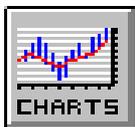


In This Chapter

This chapter introduces you to AIQ charts, where you can evaluate any ticker that is contained in your data base including stocks, groups, sectors, futures, indexes, mutual funds, and markets. AIQ Expert Rating timing signals are found on historical charts.

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1. The AIQ chart



Note

Expert Ratings are available only on historical charts.

You can analyze any ticker in your Master Ticker List on an AIQ chart by displaying your choice of indicators from the TradingExpert Pro Indicator Library. You also can print a price chart of any ticker with your selection of indicators.

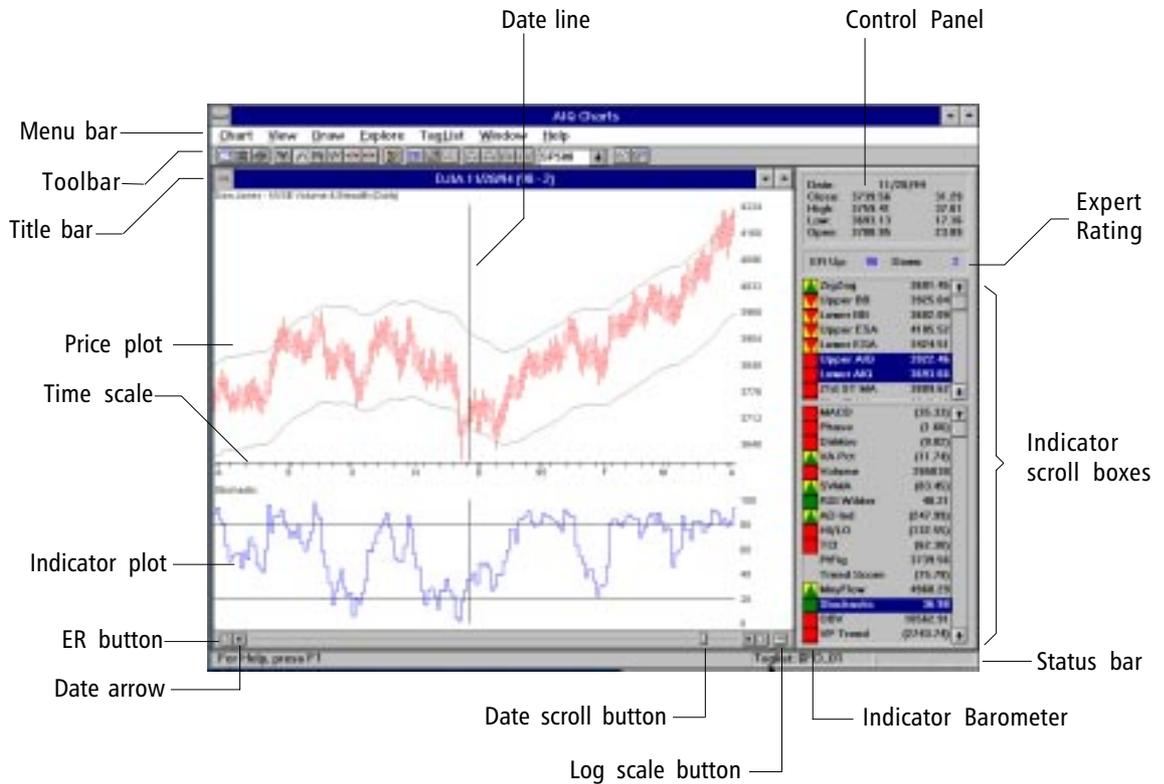
On historical charts, you will find AIQ's Expert Rating timing signals for stocks, groups, and sectors, as well as market timing Expert Ratings. Expert Ratings are not issued for indexes, futures, or mutual funds. For reliable Expert Ratings, significant volume as well as price action is required. For most indexes and all mutual funds volume is not available.

Historical charts display up to one year of daily data and up to 4 1/2 years of weekly data. In addition to the current day's data, real-time charts can display up to 10 days of history.

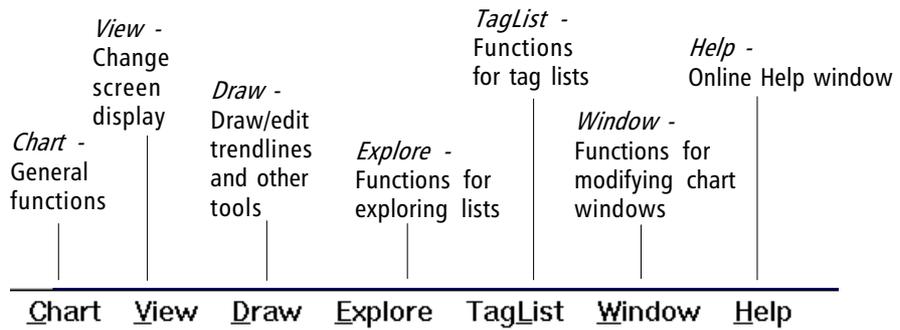
On AIQ charts, you can:

- Study graphically the price performance of a ticker against concurrent behavior of technical indicators.
- Study performance of a ticker real-time as well as historically.
- Perform relative strength analysis.
- Confirm Expert Rating signals using technical indicators.
- Customize chart settings and computation of indicators.
- Instantly switch from daily to weekly data.
- Draw trendlines and arrows or write text.
- Quickly explore industry sectors, groups, and underlying stocks.
- Quickly explore any list of symbols that you have created.
- Tag frequently monitored symbols for rapid viewing.

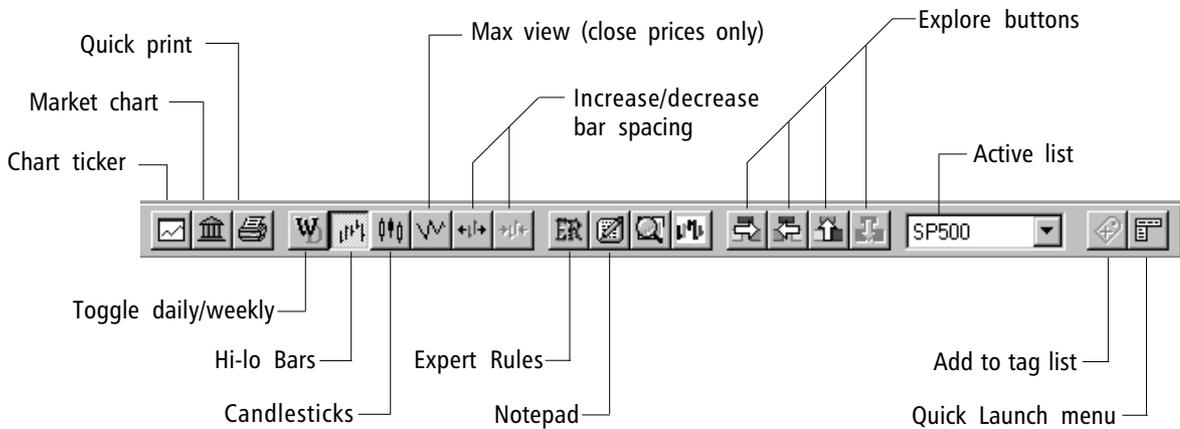
Market Chart of DJIA



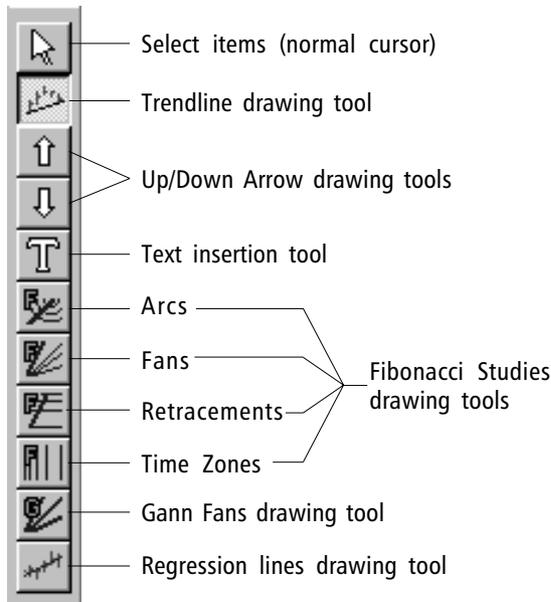
Charts menu bar



Charts toolbar buttons



Charts drawing tools



Note

To view or hide the drawing tools toolbar, click **View** on the menu bar and from the menu select (or deselect)

Drawing Tools.

2. Introduction to the TradingExpert Pro expert system and Expert Ratings

Note

Expert Rating timing signals are not available on real-time charts.

As every investor knows, in stock market trading, timing is everything. AIQ is the world leader in producing artificial intelligence-based expert systems for stock market timing for use on personal computers. AIQ TradingExpert Pro provides intelligent, bias-free information to help you decide when to take and clear positions.

Although TradingExpert Pro is a technologically advanced program, you will find it easy to use. You don't have to understand what an expert system is to be able to use TradingExpert Pro. However, if you would like to know more about the technology behind TradingExpert Pro, a thorough explanation of artificial intelligence and expert systems can be found in Appendix 1 of this manual. An explanation of technical analysis and why it is considered by many investors to be a superior approach to timing the market can be found in Appendix 2.

Briefly, an expert system is a decision making system that contains the knowledge of experts on a particular subject, and uses this knowledge to make decisions and solve problems. To create an expert system, a knowledge engineer researches experts in a particular field and distills their knowledge and insight into a series of rules. By following the rules, the expert system can analyze a problem and solve it.

AIQ TradingExpert Pro is programmed with the knowledge and insight of respected technical analysts, experts who have developed technical analysis indicators and systems for the last 50 years. The up/down timing signals issued by TradingExpert Pro are based on this knowledge. Since TradingExpert Pro's timing signals are generated on a scientific basis, free of bias or emotion, you get a disciplined, objective approach to stock market timing.

The timing signals produced by the AIQ expert system are in the form of Expert Ratings. Behind each Expert Rating is a set of rules that combine the sound principles of technical analysis with the experience of market professionals. Since no single technical indicator works all the time, using indicators in combination increases their reliability. For example, a rule is developed that combines the readings of two or more indicators. This rule is then more reliable than the reading of a single indicator.

Within TradingExpert Pro are two knowledge bases, one specifically

The AIQ Expert Rating is found in two places: on the Control Panel (after ER) and on the Title Bar of the chart. The Expert Rating consists of two values. The upside rating is the value on the left and the downside rating is on the right. Expert Ratings are based on a scale of 0 to 100. An Expert Rating between 90 and 94 is considered an early warning of a turn in the market. An Expert Rating of 95 to 100 is considered a strong signal that the market may change direction.

An Expert Rating below 90 is considered meaningless. A low rating means that there is not enough consistency in the rules that fired to translate to a signal. The expert system has not found enough evidence to warrant a change from the last strong signal.

The chart displayed shows a strong upside signal, an Expert Rating of 98, on 11/28/94. (At this time, many market analysts were bearish.) The vertical Date Line on the chart designates the date, 11/28/94. The upward move that followed this bullish signal saw the Dow reach record highs.

It's important to confirm signals

Before taking a position based on any signal, AIQ recommends waiting for the signal to be confirmed by price action. Expert Ratings from TradingExpert Pro tend to be early rather than late. There is a risk, therefore, in reacting too quickly to those signals that occur before the change in price trend actually takes place. In order to minimize this risk, confirmation techniques should be used to validate early signals, and to guard against incorrect signals.

TradingExpert Pro contains an abundance of information that can be used for this validation process. Confirmation methods range from the very simple and quick method of waiting for the Price Phase Indicator to change in the direction of the signal, to the more comprehensive methods of waiting for movements of leading industry groups and sectors, and Expert Ratings from stocks in the data base to confirm the signal. TradingExpert Pro produces group/sector and stock reports that pinpoint these movements for you.

The actual validation process must be developed by each user to fit his or her own trading style and risk tolerance. To guide you, a Signal Confirmation Guide can be found in the Technical Indicators Reference Manual.

In certain reports (Action List and Weighted Action List) Expert Rating signals from the user's stock data base are defined as

“confirmed”. For this purpose, confirmation is determined by a change in the direction of the Price Phase Indicator (for an exact definition of the Price Phase Indicator, see the Technical Indicators Reference Manual).

Data requirements for historical charts

Although all historical data within AIQ TradingExpert Pro is stored on a daily basis, it can be displayed on a weekly basis by clicking the **W/D** button on the toolbar. Whether you use daily or weekly charts, a minimum of 200 periods of data is required for a valid Expert Rating for the current date. The expert system requires 200 periods to generate the Expert Rating.

Hence, daily charts require a minimum of 200 trading days (about 10 months) of data. Weekly charts require a minimum of 200 weeks (about three years and 10 months) of data. If you move the date on a chart backwards in time (to the left), remember that you must have 200 periods of data prior to that date in order to see a valid Expert Rating.

You can view a chart with less data, but AIQ does not recommend using Expert Rating signals with less than the above requirements. With less data, the Expert Ratings are not valid.

About the charts displayed in this manual

The charts displayed throughout the documentation are, with few exceptions, charts of daily data. When reproducing a chart from the documentation, in order to obtain values for the Expert Ratings and indicators that agree with the documentation, you should do the following:

1. Change the market date to the date of the chart you are reproducing. The market date (also called the analysis date) is the most current date on the chart (date at far right).
2. Be sure that your data base contains historical data for at least 200 trading days (or 200 weeks for weekly plots) prior to the date you are examining. This allows TradingExpert Pro to compute the indicators for the knowledge base.

3. Displaying a ticker chart

□ To display a historical chart of any ticker in your Master Ticker List:

1. Double click the **Charts** application icon in the TradingExpert Pro program group.
2. With the **Charts** window on your screen, your next step is to display the *Chart Ticker* dialog box. This can be done in three ways:
 - Click **Chart** on the menu bar, and select **Chart Ticker** on the drop-down menu.
 - or—
 - Click the **Chart Ticker** toolbar button.
 - or—
 - Press the **Esc** key.

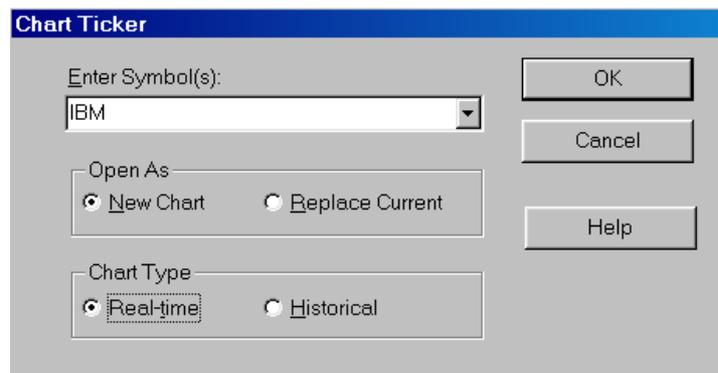


Chart Ticker dialog box

3. In the Chart Ticker dialog box, type a ticker symbol in the text box.
4. The **New Chart** option in the *Open As* section is automatically selected and both options are grayed out. (The *Replace Chart* option is only available when there is a ticker chart already displayed. Use this option when you want to replace the displayed chart rather than adding a new chart and creating a multiple chart display.)
5. From the *Chart Type* section, select **Historical**.
6. An historical chart of the ticker you entered will be displayed, similar to the chart shown on next page.

Note

To display a real-time chart, select **Real-time** for chart type.

Tip

Press the **Enter** key to switch the Control Panel to a list (a group/sector list or any list you have created), then click on a ticker to instantly display a chart of that ticker. (See Section 10, *Explore feature*, in this chapter.)

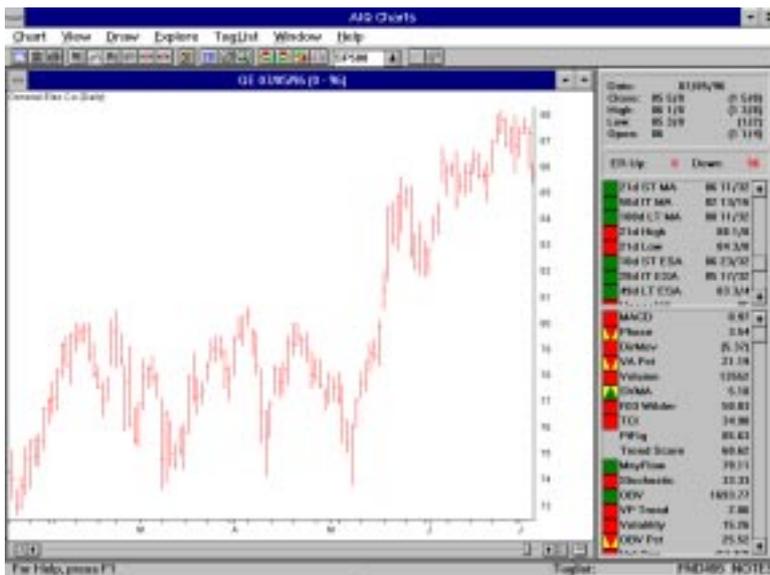


Chart for General Electric

Working with charts

□ To move a chart:

Drag (hold down the mouse button while moving the mouse) the chart window by its title bar to a new location, then release the mouse button.

□ To resize a chart:

Move the cursor to a border or corner of the chart window and position the cursor until you see a double-sided arrow. Drag the border or corner until the window is the desired size, then release the mouse button.

□ To enlarge a chart:

Click the **maximize button** (upper right corner of window). Click the same button to restore the chart window to its original size.

□ To close a chart:

Double click the **close button** (upper left corner of chart window). Or, click **Chart** on the menu bar, and select **Close Chart** from the drop-down menu.

Explanation of the chart window

When you enter a ticker, the date of the chart will be the most recent date that you have data for in your data base. This date appears in the title bar of the chart and also as the first item in the Control Panel at right. A Price Plot of the ticker appears in the main chart window (see chart displayed).

Price Plot

The Price Plot displays price performance of the ticker you are examining. The default format for displaying price is hi-lo bars. Price may also be displayed as candlesticks or as a graph of the closing price only (Max View price format). Toolbar buttons are provided for switching between the three different price plot formats. In the hi-lo bars format, the high and low prices are plotted as vertical bars. The top of the vertical bar is the high, and the bottom of the bar is the low. The closing price is indicated by a small horizontal bar on the right side of the vertical bar. If the open price is displayed, it appears as a small horizontal bar on the left side of the vertical bar. When viewing historical data, you can switch the Price Plot from daily to weekly data. Click the **W/D** button on the toolbar (or select *Daily/Weekly* from the *View* menu).

Price/Time Scales

The Price Scale of the ticker is the vertical scale on the right side of the Price Plot. The scale that runs horizontally along the bottom of the Price Plot is the Time Scale. The letters on the historical chart Time Scale represent months. When a real-time chart is displayed, the horizontal scale becomes time of day.

Log Scale

The Log scale option is not available on real-time charts.

Historical charts can be displayed with logarithmic price scaling. A *Log Scale* button (square button with logarithmically spaced horizontal lines) is located on the Scroll Bar at the bottom of the chart next to the ER button.

□ *To convert a chart to logarithmic scaling, proceed as follows:*

1. Click the **Log Scale** button which is located just to the right of the ER button on the Scroll Bar.
2. To change back to arithmetic scale, click the **Log Scale** button again.

Note

For mutual funds, daily price information is limited to one value: the fund's net asset value (NAV) at the market close. Instead of a series of vertical bars, the mutual fund Price Plot is simply a step graph with daily NAV's shown as horizontal lines. Weekly mutual fund Price Plots are similar in appearance to other ticker Price Plots. The top and bottom of the price bar represent the weekly high and low NAV's for the fund. The closing NAV for the week is shown by a small horizontal bar.

Date:	12/07/94	
Close:	47 3/8	7/8
High:	47 3/8	3/8
Low:	46 1/8	1/8
Open:	46 1/8	(1/2)
ER Up: 95 Down: 2		
Upper AIQ	49 31/32	+
Lower AIQ	45 5/8	
Upper BB	49 7/8	
Lower BB	45 5/32	
Upper ESA	52 9/32	
Lower ESA	42 25/32	
Upper MA	52 1/4	
Lower MA	42 3/4	-
RS Tkr 3610	100.00	+
RS Indx SPX	130.10	
Volume	16557	
RSI AIQ	68.84	
RSI Wilder	49.06	
VA Pct	(2.97)	
Stochastic	44.44	
SK-SD	3.40	
P-Vol	101.35	
N-Vol	88.20	
Phase	(2.14)	
OBV	533.76	
OBV Pct.	(34.56)	
MnyFlow	(3.03)	
MF RSI	23.95	
MF RSI	(0.55)	-

Control Panel

Control Panel

Upper section: date and price data

Date and price (plus time for real-time charts only) are displayed in this section. The close, high, low, and open prices for each day (or week) on the chart are available in your data base and will be displayed. On mutual fund daily charts, the fund's closing net asset value (NAV) is shown for all four prices. Usually, you will want prices for the current date, which are the prices shown when a chart is first displayed. Adjacent to each of these prices is the difference in the price between the prior day and the current day, with parentheses indicating negative changes.

Second Section: Expert Rating (ER)

Expert Ratings are not available for real-time charts.

For historical charts, a special section of the Control Panel displays the Expert Ratings for the ticker being charted on the date of the chart. The TradingExpert Pro system generates Expert Ratings for stocks, groups, or sectors as well as market timing Expert Ratings every market day. The Expert Rating is displayed on the Control Panel and also in the title bar of the chart. The number on the left is the upside Expert Rating, and the number on the right is the downside Expert Rating. Expert Ratings are generated on a scale of 0 to 100. An Expert Rating of 95 or above is considered to be a signal.

Third section: Price Plot indicators

Indicators that can be charted on the Price Plot include trading bands, exponentially smoothed averages (ESA's), and moving averages (MA's). Also available for charting on the Price Plot are Candlesticks and the ZigZag indicator. (See *Displaying indicators*)

Bottom section: technical indicators

Technical indicator values for the ticker on the date of the chart are displayed in the Control Panel, next to the name of each indicator. Any of the indicators can be charted below the Price Plot. (See *Displaying indicators*).

Indicator Barometer

The vertical color bar located along the left side of the indicators is called a Barometer. The purpose of the Barometer is to provide a quick “snapshot” view of the status of each of the indicators at any particular point in time. Each square on the Barometer can take on one of these four configurations:

Note

More information about the Indicator Barometer can be found in the Technical Indicators Reference Manual.

- **Solid Green:** indicates strong up.
- **Green Up Arrow on Yellow Square:** indicates a weak up movement.
- **Red Down Arrow on Yellow Square:** indicates a weak down movement.
- **Solid Red:** indicates strong down.

Status Bar

The bar running along the bottom of the Charts window, called the Status Bar, displays the following information (listed in left to right order) on the right end of the bar:

- **Taglist:** Name of active taglist will appear after the word *Taglist*.
- **User Report Code:** If a User Report Code has been entered for the charted ticker, that code is displayed here. If the Charts window displays more than one chart, the code for the selected chart (Title Bar is highlighted) is shown.
- **Notes:** If a note has been saved for the selected chart, the word NOTES will appear in the far right section of the Status Bar.
- **Connected/Disconnected:** Internet connection status for real-time charts.

Changing the date on historical charts

When you first enter a chart, a vertical Date Line appears at the far right, designating the current market date (or the most recent date of data in your data base). That date is visible at the top of the Control Panel and in the title bar of the chart. Values of the indicators and the Expert Rating displayed in the Control Panel reflect this date.

The market date (also called the analysis date) can be changed for historical study by moving the vertical Date Line. When you change the analysis date by moving the Date Line, the data in the Control Panel will change to reflect the new date. Remember, a minimum of 200 periods of historical data are needed prior to the analysis date for TradingExpert Pro to compute a valid Expert Rating.

Tip

Switch the vertical Date Line to an arrow by pressing the **A** key. Press the **A** key again to switch back to the Date Line.

□ *Change the date and data using any of these six different methods:*

- Move the date in the direction you want, one day at a time, by using the left and right Date Arrows on the bottom scroll bar.
- Point to a date on the Time Scale with your mouse (a small calendar will appear) and click the left mouse button.
- Point to a date on the Time Scale with your mouse and click the right mouse button. The chart will recompute and this new date will become the current market date at far right on the chart.
- Drag (hold down the mouse button while you move the mouse) the Date Scroll Button on the scroll bar. When you drag the Date Scroll Button, the changing date is displayed in the bottom right corner of the chart.
- Click on the horizontal Scroll Bar located at the bottom of a chart window to shift the charted time period by 180 days (or weeks). Clicking anywhere to the left of the *Date Scroll Button* moves the chart back in time, and clicking to the right of the *Date Scroll Button* moves the chart forward in time.
- Press the **D** key to display a small window containing a text box labeled *New Date*. Type in a new market date, press **Enter**, and all charts on your screen will recompute for that date. This is a quick way to change the market date of all the charts displayed on your screen.

New Date window

New Date:

Max View (Close price only)

Note

To remove the Control Panel from a chart, click the F10 key.

Tip

Since Max View drastically compresses the time scale, the chart may not fill your screen. To compensate, you can spread the data using the Increase Spacing toolbar icon.

Max View weekly chart of DJIA displaying 10+ years of data



□ To convert a chart to Close prices using Max View:

1. Click the **Max View** button which is located at the right of the *Candlesticks* button on the toolbar.
2. To change back to the normal price bars, click the **Hi-Lo bars** button which is located at the left of the *Candlesticks* button on the toolbar.



Max View toolbar button

Daily/weekly data change

Although all data within TradingExpert Pro is stored on a daily basis, it can be displayed on a weekly basis by clicking the **W/D** button on the toolbar. To change back to daily data, press the **W/D** button again and the daily plot will be regenerated. You also can change a chart from daily to weekly data by clicking **View** on the menu bar, then selecting **Daily** or **Weekly** on the drop-down menu.

Tip

Quickly switch between daily and weekly data by pressing the **W** key.

Changing from daily to weekly causes the system to condense daily data into weekly data. Weekly prices (close, high, low, open) and volumes are generated. A week is defined as beginning on Monday and ending on Friday. Weekly close, high, low, open, and volume figures are created by combining the appropriate daily data. The opening for the week is Monday morning's opening price, and the close is the closing price on the last day of the week. The high and the low values are simply the highest high and lowest low for the five days, and volume is the summed volume. If Monday is a holiday, the week starts on Tuesday, and if Friday is a holiday the week ends on Thursday.

The weekly chart can display up to 4 1/2 years of historical data. For weekly plots, the Expert Rating as well as all of the indicators are computed from weekly data.

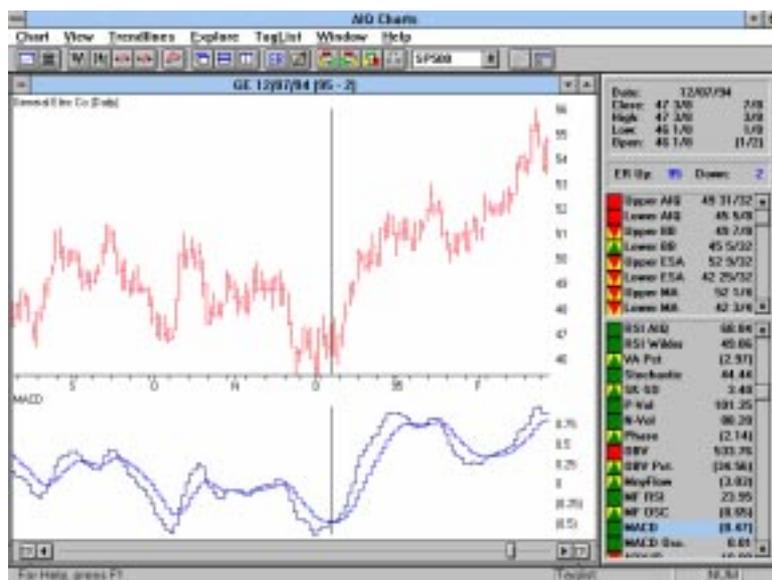
Important

As noted previously, a minimum of 200 periods of historical data are needed for TradingExpert Pro to compute a valid Expert Rating. This means that as the analysis date is moved to the left on a weekly chart, a minimum of 200 weeks of data are needed prior to the analysis date for a valid Expert Rating.

The purpose of using weekly data is to gain a longer-term perspective of price action. Being able to look at a chart displaying 4 1/2 years of data makes it easy to identify long-term support and resistance levels. Another very important use of weekly data is for improved analysis of thinly traded stocks. By using weekly data, the AIQ requirement for sufficient price action and volume is met, and the Expert Ratings have more validity than would otherwise be the case.

AIQ Expert Rating (ER)

The GE chart displays an analysis date of 12/07/94. On this date, GE has an upside ER of 95 for the day indicated (12/07/94), and a downside ER of 5. This daily Expert Rating on the chart can provide a basis for your trading decisions. Expert Ratings are generated on a scale of 0 to 100. An Expert Rating of 95 or above on the upside (left figure) is considered to be a signal. A rating of 95 or above on the downside (right figure) is considered to be a signal. The higher the rating, the stronger the signal. An Expert Rating of 90 to 94 on the upside or downside should be considered a warning.



*General Electric
analysis date 12/07/94*

More often than not, high Expert Ratings will be generated close to the change in price trend and usually prior to the change. Expert Ratings from TradingExpert Pro tend to be early rather than late. There is a risk, therefore, in reacting too quickly to those signals that occur before the change in price trend actually takes place. In order to minimize this risk, the trader should use confirmation methods.

In addition to the Expert Rating, the chart displays technical indicators that can be used to confirm Expert Rating signals. Since price is the best confirmation, a safe rule is to delay trading until the stock or market actually turns in the direction of the signal.

Price direction changes can best be evaluated through the MACD (Moving Average Convergence-Divergence Index) or the Price Phase Indicator and, consequently, these are two of the indicators recommended for signal confirmation. In the examples in this documentation, the Price Phase Indicator is used as the confirming indicator of Expert Rating signals. For a complete guide to signal confirmation, see the Technical Indicators Reference Manual.

The review of the technical indicators in the Technical Indicators Reference Manual points out that none of the indicators works all the time. Rather than rely on a single indicator, AIQ TradingExpert Pro combines all the indicators available on these charts, plus others, into a rule base that, together with knowledge garnered from masters of market action, forms the knowledge base of the AIQ expert system. It is a deductive system that produces an Expert Rating each market day for every stock and group in your data base, and for the market in general.

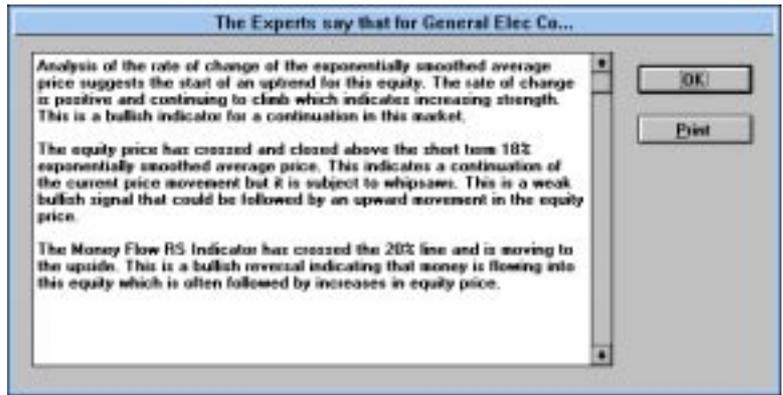
Quick search for Expert Ratings

To rapidly examine historical Expert Rating signals on a particular chart, TradingExpert Pro provides a feature that allows you to search for Expert Ratings of 95 and above for up or down signals. To do this, click the **ER** button on the scroll bar on the bottom of the chart window. Click the left or right **ER** button depending on the direction you want to examine. You can change the Expert Rating search to values lower or higher than the default settings of 95 (see *How to Customize your Charts* in this chapter).

Explanation of Expert Rating rules

In order to understand the Expert Rating, you can query the AIQ expert system for an explanation of rules within the knowledge base that “fire,” causing an Expert Rating. Click the **ER** button on the toolbar at the top of the chart and a window containing rules will be displayed. (Or, click **View** on the menu bar, then choose **ER Rules** on the drop-down menu.) An explanation of some of the rules that fired to cause the Expert Rating of 95 for GE on 12/07/94 can be seen in the displayed window. You can make a printed copy of the rules by clicking the **Print** command button in the rules window.

Expert Rating rules



Displaying technical indicators

Note

Explanations of all indicators can be found in the Technical Indicators Reference Manual. Also in the Reference Manual, you will find formulae for the indicators and references for further study.

The technical indicators that can be displayed on the TradingExpert Pro chart are shown in the Control Panel. Both those indicators that can be plotted on the Price Plot and those that are plotted below the Price Plot are listed. Use the up/down arrows on the scroll bar in the Control Panel to view all available indicators.

□ To display indicators:

Simply click the indicator names in the Control Panel. For example, with a chart displayed on your screen, do the following:

1. Click the **21 d ST MA** from the group of Price Plot indicators and the 21-day Short Term Moving Average will be displayed on the Price Plot of the chart.
2. From the bottom group of indicators, click **DirMov**, and the Directional Movement indicator will be displayed in the lower window of the chart.
3. To display a second indicator, hold down the **Ctrl** key and click another indicator; for example, **MnyFlow**. The Money flow indicator will be displayed beneath the Directional Movement indicator. You should now see a chart similar to the GE chart shown on the next page.



GE with three indicators

To select multiple indicators:

Select and display multiple indicators from the Control Panel by holding down the **Ctrl** key and clicking those indicators. You can also select adjacent indicators by dragging (holding down the mouse button while you move the mouse).

To remove an indicator from display:

Hold down the **Ctrl** key and click the name of the indicator on the Control Panel.

To save selected indicators:

1. Display your selection of indicators on any chart.
2. Click the **Chart** command on the menu bar.
3. Choose **Settings** on the drop-down menu.
4. On the *Settings* menu, click **Save Current Indicators**. The saved indicators will be displayed whenever you open a chart for a ticker.

Note

To change your selection of indicators for display, or to remove all indicators from display, first change or remove the indicators on any chart, then click **Save Current Indicators** again.

Note

Using the **Z** key to expand an indicator plot is recommended for Point and Figure charting.

Indicator Zoom feature

You can expand an indicator plot to fill the entire chart window. Position your mouse cursor on the indicator plot, and press the **Z** key. Pressing the **Z** key again restores the indicator plot to its original size.

Indicators that can be plotted in the lower window of the chart include:

Accumulation/Distribution (AcmDis)
ADX Rate
Average Directional Movement Index (ADX/R)
Commodity Channel Index (CCI)
Directional Movement Index (DirMov)
ER UP/DOWN
MACD, Moving Average Convergence-Divergence Index
MACD Oscillator (MD Osc)
Money Flow (MnyFlow)
Money Flow Oscillator (MF Osc)
Money Flow RSI (MF RSI)
Negative Volume Index (N-Vol)
On-Balance Volume (OBV)
On-Balance Volume Percentage (OBVPct)
Open Interest**
Phase (Price) Indicator
Point and Figure Charting (Pt Fig) *
Positive Volume Index (P-Vol)
Relative Strength Index (RSI AIQ)
Relative Strength Index (RSI Wilder)
Relative Strength, Index (RS Indx)*
Relative Strength, Index (RSMD Indx)*
Relative Strength, Ticker (RS Tkr)*
Relative Strength, Ticker (RSMD Tkr)*
SK - SD Stochastics (SK-SD)
Split Volume
Split Volume Moving Average (SVMA)
Stochastic
Trading Channel Index (TCI)
Trend Score*
Velocity
Volatility*
Volume
Volume Accumulation Percentage (VA Pct)
Volume Oscillator (Vol Osc)
Volume/Price Trend (VP Trend)

Note

When you display a Market Chart, seven additional breadth indicators can be plotted. See Section 6, *Displaying the Market Chart*.

Note

When you display a chart for a futures ticker, an Open Interest indicator is also available.

* Not available on real-time charts

** Available only for futures

Indicators that can be displayed only on Market Charts include:

- Advance/Decline Indicator (AD Ind)
- Advance/Decline Line (AD Line)
- Advance/Decline Oscillator (AD Osc)
- High/Low Indicator (HI/LO)
- Summation Index (SumInd)
- Traders Index (TRIN)
- Up/Down Volume Oscillator (Up/Down Osc)

Indicators that can be displayed on the Price Plot include:

- AIQ Trading Bands (Upper/Lower AIQ)
- Bollinger Bands (Upper/Lower BB)
- ESA Trading Bands (Upper/Lower ESA)
- Moving Average Trading Bands (Upper/Lower MA)
- Para Sar
- Short, Intermediate, and Long Term Moving Averages
- Short, Intermediate, and Long Term ESA's
- 21-day high
- 21-day Low
- ZigZag

Candlestick Charts

In addition to those indicators listed in the Control Panel, Candlestick charts may be accessed from the toolbar or from the *View* menu. When selected, a Candlestick chart replaces the Price Plot for a ticker.

Displaying EDS indicators

Any User Defined Function created in Expert Design Studio can be displayed as an indicator on your TradingExpert Charts (with the exception of real-time charts). The *Charts* application provides a special function for this purpose. This function allows you to select a User Defined Function (UDF) from any of your EDS files and use that UDF to create an indicator, which is then added to the Indicator Library.

For information on creating and displaying EDS Indicators, see Expert Design Studio, Part 2, Chapter VII.

Processing splits/distributions on the chart

Note

When a stock split or mutual fund distribution has been processed, either directly on a chart or during a telephone update, affected stock or mutual fund transactions in the Profit Manager will be automatically adjusted.

Occasionally, while viewing a chart, you will come across a stock that has obviously split or a mutual fund that has received a distribution at some time in the past. When identified by your data service, TradingExpert Pro automatically processes splits and distributions after an update. You can also process these items directly on your charts.

To process a stock split or distribution on the chart:

Display a chart of the stock in question on your screen, and do the following:

1. Position the Date Line on the effective date of the split (first day at split price).
2. Click the **Chart** command on the menu bar.
3. Choose **Split** on the drop-down menu and a dialog box appears with the stock symbol displayed.
4. Verify the effective date of the split in the *Date* text box.

Note

Splits/distributions cannot be processed on real-time charts.

The image shows a dialog box titled "Split Ticker". It has a blue title bar. Below the title bar, there are two fields: "Symbol: INTC" and "Date: 04/28/95". Below these fields is a section with two radio buttons: "Split" (which is selected) and "Distribution". To the right of these radio buttons are two empty text boxes, both labeled "Factor". Below this section is a checked checkbox labeled "Recompute Appropriate Groups/Sectors.". At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

Stock Split/Distribution dialog box

5. Choose *Split* or *Distribution* by clicking the option button.
 - If a split, type in the split *Factor*. The split factor is the number of new shares issued for each old share. For example, for a two for one split, enter the number 2; for a three for two split, enter the number 1.5. Also use this option for stock dividends.

Tip

Position the Date Line on the effective date of the split or distribution, and press the **S** key to access the split/distribution dialog box.

- If a distribution (such as a capital gain distribution from a closed end fund) type in the \$/share distribution amount in the text box.

6. Check (or uncheck) *Recompute Appropriate Groups/Sectors*.
7. Choose the **OK** button to process the split or distribution and recalculate price and volume data.

□ *Adjusting a mutual fund distribution on the chart:*

Display a chart of the mutual fund in question on your screen, and do the following:

1. Position the Date Line on the effective date of the distribution.
2. Click the **Chart** command on the menu bar.
3. Choose **Split** on the drop-down menu and a dialog box appears with the mutual fund symbol displayed.
4. Verify the effective date of the distribution in the *Date* text box.
5. Enter the \$/share amount in the *Distribution* text box.
6. Check (or uncheck) *Recompute Appropriate Groups/Sectors*.
7. Choose the **OK** button and the share price adjustment process will be initiated.

Entering and viewing Notes

Note

Notepad is not available for real-time charts.

You can write and view notes when working in *Charts* or *Data Manager*. The notes are communal — regardless of where the notes originate, they can be read and edited in any of the two functions. The *Notes* function is the Windows *Notepad* function. Notes are entered, saved, and printed in exactly the same way as a Windows *Notepad* document.

□ *To enter a note for a ticker while working in Charts:*

1. Display a chart of the ticker for which you will be entering a note.
2. Access *Notepad* in one of two ways:

Click the **Notepad** button on the toolbar.

— or —

Click the **View** command on the menu bar. Choose **Notes** on the drop-down menu.

3. A window appears titled *Notepad - with ticker symbol.TXT*.
4. Begin typing your note at the prompt.

Tip

If you have written a note (or notes) about a ticker, the word NOTE will appear in the Status Bar at the bottom of the chart window.

5. To save your note, click **File** on the *Notepad* menu bar, then click **Save** on the sub-menu.

□ *To view a previously saved note:*

1. Access *Notepad* by:

Clicking the **Notes** button on the toolbar.

— or —

Choosing the **Notes** command on the **View** sub-menu.

2. A window appears with the saved note.

4. Real-time charts

In addition to historical charts, the *Charts* application also provides charts of real-time information. Real-time charts provide many of the same features available on historical charts, including trendlines, multiple charts, and changeable price display. Although Expert Ratings are not available, most of the indicators available on historical charts can also be plotted in real-time.

To obtain real-time data, you must first establish an account with a real-time data provider. After entering the required setup information and connecting to the internet, you are ready to display real-time charts.

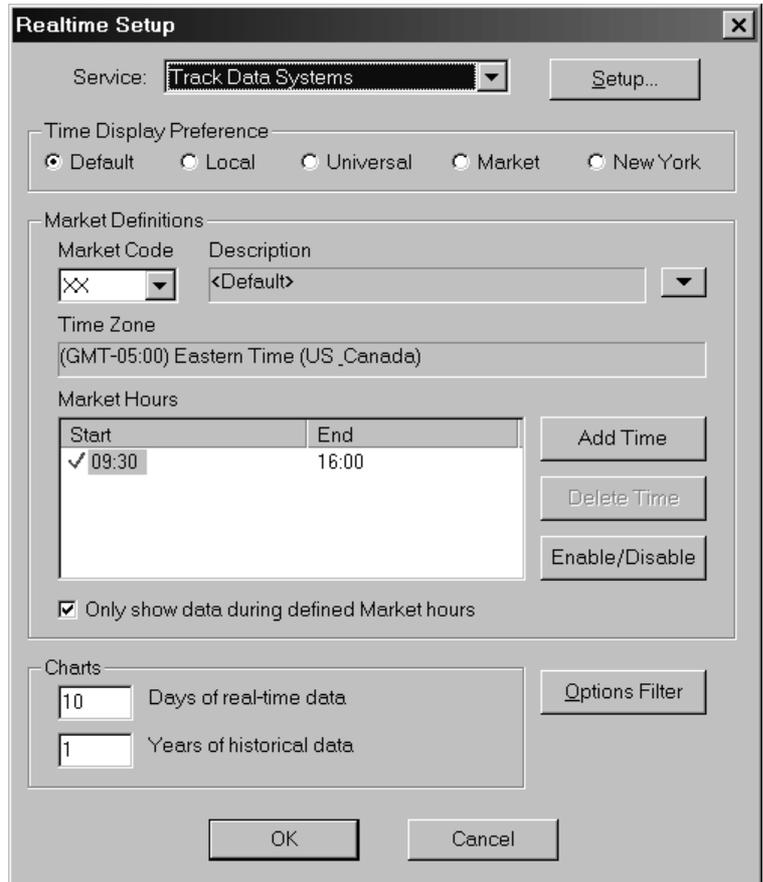


Real-time Chart of General Electric

Setting up to retrieve real-time data

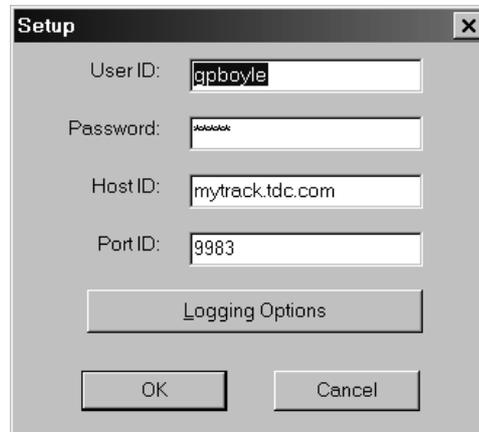
□ *To set up for retrieval of real-time data:*

1. Establish an account with a real-time data provider and record your User ID, Password, and any other required information.
2. Open **Charts** by double clicking the application icon in the TradingExpert Pro program group.
3. With the empty **Charts** window on your screen, click the **Chart** command on the menu bar and select **Service Setup** from the drop-down menu.



4. In the *Real-time Setup* dialog box, use the *Service* list box to select your real-time data provider. Then, with the name of your data provider shown in this box, click the **Setup** button.

5. A *Setup* dialog box for the selected data provider will appear. Enter all required information (User ID, Password, etc.). When finished, click **OK** to return to the *Real-time Setup* dialog box.



Setup dialog box

6. From the *Time Display Preference* section, select the option you prefer for the time scale displayed on real-time charts. For all options except **Market**, trading data is displayed only during normal market hours (e.g., 9:00 to 4:00 est for NYSE).
- **Default** - New York Stock Exchange time.
 - **Local** - The time and date set on user's computer.
 - **Universal** - GMT
 - **Market** - For this option, exchange, time, and market hours are determined by the parameters chosen in the *Market Definitions* section of this dialog box. See the next section for information on defining a Market.
 - **New York** - New York Stock Exchange time.
7. The *Charts* section allows you to adjust two parameters that affect the display of real-time charts:
- *Days of real-time data*
In box labeled *Days of real-time data*, type in the largest number of days of history that can be shown on real-time charts. The maximum that can be retrieved is usually 5 to 20 days depending on the ticker. This is determined by the amount of space your data service reserves on its servers for a particular ticker.

- *Years of historical data*
This entry applies only to charts displayed in the **Real-Time Alerts** application. In box labeled *Years of historical data*, type in the maximum number of years of history that can be shown on real-time charts.

8. When finished, click **OK** to close the *Real-time Setup* dialog box and save your changes.

Defining a Market for real-time data retrieval

When the **Market** option is selected in the *Time Display Preference* section, the middle section of the dialog box, the *Market Definitions* section, is used to define the Market that is currently in effect. As it pertains to this function, a Market is a special set of parameters that is used for charting real-time data. From this section, you can also create a new Market, or edit or delete an existing Market.

Market Definitions

Market Code: S Description: NASDAQ

Time Zone: (GMT-05:00) Eastern Time (US_Canada)

Start	End
✓ 09:30	16:00
✗ 08:00	09:30
✗ 16:00	17:30
✗ 17:30	20:00

Buttons: Add Time, Delete Time, Enable/Disable

Only show data during defined Market hours

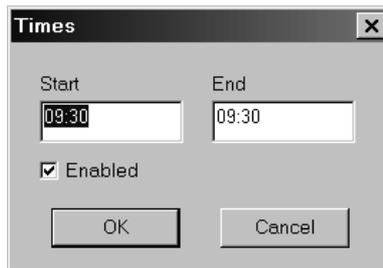
Market Definitions section of Realtime Setup dialog box

□ *To define a Market, proceed as follows:*

1. From the list of codes in the *Market Code* list box, select a code. This code identifies a particular stock exchange and the time zone to which it is linked. When a code is selected, the adjacent *Description* box will display the name of the exchange (e.g., Pacific Stock Exchange for code P), the *Time Zone* box will display the time zone that has been linked to this market (usually the time zone for the designated exchange), and the *Market Hours* box will list all time periods that have been specified for this Market.

2. Specify *Market Hours* as follows:

- If only one set of *Start* and *End* times is listed in the *Market Hours* box and these times are acceptable to you, you only need to verify that the times are enabled (green check mark in far left column). If disabled (red X in far left column), click the **Enable/Disable** button to change the status.
- If more than one set of *Start* and *End* times is listed in the *Market Hours* box and one is acceptable to you, use the **Enable/Disable** button to enable the set that you want to use and to disable all others.
- To add a new set of times to the *Market Hours* box, click the **Add Time** button and proceed as follows:
 - In the *Times* dialog box, enter *Start* and *End* times in the labeled boxes using 24 hour military time.
 - To enable these times, click the **Enabled** option box.
 - Click **OK** to add this new set of times to the *Market Hours* box.



Times dialog box

3. Switch the defined *Market Hours* (the times enabled in the *Market Hours* box) on or off.

- To switch the defined *Market Hours* on, check the option box labeled **Only show data during defined Market hours**.
- To switch the defined *Market Hours* off, remove the check mark from the option box labeled **Only show data during defined Market hours**. *Market hours* will revert to the default times.

Creating a New Market for real-time data retrieval

□ *To create a new Market, do the following:*

1. Click the arrow located at the right of the *Description* box and, from the drop-down menu, choose **New** to display the *Market* dialog box.

The image shows a dialog box titled "Market" with a close button (X) in the top right corner. It contains three input fields: "Market Code" (a small text box), "Description" (a larger text box), and "Time Zone" (a dropdown menu). The "Time Zone" dropdown is currently set to "(GMT-05:00) Eastern Time (US & Canada)". At the bottom of the dialog box are two buttons: "OK" and "Cancel".

Market dialog box

2. Complete the *Market* dialog box as follows:

- In the *Market Code* box, enter a one or two letter code. The code must be a valid market code since it is used by your real-time data service to provide the correct time zone information.
- In the *Description* box, enter the name of the market that the code represents.
- Click the arrow at the end of the *Time Zone* list box to display a drop-down list of time zones. From this list, select the time zone corresponding with the market you are defining.
- Click **OK** to add this new Market to the list of Markets that can be selected from the *Real-time Setup* dialog box.

Editing a Market

□ *To edit a Market, do the following:*

1. Select the Market you want to edit and then click the arrow located at the right of the *Description* box and, from the drop-down menu, choose **Edit**.
2. The *Market* dialog box that appears displays the parameters entered for this Market. Any of these parameters may be changed.
3. When you have completed your changes, click **OK**.

Displaying real-time charts

□ To display a real-time chart of any ticker in your Master Ticker List:

1. Double click the **Charts** application icon in the TradingExpert Pro program group.
2. With the **Charts** window on your screen, your next step is to display the *Chart Ticker* dialog box. This can be done in three ways:
 - Click **Chart** on the menu bar, and select **Chart Ticker** on the drop-down menu.
 - or—
 - Click the **Chart Ticker** toolbar button.
 - or—
 - Press the **Esc** key.

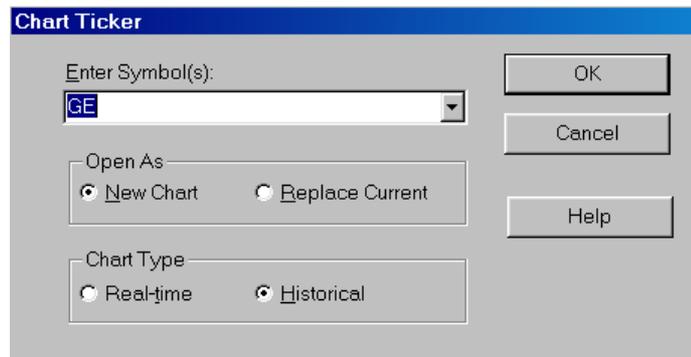


Chart Ticker dialog box

3. In the *Chart Ticker* dialog box, type a ticker symbol in the text box.
4. The *New Chart* option in the *Open As* section is automatically selected and both options are grayed out. (The *Replace Chart* option is only available when there is a ticker chart already displayed. Use this option when you want to replace the displayed chart rather than adding a new chart and creating a multiple chart display.)
5. From the *Chart Type* section, select **Real-time**.
6. A real-time chart of the ticker you entered will be displayed, similar to the chart shown below.

Working with real-time charts

□ To change the tick interval on the real-time chart:

Click one of the six interval buttons at the bottom of the real-time chart. Intervals of 1 min., 5 min., 10 min., 15 min., 30 min., and one hour are available.



Real-time Chart of Cisco with 10 min. tick intervals

□ To set your own tick intervals:

Any of the six tick intervals (1 min., 5 min., etc.) can be changed to display ticks representing some other interval of time. From the **Charts** main menu, select **Chart**, then **Settings** and **Scaling**. The *Default Intraday Intervals* dialog box will appear.

1. Select the tick interval you want to change.
2. Use the arrow on the *Interval* box to change the number of units (minutes or hours).
3. If necessary, change the type of units (minutes or hours) shown in the *Units* box.
4. Click **OK**.

□ *To correct bad data, refresh the real-time chart as follows:*

On the **Chart** submenu, click **Refresh Data**.

-or-

With cursor on chart, right click mouse and choose **Edit price data**.

□ *To re-establish internet connection:*

On the **Chart** submenu, click **Re-connect**.

-or-

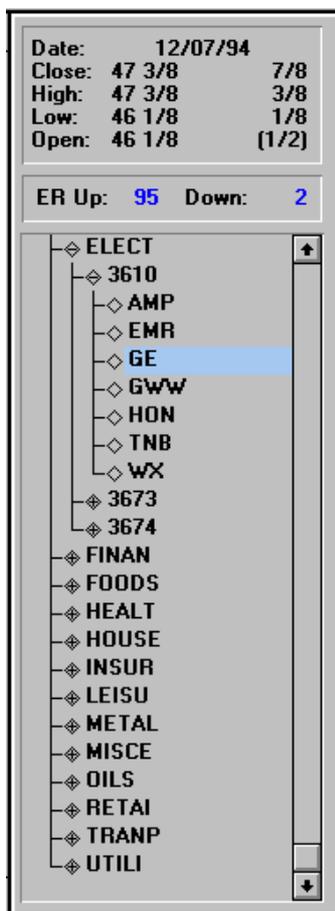
Press the **C** key.

5. Displaying multiple charts

TradingExpert Pro allows you to display up to 12 charts on your screen. You can enter charts using the *Chart Ticker* dialog box, or you can select multiple charts from an Explore List (a group/sector list or other list from *Data Manager*).

□ *To enter multiple charts:*

1. Open the **Charts** application window and do one of the following:
 - Click **Chart** on the menu bar, and select **Chart Ticker** on the drop-down menu.
 - Or, click the **Chart Ticker** toolbar button.
 - Or, simply press the **Esc** key.
2. In the dialog box that appears, type multiple ticker symbols in the text box, each separated by a semicolon (;).
3. Click the **New Chart** option button. (The other option, **Replace Chart**, is used to replace the displayed chart with a new chart.)
4. Click **OK**.



Explore List Window

□ *To enter multiple charts from an Explore List:*

1. Convert the Control Panel to an Explore List window in one of these two ways:
 - Press the **Enter** key and the Control Panel will convert to an Explore List.
 - From the **View** sub-menu, select **Control Panel**, then check **View Explore List**.
2. On the toolbar, click the **arrow** on the Explore List box to view your lists.
3. Select a list by clicking it, and that list will be displayed in the Explore window.
4. Hold down the **Ctrl** key to select multiple tickers from the list, and those tickers will be charted. If you select a ticker from the Explore List without holding down the **Ctrl** key, that ticker will replace the active (title bar is highlighted) chart.

The active chart

The chart with the highlighted title bar is the active chart. To make a chart active, simply click anywhere on that chart. You can make only one chart active at a time.

Arranging charts on the screen

You can arrange charts horizontally or vertically, or you can cascade them. To arrange the charts in any of these three modes, click **Window** on the menu bar and select **Cascade**, **Tile Horizontally**, or **Tile Vertically**. You also can select any of the arrangements by using toolbar buttons.

If you prefer one of the three arrangement modes, and would like to have your charts displayed in that mode whenever you display multiple charts, you can do so by using the *Auto Arrange* option on the *Window* sub-menu. For example, you may want charts to be displayed in the Cascade arrangement. First, display two or more charts on your screen, select **Window** on the menu bar, and from the sub-menu check (by clicking) **Cascade**. Then, again from the **Window** sub-menu, check **Auto Arrange**. Now, when you display multiple charts, they will be arranged in the Cascade mode.

Closing charts

□ *To close a chart, do one of the following:*

- Double click the **close button** (upper left) on the chart's title bar.
—or—
- Click **Chart** on the menu bar, and choose **Close Chart** from the drop-down menu.

Tip

To close all charts displayed without leaving the *Charts* application:

- Click the **Window** command on the menu bar, and from the drop-down menu choose **Close All**.
-or-
- Press **F5**.