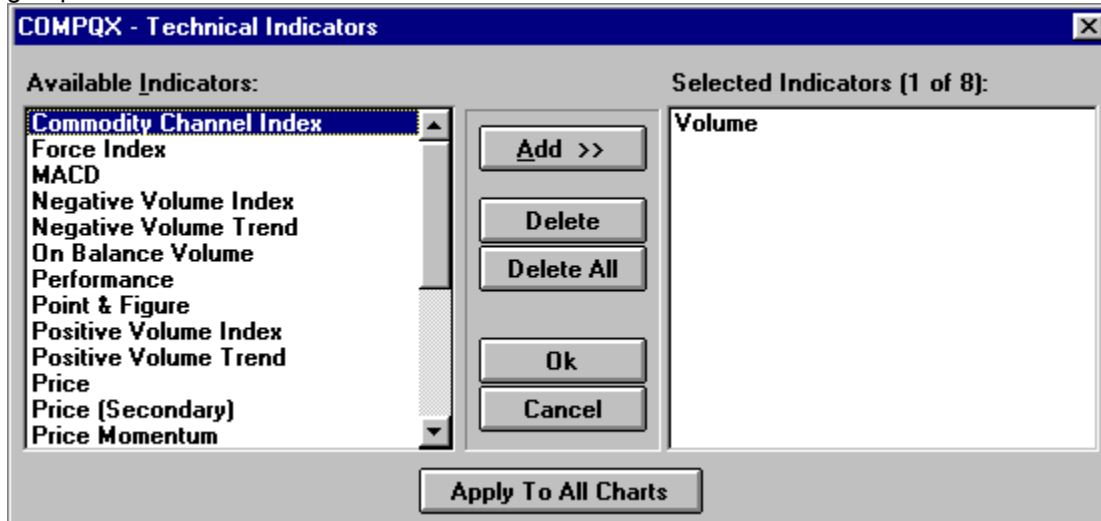
To add or remove technical indicators:

1.	Select the graph by clicking within the graph, or by "tabbing" to the graph.

2.	Select Indicators... from the Graph Menu.

	-OR-

	Click on the Ind button at the lower right corner of the chart.

3.	In the Technical Indicators dialog, add indicators from the list on the left - or remove indicators from the list on the right.

4.	Accept your changes by clicking the **OK** button to create the indicators on the current chart, or clicking the **Apply To All Charts** button to create the indicators on every chart in the financial group.

List of Technical Indicators

Adding New Attachments

Attachments are graphical elements such as lines and text which you place on a graph.   To add an attachment, perform the following procedures.

To add an attachment:

1.   Select the attachment you want to add from the Tools menu.

-OR-

Click the desired attachment button on the toolbar.

2.   Move the mouse to the location on the graph where you want to place the attachment. *The mouse cursor appearance changes to the selected attachment type*.

Once the above steps have been performed, various actions occur depending on your selected attachment type:

Text attachment:

3.   Click the left mouse button to drop the attachment onto the graph.

4.   Enter the text and select the colors, alignment, and other styles from the available options - then press the OK button.

Trend line attachment:

3.   Click and hold the left mouse button to anchor the first endpoint, then move the mouse to the location where you want the second endpoint to be.

4.   Release the left mouse button to complete the trend line.

Tip: Holding the Ctrl key down during the above procedure will extend the line beyond the second endpoint to the edge of the graph.

Parallel Trend lines attachment:

3.   Click and hold the left mouse button to anchor the first endpoint, then move the mouse to the location where you want the second endpoint to be.

4.   Release the left mouse button to complete the trend line (in fact, two parallel trend lines have been created - one on top of the other).

Tip: Holding the Ctrl key down during the above procedure will extend the line beyond the second endpoint to the edge of the graph.

5.   Click and hold the left mouse button anywhere along the new trend line, then drag one of your parallel trend lines to a new location on the graph.

Vertical and horizontal line attachment:

3.   Click the left mouse button to draw the vertical or horizontal line.   The line is drawn to the edges of the graph.

Speed resistance line attachment:

3.   Click and hold the left mouse button to anchor the first endpoint, then move the mouse to the location where you want the second endpoint to be.

4.   Release the left mouse button to complete the speed resistance line.   Two lines originating from the earlier endpoint are drawn, each representing the 1/3 and 2/3 speed resistance points.

Tip: Holding the Ctrl key down during the above procedure will extend the lines beyond the second endpoint to the edge of the graph.

Additional Notes:

- o   Trend and speed resistance line extension can be performed either by holding the Ctrl key down while drawing the line, or by selecting Auto Line Extension from the Tool menu before selecting the attachment type.

- o   The color and style of all lines can be selected prior to drawing from the color and style combo boxes found in the programs toolbar.

Displaying Graph Data

Adjusting Chart and Graph Sizes

As more charts are added to a financial group, you may want to change the size of the charts to accommodate the optimal viewing of each chart.   When new technical indicator graphs are placed within a chart, the size of the price graph changes to make room for these additional graphs.

To adjust the size and location of charts:

>Charts are effectively standard windows that support the normal window management techniques found in the Microsoft Windows environment.

>You can resize any chart window by clicking on the border of the window and dragging the sizing rectangle until the desired size is set.   You can reposition a window by clicking on the windows title and dragging the window to a new location.

>Additionally, you can perform standard tiling and cascading of financial chart windows by choosing the appropriate selection from the Window menu.

To interactively change the size of the Price Graph (only when one or more technical indicators are visible):

1. Move the mouse to the location between the Price Graph and the first technical indicator graph until the mouse cursor changes to a double vertical arrow.

2. Press and hold down the left mouse button.

3. Move the mouse vertically to set the new bottom of the Price Graph.   As you move the mouse, a horizontal line is drawn to identify the new bottom of the Price Graph.

4. Release the mouse to set the new Price Graph size.

Force Automatic Graph Labeling

When this option is selected, the program automatically determines the available space on each graph and automatically generates horizontal grids and labels that optimally fit within this space. The automatic labeling feature is performed even if a graph has been configured to use a manually set number of horizontal divisions.

To select automatic labeling for your charts:

1. Select Chart... from the Options menu.

2. Check the box labeled "Force Automatic Graph Labeling".

To use normal text labeling on your charts:

1. Select Chart... from the Options menu.

2. Clear the box labeled " Force Automatic Graph Labeling".

Changing a Graph's Drawing Style

The drawing style for a graph can be changed so that you can interpret the data more easily. Four basic drawing styles are supported; a High/Low Bar graph, a Line graph, a Histogram graph, and Candlesticks. The High/Low Bar and Candlestick styles are available only for the Price graph (Candlesticks require open, high, low, and close data).

To change the drawing style for a graph:

1. Select the graph by clicking within the graph, or by "tabbing" to the graph.

2. Select High/Low Bar, Line, Histogram, or Candlestick from the Graph menu on the chart.

    -OR-

    Activate the popup graph menu and select High/Low Bar, Line, or Histogram from the menu.

Changing Graph Colors and Horizontal Divisions

You can change the colors and the number of horizontal divisions for any graph displayed in a chart.

To change an individual graph's colors or number of horizontal divisions:

1. Select the graph by clicking within the graph, or by "tabbing" to the graph.

2. Choose Parameters... from the Graph menu or press Ctrl+T.

    -OR-

    Activate the popup graph menu and select Parameters... from the menu.

Selecting the Number of Horizontal Divisions

Changing and Removing Attachments

Attachments are graphical elements such as lines and text which you place on a graph.   To remove or make changes to an attachment, perform the following steps.

To access the list of all attachments on a graph:

> 1.   Select Attachments... from the Graph menu.
>
>   -OR-
>
>   Click the right mouse button on the graph and select Attachments... from the popup menu.
>
> 2.   Choose Delete or Edit... to remove or change the attachment.

To change the location of an attachment:

> 1.   Click and hold the left mouse button over the attachment and drag it to the new location.

To delete an attachment:

> *Option 1*
>
> 1.   Select Attachments... from the Graph menu.
>
>   -OR-
>
>   Click the right mouse button on the graph and select Attachments... from the popup menu.
>
> 2.   Select the attachment from the list and choose the Delete button.
>
>
> *Option 2*
>
> 1.   Double-click on the attachment in the graph.
>
> 2.   Choose Delete from the displayed dialog to remove the attachment.

To delete all attachments:

> 1.   Select Attachments... from the Graph menu.
>
>   -OR-
>
>   Click the right mouse button on the graph and select Attachments... from the popup menu.
>
> 2.   Choose the Delete All button.

To change the color or style of an attachment:

> *Option 1*
>
> 1.   Select Attachments... from the Graph menu.
>
>   -OR-
>
>   Click the right mouse button on the graph and select Attachments... from the popup menu.
>
> 2.   Select the attachment from the list and choose the Edit... button.
>
>
> *Option 2*
>
> 1.   Double-click on the attachment in the graph.

2.   Make changes to the information in the displayed dialog and choose the Ok button.

<u>Displaying Graph Data</u>

Copying a Chart To Another Group

Charts can be easily moved or copied between each of your financial groups.   This feature enhances your ability to manage and organize your financial securities.

As an example, assume you have created a number of groups - with two being Stocks to Watch and Stocks Long. In the Stocks To Watch group you have a number of stocks/charts you are interested in - and you decide to purchase shares in one of them. At this point you decide you want to move the chart into the Stocks Long group.

To copy a chart to another group:

1. Select the chart by clicking anywhere within its window border, or by pressing Ctrl+F6 to activate each chart in succession.

2. Select Copy Chart To Group… from the File menu, or press F2.

    -OR-

    Click the right mouse button on any graph within the chart and select Copy Chart To Group... from the popup menu.

3. Select an existing group by choosing a name from the Group List and clicking the OK button.

    -OR-

    Double-click on the name of the group in the Group List box.

4. At this point, your chart has been copied to the group specified. If you no longer want the chart to exist in the original group, simply close the chart and save the group.

Note that the group you are copying the chart into must already exist. You can easily create new groups (with or without charts) as indicated below.

To create new financial groups that are empty:

1. Select New from the Group menu

    -OR-

    Click on the New Group button in the toolbar.

2. Save your new group by selecting Save or Save As... from the Group menu (or by clicking the Save button on the toolbar).

3. Enter a descriptive name for your new group and choose the OK button to save the information.

Financial chart groups

Default Chart Templates

You can specify default chart configurations which are used when you open new charts (charts which have not been previously saved in a group).   The charts configuration represents items such as chart colors and selected technical indicators.

Default chart configurations can be established at both the program level, and within your individual financial groups.   The default configuration you specify at the program level is used when a new chart is opened in an untitled group.

To specify the chart configuration you want to use at the program level:

1.   Select or open any financial chart.

2.   Configure the chart as you want the other new charts to look when they are opened (including any technical indicators).

3.   Select Save Chart As Default... from the File menu.   Click the Standard Default button.

To specify the chart configuration you want to use in a particular group:

1.   Open an existing group, or create and save a new group.

2.   Select or open any financial chart.

3.   Configure the chart as you want the other new charts to look when they are opened (including any technical indicators).

4.   Select Save Chart As Default... from the File menu.   Click the Group Default button.

   The Group Default button is only available when you are working within an existing group.

Displaying Graph Data

For any financial chart, you can display the underlying data of each graph for one day or unit of data. The "day" that is displayed is based on the current position of the slide, found at the top of each chart.

To display a day of data based on the current position of the slide:

1. Select the chart by clicking anywhere within its window border, or by pressing Ctrl+F6 to activate each chart in succession.

2. If the popup Data Window is not displayed, press F4 or select Options/Data Window from the menu.

3. To move the slide, press CTRL+Left Arrow or CTRL+Right Arrow on the keyboard.

    -OR-

    Press and hold down the mouse button over the slide, and move the mouse horizontally from side to side.

Using the Slide

Displaying Moving Averages on a Graph

As many as three (3) individual moving averages can be displayed on a price or indicator graph.   In addition to specifying the number of units for these averages, the type of average (Simple, Weighted, or Exponential), any shift factors, and its color can be indicated.

To select and specify a moving average:

      1.   Select the graph by clicking within the graph, or by "tabbing" to the graph.

      2.   Select Parameters... from the Graph Menu on the chart or press Ctrl+T.

              -OR-

              Activate the popup graph menu and select Parameters... from the menu.

To remove a moving average:

      *   Set the number of units to zero (0) for the specific average.

Displaying a Price Channel

Displaying a Price Channel

A price channel can be displayed on a graph along with moving averages.   In addition to specifying the number of units for the channel, the type of average (Simple, Weighted, or Exponential), the shift factors, and its color can be specified.

To select and specify a price channel:

1.   Select the graph by clicking within the graph, or by "tabbing" to the graph.

2.   Select Parameters... from the Graph menu on the chart or press Ctrl+T.

-OR-

Activate the popup graph menu and select Parameters... from the menu.

To remove the price channel:

*   Set the number of units to zero (0) for the price channel.

Displaying Moving Averages on the Price Graph

Drag and Drop

Charts can be opened using "Drag and Drop".   By simply selecting a file from the File Manager, and "dragging" that file using the mouse into the program window or icon, you can easily create new charts without the need to interact with the Open Chart dialog.

"Drag and Drop" supports the use of two types of historical data files; **ASCII** (files with the extension CSV, TXT, and ASC) and **Technical Tools** data files.   Any other data file format is ignored.

Refer to your Windows 3.1 documentation for more information on the Drag and Drop facility of Windows 3.1.

Dynamic Data Exchange   (DDE)

The program functions as a DDE server application; responding to client applications by providing technical graph services in the areas of chart display management and real-time data update.

In the area of display management, basic control over the creation and display of technical charts is available:

o   Charts can be opened or created by a DDE client application through the use of execute transactions issued to the program as the "SYSTEM" topic.

o   The application window can be controlled using DDE execute transactions.   Supported commands allow the window to be minimized, shown (normal), and closed.

o   Individual charts can be controlled visually through DDE execute transactions.   Among the supported command actions are minimize, maximize, print, show, close, update, and export.

Real-time data update of your charts is also supported.   By passing ASCII data record information conforming to the underlying security's content, new financial data can be submitted to a chart for immediate update and display.

For further details about DDE functionality, refer to the User's Guide, or DDE Command Summary.

Exporting Chart Data To An ASCII Data File

Once a chart has been opened, the underlying financial data (i.e., volume, close, etc.) used to draw the chart can be saved as an ASCII data file.   This allows you to share the data with other third-party products such as Quicken(tm), various spreadsheet programs, and even other technical analysis applications.   This feature also provides a way of converting financial data in one format (i.e., TeleChart 2000, MetaStock, CSI, etc.) to an ASCII file.

Supported Data Formats

```
┌─ Export Chart Data ──────────────────────────────── ⊠ ┐
│                                                        │
│  ┌──────────────────────────────────────────────────┐ │
│  │                  SP 500 INDEX                      │ │
│  │         200 Records - 08/03/95 to 05/29/96         │ │
│  └──────────────────────────────────────────────────┘ │
│                                                        │
│  ┌─ File Name: ─────────────────────────────────────┐ │
│  │  c:\mktdata\sp500.asc          [ Browse... ]      │ │
│  └──────────────────────────────────────────────────┘ │
│                                                        │
│  ┌─ Export Format ──────────────────────────────────┐ │
│  │  ○ Quicken Historical    Symbol:  [        ]      │ │
│  │  ◉ CSV (ASCII)      Data Format:  [DOHLCV]        │ │
│  │            Include Format Header?  ☐              │ │
│  └──────────────────────────────────────────────────┘ │
│                                                        │
│  ┌─ Export Range ────────────┐  ┌─────────────────┐   │
│  │  ◉ All                    │  │  [ Export New ]  │   │
│  │  ○ Range (YYMMDD format)  │  │  [Export Append] │   │
│  │  [          ]  to  [     ]│  │  [   Close    ]  │   │
│  └───────────────────────────┘  └─────────────────┘   │
│                                                        │
└────────────────────────────────────────────────────────┘
```

To export the active charts financial data:

1.   Choose Export Chart Data from the File Menu.

2.   Specify the name of an output ASCII data file.

3.   Select other export options from the dialog.

4.   Select Export New or Export Append to write the ASCII data.

To export the charts price data to a file that can be imported into Quicken:

1.   Enter a file name in the File Name box (or choose Browse to search for an existing file).

2.   Select Quicken Historical as the export format.

3.   Enter the symbol id (i.e., IBM, HRB, etc.) matching the id used in your Quicken database.

4.   Select a data export range.

5.   Choose Export New to create a new file, or Export Append to add the data to the end of an existing ASCII file.

To export the charts price data to an ASCII file that can be used by the program:

1.   Enter a file name in the File Name box (or choose Browse to search for an existing file).

2.   Select CSV (ASCII) as the export format.

3.	Verify or change the data format to match your new files requirements.	*If you are creating a file to be used by the program, you should accept the displayed default (*<u>Supported Data Formats</u>*)*.

4.	Check the box for Include Format Header.

5.	Select a data export range.

6.	Choose Export New to create a new file.

Printing Charts

You can print individual or every financial chart in a group.   All printing is performed in a "fit to page" mode - where the chart is printed to fill the entire printed page within your specified margins.

When you print all of the charts within the current group, you additionally have the choice of printing either one, two, or four charts per printed page.

To print an individual financial chart:

      1.   Choose Print... from the File menu or press Ctrl+P.

           -OR-

           Click on the Print button in the toolbar.

To print all charts in a financial group:

      1.   Select Print All Charts... from the File menu or press Shift+Ctrl+P.

To set the number of charts printed on each page:

      1.   Select Page Setup... from the File menu.

Changing Printers and Print Options

Scrolling Through a Graph

In some instances you will find that the securities data you are displaying extends beyond the left and/or right borders of your graph.   You can gain access to all of the data using the scroll bar displayed at the bottom of the chart window, or by using the supported navigation keys.

To scroll forward through your graph data:

> *   Click the right arrow on the scroll bar, or press the **Down Arrow** key, to move forwards your selected arrow distance.

> *   Click the page right area of the scroll bar, or press the **PgDn** key, to move forward by your selected page distance.

> *   Press the **End** key to move to the last page of data.

To scroll backwards through your graph data:

> *   Click the left arrow on the scroll bar, or press the **Up Arrow** key,   to move backwards your selected arrow distance.

> *   Click the page left area of the scroll bar, or press the **PgDn** key, to move backwards your selected page distance.

> *   Press the **Home** key to display the first page of data.

To scroll to any location within your graph data:

> *   Drag the scroll bar's thumb horizontally along the scroll bar and position the date text for the desired time range, then release the mouse.

Program Keys

Selecting a Graph

You can select a graph as the active graph in a chart for the purpose of changing its display characteristics; including the display of its underlying data, the type of chart, its colors, and any other indicator-specific parameters.

To select a graph within a chart:

1. Click anywhere within the graph's border; including its display area and label.

    -OR-

    Press Tab or Shift+Tab to sequence through all the graphs in a chart.

Selecting a Printer and Options

You can select any attached printer to print your securities charts and also select options specific to the printer.

To change printers and/or specify printer options:

1.   Choose Printer Setup... from the File menu.

2.   Select the printer you want to use for printing.

3.   Choose Options... to change the printers options.

4.   Select OK to save the new settings.

Printing a Chart

Setting the Number of Horizontal Divisions

You can specify the number of horizontal divisions displayed on a graph.   For every displayed grid line, a corresponding value is shown in the label area of the graph.   If *Force Automatic Graph Labeling* has been selected in Chart Options, the number of horizontal divisions will automatically be determined and this value ignored.

To change the number of horizontal divisions for a displayed graph:

1. Select the graph by clicking within the graph, or by "tabbing" to the graph.

2. Choose Parameters... from the Graph Menu or press Ctrl+T.

   -OR-

   Activate the popup graph menu and select Parameters... from the menu.

3. Enter the number of horizontal divisions you want displayed for the graph in the field labeled Horizontal Divisions (0 = Automatic). Enter a zero (0) if you want the program to always determine the number of horizontal graph divisions.

Changing Graph Colors

Popup Graph Menu

There is a technique by which you can more efficiently use your technical charts.   This feature allows you to access some of the more frequently used graph functions while you concentrate your attention directly on the graph.

To take advantage of the popup menu support:

1. Move the mouse within any visible graph and click and hold the right mouse button.

2. Make a selection from the popup menu by selecting an item, then releasing the right button.

The Slide

The slide (which is positioned at the top of each chart) is used for focusing on a particular day on a chart. "Attached" to the slide is a vertical line or *hair* that provides a mechanism for precise vertical alignment across all graphs within the chart.   As you move the slide horizontally, the hair will follow and, if the Popup Data Window is visible, data associated with the hair location will be displayed.

To move the slide horizontally:

1.   Press CTRL+Left Arrow or CTRL+Right Arrow on the keyboard.

-OR-

Press and hold down the mouse button over the slide, and move the mouse horizontally from side to side.

Displaying Graph Data

Opening Financial Charts

Financial charts are created from existing financial data.   The creation of new financial data files is not supported.
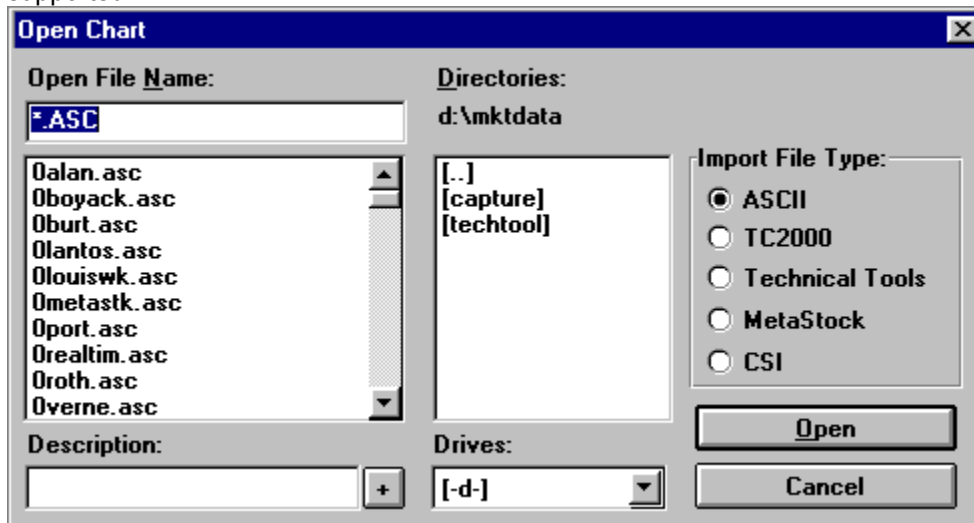
To create or open a new chart:

      1.   Select Open Chart... from the File menu.

            -OR-

            Click on the Open Chart button in the toolbar.

      2.   Choose one of the supported Import File Types and navigate through your system directories to the directory containing the financial data for your selected type.

            You can assign a specific directory for each of the supported import file types.   Using this feature, the program will automatically navigate to the directory youve specified for each import file type.   See File Import Options

      3.   Select the security name or data file from the File Name list box and click the OK button.

            -OR-

            Double-click on the security name or data file listed in the File Name list box.

Displaying Graph Data

Formatting the Printed Page

You can specify the margins used for printing a financial chart as well as a standard title you want to print on each chart.

**To specify a chart title and page margins:**

1. Select Page Setup... from the File menu.

2. Enter the report heading you want printed on each financial chart (Optional).

3. Enter the top, bottom, left, and right margin values in inches for the chart.

4. Select either one, two, or four charts per printed page (for printing all charts within a group).

5. Click OK to save your new settings.

Financial Chart Groups

There is a feature for organizing and collecting a number of individual charts into a common group. These financial groups can contain almost any collection of one or more securities meeting your specific analysis needs.

For example, a group might contain a collection of market indexes.   Another group might contain all the securities in your portfolio, while another might include mutual funds of a particular sector group.   The choice of securities is totally up to you.

Additionally, you can choose to have a single financial group automatically opened each time the program is run.
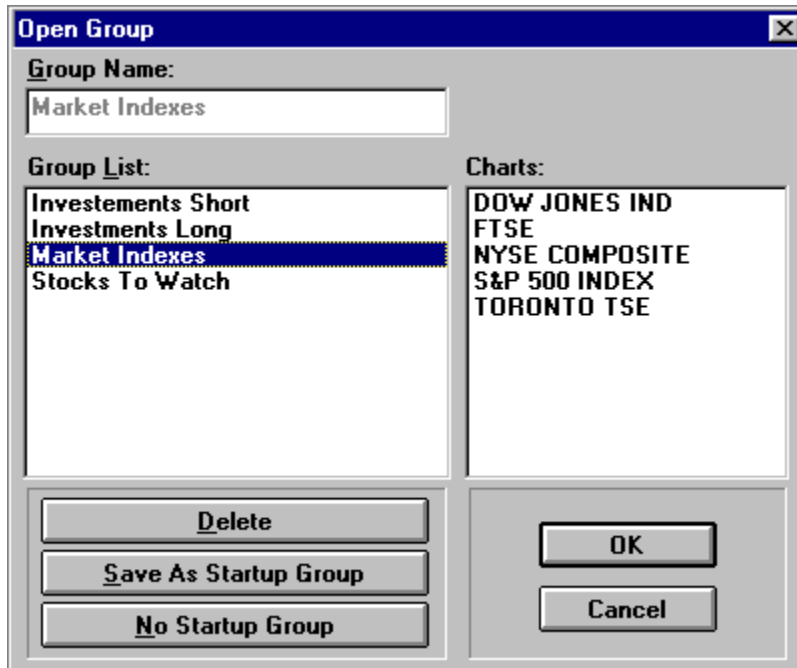
To create new financial groups that are empty:

You may want to create new financial groups that do not contain any charts whatsoever- as you may add or copy charts into these groups at a later time.

1. Select New from the Group menu

    -OR-

    Click on the New Group button in the toolbar.

2. Save your new group by selecting Save or Save As... from the Group menu (or by clicking the Save button on the toolbar).

3. Enter a descriptive name for your new group and choose the OK button to save the information.

To create a new financial group with a selected set of charts:

1. Select New from the Group menu

    -OR-

    Click on the New Group button in the toolbar.

2. Add new charts to your group by opening each chart using the Open Chart... selection on

the File menu or clicking the Open Chart button on the toolbar.

3. Organize the charts in the group by adjusting the sizes and positions of each chart. Include any technical indicators with each chart.   <u>List of Technical Indicators</u>

4. Save your new group by selecting Save or Save As... from the Group menu (or by clicking the Save button on the toolbar).

5. Enter a descriptive name for your new group and choose the OK button to save the information.

To open an existing financial group:

1. Select Open from the Group menu

    -OR-

    Click on the Open Group button in the toolbar.

2. Select an existing group to open by choosing a name from the Group List and clicking the OK button.

    -OR-

    Double-click on the name of the group in the Group List box.

To delete an existing financial group:

1. Select Open from the Group menu

    -OR-

    Click on the Open Group button in the toolbar.

2. Select an existing group to open by choosing a name from the Group List.

3. Click the Delete button to remove the group.

To select the financial group you want opened at program startup:

1. Select Open from the Group menu

    -OR-

    Click on the Open Group button in the toolbar.

2. Select an existing group by choosing its name from the Group List.

3. Click the Save As Startup Group button.   The next time the program is run, this group will automatically be opened for you.

    NOTE: Click the No Startup Group button to disable the initial loading of a financial group.

To change which charts are in the financial group:

1. Simply open or delete existing charts from the display, and then save the group by selecting Save or Save As... from the Group menu - or click the Save Group button on the toolbar.

Chart Options

Many of the operational characteristics associated with your financial charts can be configured to meet your own needs and preferences.
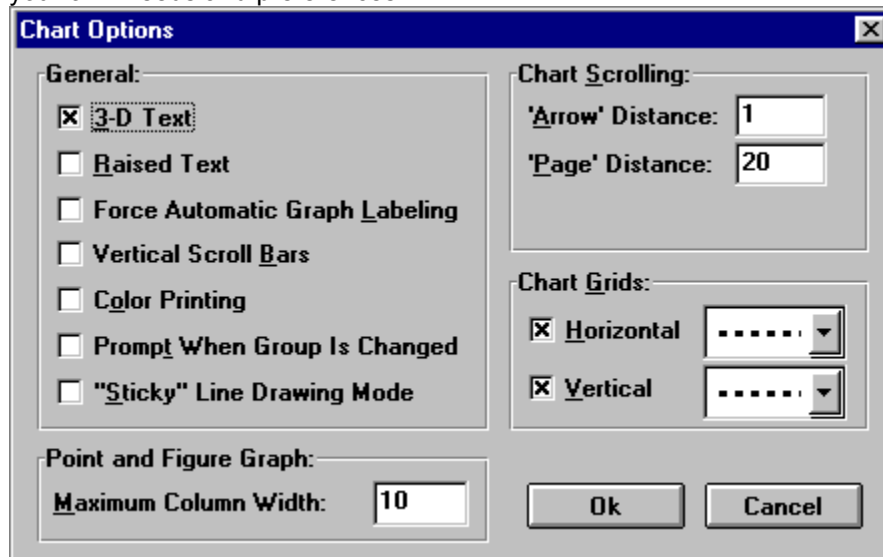
To modify any of the available chart options:

1. Select Chart... from the Options menu.

2. Modify or choose from the various configuration options.

3. Choose OK to save the new settings.

Chart Option Settings and Their Use:

3-D Text and Raised Text
These options allow you to configure the appearance of text used in labeling your charts.   Select 3-D text to use three-dimensional text labels.   Raised or recessed text is controlled using the Raised Text checkbox.

Force Automatic Graph Labeling
Select this option if you want the program to automatically determine the price values and number of horizontal divisions for your graphs.   If this option is not selected, you can specify the number of horizontal divisions individually for each graph (Selecting the Number of Horizontal Divisions).

Vertical Scroll Bars
This option adds vertical scroll bars to every graph.   Normal use of the program will not require these.

Color Printing
Select this option only if you have a color printer and want to print graph lines in color.   The background color for all printed graphs is white.   If you fail to get satisfactory results using this option - or if you have a black and white printer - turn this option off.

Prompt When Group is Changed
When any change occurs to a group - such as window resizing, color changes, additions or the removal of charts - that group is tagged as "changed".   If you move to another group, try to create a new group, or exit the program, you are automatically notified by the program that the group has changed - allowing you to save or ignore the changes you have made.

If this selection is checked, you will be notified by the program that changes to a group have been

made.   If this selection is not checked, you will not be notified by the program.   In this case, you are responsible for saving any changes you make to a group.

Sticky Line Drawing Mode
When using the line drawing tools (ie., Trend, Vertical, Horizontal, and Resistance), the tool normally remains in the selected mode so that you can freely draw to the chart without having to continually reselect that tool.   In some cases, this may not be the ideal mode of operation.   This option is used for selecting "sticky" line drawing mode (as described above), or for having the line drawing tool reset immediately after the line is drawn.

Chart Scrolling
You can specify the number of data units you want your charts to scroll by setting these values. The Arrow Distance is the amount to scroll when the scroll bar arrow is clicked.   The Page Distance is the amount to scroll when the page area of the scroll bar is clicked.

Chart Grids
Select the usage of, and line style, for both the vertical and horizontal grids displayed in every graph.

Point & Figure Graph - Maximum Marker Width
Assign the maximum width (in pixels) of the X and O markers used in Point & Figure graphs. This value is the largest display size you will accept for use within the graph.

File Import Options

You can specify the number of most recent data units you want graphed in each of your charts, as well as providing a mechanism for importing ASCII files that do not conform to the normal ASCII file specification.
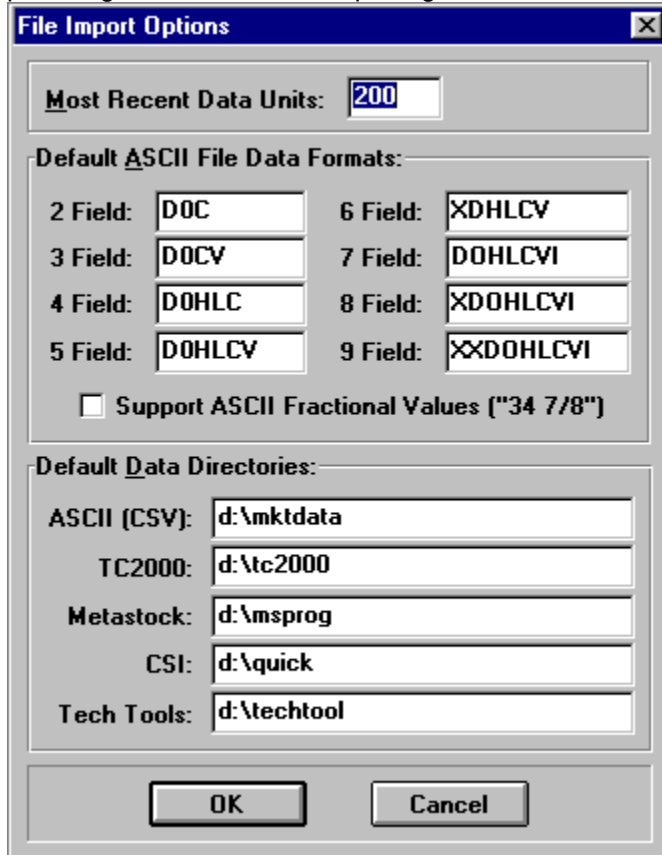
Selecting the number of recent data units used in your charts:

The amount of data loaded into Windows memory for all charts is configurable to meet your own personal analysis needs, or to address any specific memory constraints or problems you might encounter when running the program.

When you open a chart, the most recent data is loaded, up to a selected number of units.   The number of units is specified by you and can range from 2 up to 16,384.

To specify the number of graph units:

1.   Select File Import... from the Options menu.

2.   Indicate the maximum number of data units you want each graph to contain by entering a value from 2 to 16,384 in the edit box labeled Most Recent Data Units.

3.   Choose OK to save your selection.   Any chart opened after this change is made will contain a maximum of the number you specified.

Support for Non-Standard ASCII File Formats:

Support is provided for reading some ASCII data files that do not conform to its normal format - such as those used by other third-party analysis programs or some spreadsheet applications.   Normally, these ASCII files do not contain the Data Format record specified as the first record in an ASCII file (Supported Data Formats).

Through File Import Options, you can specify the default ASCII file formats to be assumed when the program encounters a file that does not contain the normal data format record.

**To specify default file formats:**

1.   Select File Import... from the Options menu.

2.   Enter the default file format definitions you want to assume for ASCII files containing 2, 3, 4, 5, 6, 7, 8, and 9 fields.

3.   Choose OK to save your selections.

Establishing Default Directories for Data Files:

Financial charts can be created using several different import data file types.   Normally, you will have a specific (or master) directory containing your financial data files.

Font Options

You can select the font styles used for chart labels, data display, and the status bar located at the bottom of the program window.   This feature allows you to optimize your charts appearance based on the resolution of your display.
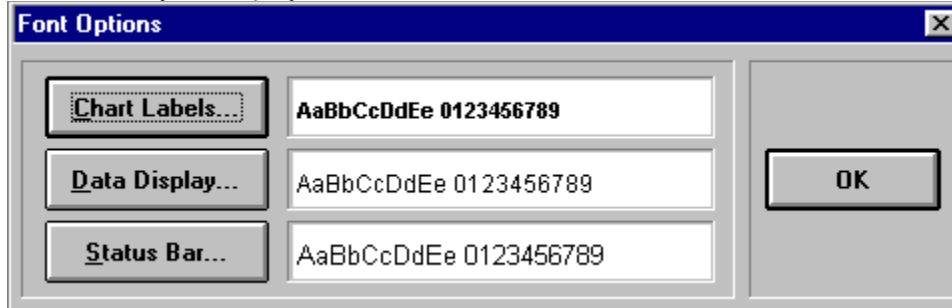

To select a font style:

1.   Select Font... from the Options menu.

2.   The currently selected font styles are displayed for each appearance selection type. Choose the appearance type to change by clicking on its descriptive button.

3.   Select the font style from the Font dialog and choose the OK button to accept the new setting.

4.   Choose the OK button of the Font Options dialog to redisplay using your new font choices.

Graph Color Options

You can select the default colors used when a chart is opened by selecting Graph... from the Options menu.
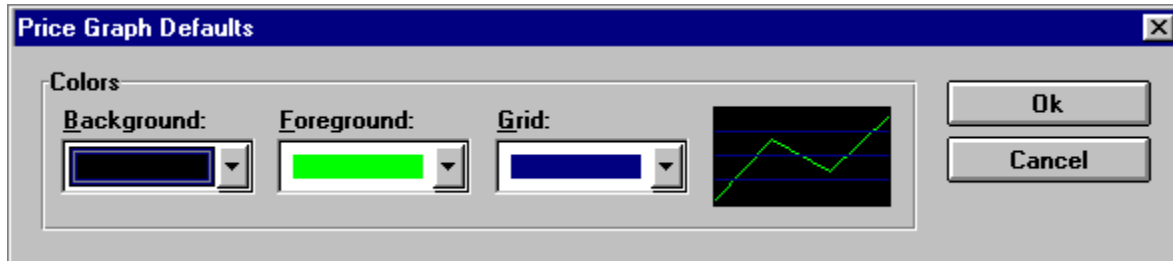
To select the default graph colors:

1. Select Price... or Indicators... from the Graph selection on the Options menu.

2. Select the background, foreground, and grid colors.

3. Choose the OK button to save your selected settings.

Selecting the Number of Horizontal Divisions