

## 10. Trendlines and other drawing tools

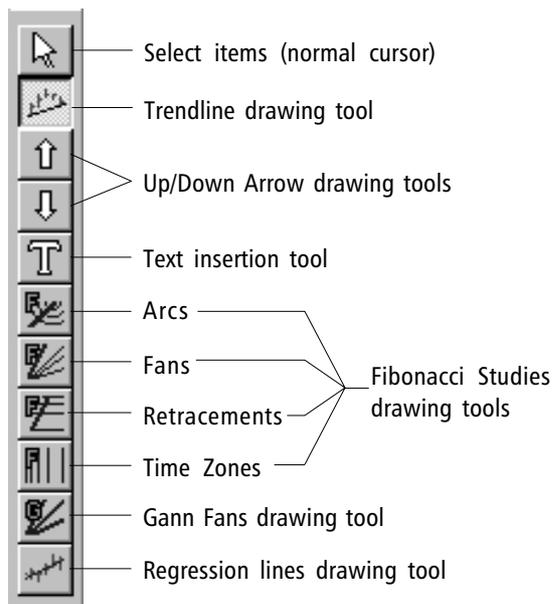
TradingExpert provides tools for drawing and editing trendlines and placing arrows and text on charts. Other drawing tools allow you to define Fibonacci Studies, Gann Fans, and Regression lines. To access the drawing tools while working in *Charts*, choose the *Draw* command on the menu bar. You can also access individual drawing tool icons by clicking the *View* menu bar command, then clicking on *Drawing Tools* to display a toolbar.

Drawing tools include:

- Cursor (used for editing trendlines, text, and arrows)
- Trendlines (for drawing trendlines)
- Up/Down Arrows (for placing arrows on charts)
- Text (T) (for entering notes on charts)
- Fibonacci Arcs
- Fibonacci Fans
- Fibonacci Retracements
- Fibonacci Time Zones
- Gann Fans
- Regression Lines

### Note

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



*Drawing Tools toolbar buttons*

## Drawing, editing trendlines

---

The use of trendlines in technical analysis is as old as technical analysis itself. With AIQ TradingExpert Pro, trendlines can be used for signal confirmation, to determine variable stop loss points, and to help identify trading patterns in the tradition of classical technical analysis. TradingExpert Pro allows you to draw unlimited trendlines on Price Plots and technical indicator plots.

### To create new trendlines

---

□ *To draw trendlines on a Price Plot or on an indicator plot:*



*Trendline drawing cursor*

1. Click the **Trendlines** icon on the toolbar. Or, select the **Draw** command on the menu bar, then choose **Trendlines** from the drop-down menu.
2. The trendline drawing cursor appears. Note, the exact coordinates of the cursor appear at the top right of the Chart window.
3. Position the cursor at the point the trendline is to begin.
4. Click and hold down the left mouse button, guide the mouse to the end point of the trendline, then release the mouse button.
5. When you have finished drawing your trendline(s), cancel the trendline cursor by clicking the **Trendlines** button on the toolbar. Clicking the **Arrow** button (located to the left of the *Trendlines* button) will also cancel trendline drawing.

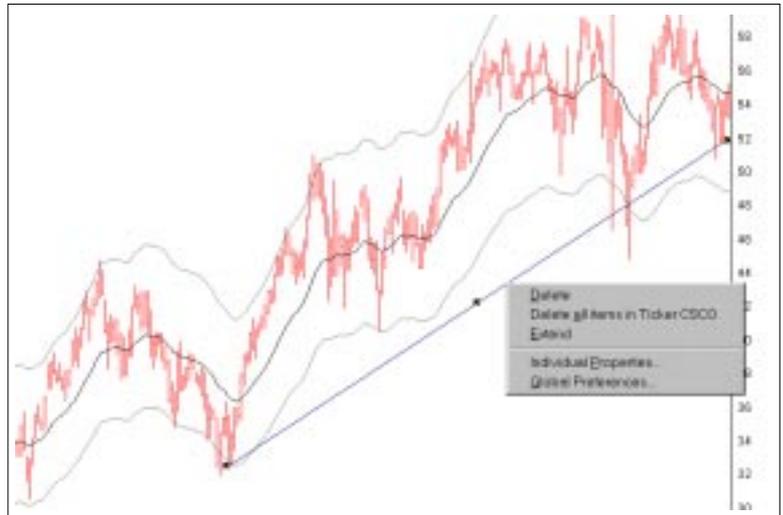
### To edit an existing trendline

---

□ *You can edit a trendline in one of three ways:*

1. Use the mouse to physically relocate the trendline on the chart.  
Use the arrow cursor to select the trendline that you want to edit by clicking anywhere on it with the left mouse button. Three small black dots will appear on the selected trendline, one at each end and one at the midpoint. Follow the directions below to edit (relocate) the trendline.
  - Move one end to a new location by first placing the cursor at the end that you want to move. The mouse pointer will change to a double ended arrow. Continue to hold down the left mouse button while moving the end of the trendline to its new location. Release the mouse button.

- Move the entire trendline to a new location by clicking on the trendline until the mouse pointer changes to a four-pronged arrow. Continue to hold down the left mouse button while moving the trendline to its new location. Release the mouse button.
2. Use the *Properties* function on the right-click menu to enter new end point coordinates for the trendline.
- With the right mouse button click anywhere on the trendline that you wish to edit. This will both select the trendline and display the *Trendline Edit* menu.



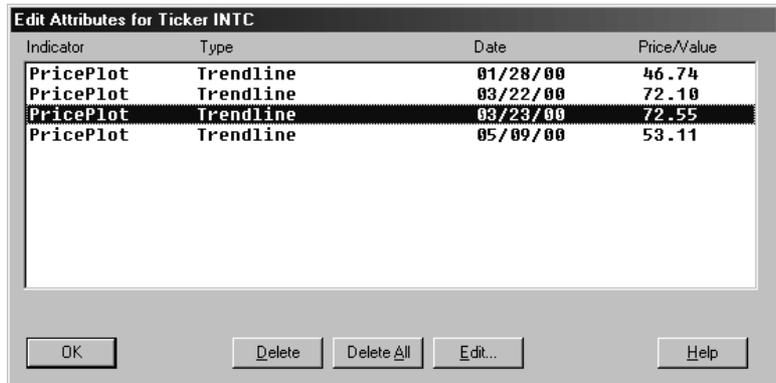
*Chart with Trendline Edit menu displayed*

- Select **Individual Properties** from this menu. A dialog box titled *Trendline Properties* is displayed.

Trendline Properties	
Start	End
Date <input type="text" value="02/23/00"/>	Date <input type="text" value="05/04/00"/>
Price <input type="text" value="106.1719"/>	Price <input type="text" value="106.6406"/>
<input checked="" type="checkbox"/> Auto Extend	
<input type="button" value="OK"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>	

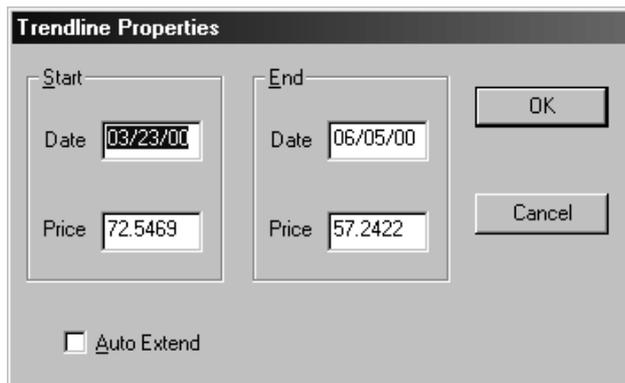
*Trendline Properties dialog box*

- The dialog box lists the Start and End price and date coordinates for the trendline. To adjust the trendline, enter revised coordinates.
  - Click **OK**.
3. Use the *Edit* command on the *Draw* menu to enter new end point coordinates for the trendline.
- Click **Draw** on the menu bar, then **Edit** on the sub-menu. The *Edit Attributes* dialog box that appears lists all trendlines and other items that have been drawn on the displayed chart.



*Edit Attributes for Ticker INTC*

- Select the trendline that you want to edit and click the **Edit** command at the bottom.
- The next dialog box, *Trendline Properties*, lists the Start and End price and date coordinates for the trendline. To adjust the trendline, enter revised coordinates.
- Click **OK** to return to *Edit Attributes* and click **OK** again.



*Trendline Properties dialog box*

### Note

The **Edit** command on the **Draw** sub-menu may also be used to delete a trendline. In the *Edit Attributes* dialog box, select the trendline you want to delete and click **Delete**.

### To delete a trendline

#### □ To delete a trendline:

- With the right mouse button click anywhere on the trendline that you wish to delete. This will both select the trendline (three small black dots will appear on the trendline) and the *Trendline Edit* menu will appear.
- Select **Delete** from this menu. The selected trendline will be removed from the chart.

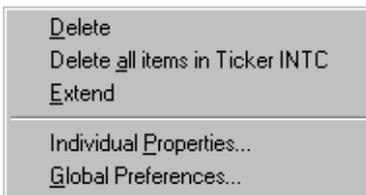
### To extend a trendline

#### □ To extend a trendline to end of chart:

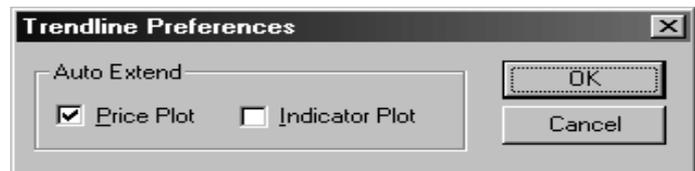
- With the right mouse button click anywhere on the trendline that you wish to extend. This will both select the trendline (three small black dots will appear on the trendline) and the *Trendline Edit* menu will appear.
- Select **Extend** from this menu. The selected trendline will be extended from its far right endpoint until it reaches the end of the chart.

#### □ To extend a trendline automatically after each update:

- With the right mouse button click anywhere on the trendline that you wish to extend. This will both select the trendline (three small black dots will appear on the trendline) and the *Trendline Edit* menu will appear.
- Select **Global Preferences** from this menu. The *Trendline Preferences* dialog box will appear.



*Trendline right-click Edit menu*



*Trendline Preferences dialog box*

- Click the option to automatically extend trendlines on the Price Plot or on the Indicator Plot, or both.
- As long as the trendline remains on the chart, it will be automatically extended with each update of the chart data.

## To add Up/Down Arrows

---

Use this function to mark specific events, etc. on a chart with arrows.

### □ *To place an up or down arrow on a chart:*

1. Click on either the up ↑ or down ↓ arrow icon on the toolbar. Or, choose the **Draw** command on the menu bar and from the drop-down menu choose **Up Arrows** or **Down Arrows**. The mouse pointer changes to a cursor with a small black arrow.
2. Move the cursor to the location where you want to add the arrow. Click the left mouse button.
3. To cancel the Arrow drawing cursor and return to the normal arrow cursor, press the **Arrow** on the toolbar (to the left of the *Trendlines* toolbar button).

### □ *To delete an arrow from a chart:*

1. Position the mouse cursor over the arrow and click the right mouse button to display a menu.
2. Click the **Delete** command to delete the arrow.

#### **Note**

The **Edit** command on the **Draw** sub-menu may also be used to edit or delete items on a chart.

## To add Text

---

Use this function to add text notations directly on charts.

### □ *To place a block of text anywhere on a chart:*

1. Click on the Draw Text toolbar icon (T). Or, choose the **Draw** command on the menu bar and from the drop-down menu choose **Text**. The mouse pointer changes to a vertical text cursor.
2. Move the cursor to the location where you want to add the note and click the left mouse button.
3. Type a note.
4. To cancel the Text cursor and return to the normal arrow cursor, press the **Arrow** on the toolbar (to the left of the *Trendlines* toolbar button).

### □ *To delete or edit text:*

1. Position the mouse cursor over the text and click the right mouse button to display the menu.
2. Click the **Delete** command to delete the text, or select the **Properties** command to edit the text.

#### **Note**

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

## Fibonacci Studies

---

Fibonacci numbers are a sequence of numbers in which each successive number is the sum of the two previous numbers: 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, etc. These numbers possess an intriguing number of interrelationships, such as the fact that any given number is approximately 1.618 times the preceding number and any given number is approximately 0.618 times the following number. This numerical relationship is named for its discoverer, Leonardo Fibonacci, who was an important mathematician born in Italy around the year 1170. It is rumored that Fibonacci found this relationship while studying the Great Pyramid of Giza in Egypt.

There are four Fibonacci Studies used to analyze chart patterns: Arcs, Fans, Retracements, and Time Zones. The general interpretation of the Fibonacci Studies involves the anticipation of a change in trend as prices near the lines created by the studies.

### Fibonacci Arcs

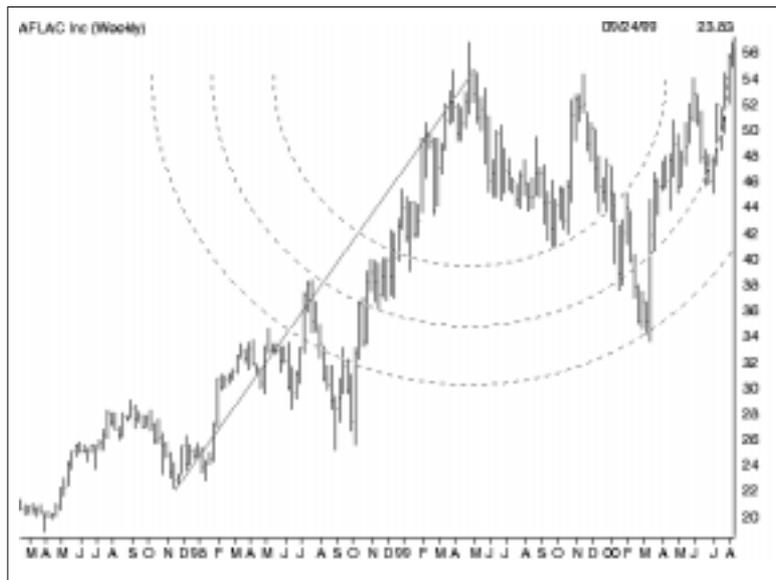
---

Fibonacci Arcs are constructed by first drawing a trendline between two extreme points on a chart; for example, a trough and the opposing peak. Three arcs are then drawn, centered about the second extreme point. The radiuses of these arcs represent distances along the trendline proportional to its length and are equivalent to the Fibonacci levels of 38.2%, 50.0%, and 61.8%.

The interpretation of Fibonacci Arcs involves anticipating support and resistance as prices approach the arcs. The chart on the preceding page illustrates how the arcs can provide support and resistance.

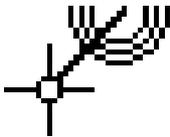
A common technique is to display both Fibonacci Arcs and Fibonacci Fan lines (see below) and to anticipate support/resistance at the points where the Fibonacci Studies intersect.

Note that, because the Arcs are drawn so they are circular relative to the chart axis, the points where the Arcs cross the price data will vary depending on the scaling of the chart.



□ *To draw a Fibonacci Arc on a chart:*

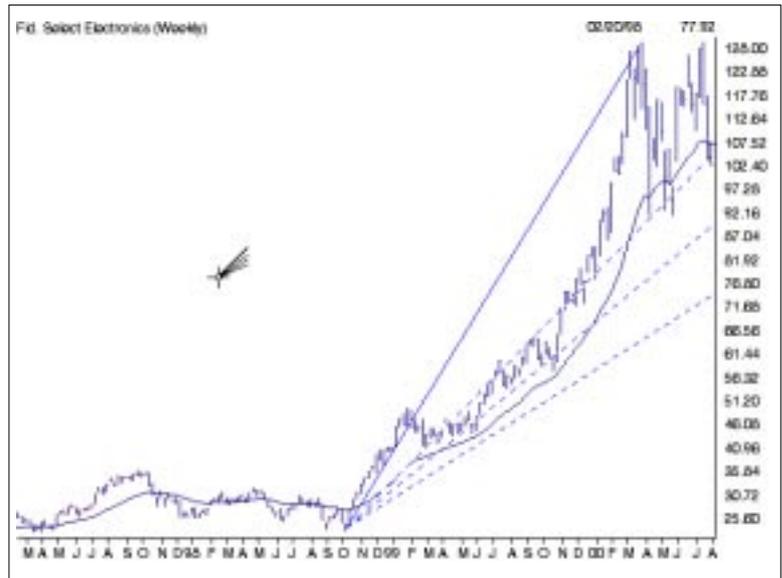
1. Display a chart of the ticker you want to analyze.
2. From the **Draw** sub-menu select **Fibonacci Arcs**, or click the **Fibonacci Arcs** toolbar button. The arrow cursor will change to the Fibonacci Arcs drawing cursor.
3. Place the cursor at the point on the price chart where you would like the trendline to begin and press the left mouse button.
4. While continuing to hold down the button, move the cursor to the point where you want the trendline to end.
5. When you release the mouse button, the Fibonacci Arc study will be automatically drawn.
6. To cancel the Fibonacci Arc drawing cursor and return to the normal arrow cursor, press the **Arrow** on the toolbar (to the left of the *Trendlines* toolbar button).



## Fibonacci Fans

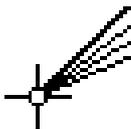
Fibonacci Fans are displayed by drawing a trendline between two extreme points; for example, a trough and the opposing peak. Then an “invisible” vertical line is drawn through the second extreme point. Three trendlines are then drawn from the first extreme point so they pass through the invisible vertical line at the Fibonacci levels of 38.2%, 50.0%, and 61.8%. (This technique is similar to Speed Resistance Lines.) The chart below shows how prices find support at the Fan lines.

You can see that when prices encountered the top Fan line (point “A”), they were unable to penetrate the line for several days. When prices did penetrate this line, they dropped quickly to the bottom Fan line (points “B” and “C”) before finding support. Also note that when prices bounced off the bottom line (point “C”), they rose freely to the top line (point “D”) where they again met resistance, fell to the middle line (point “E”) and rebounded.



□ *To draw Fibonacci Fan lines on a chart:*

1. Display a chart of the ticker you want to analyze.
2. From the **Draw** sub-menu select **Fibonacci Fans**, or click the **Fibonacci Fans** toolbar button. The arrow cursor will change to the Fibonacci Fans drawing cursor.



3. Place the cursor at the point on the price chart where you would like the trendline to begin and press the left mouse button.
4. While continuing to hold down the mouse button, move the cursor to the point that you want the trendline to end.
5. When you release the mouse button, a trendline will be drawn between the two points and three Fibonacci Fan lines (shown as dashed lines) will be automatically drawn below the trendline.
6. To cancel the Fibonacci Fans drawing cursor and return to the normal arrow cursor, press the **Arrow** on the toolbar (to the left of the *Trendlines* toolbar button).

## Fibonacci Retracements

Fibonacci Retracements are constructed by first drawing a trendline between two extreme points; for example, a trough and the opposing peak. A series of nine horizontal retracement lines are then drawn intersecting the trendline at the Fibonacci levels of 0.0%, 23.6%, 38.2%, 50%, 61.8%, 100%, 161.8%, 261.8%, and 423.6%. The values are percentages of the total length of the trendline. Obviously, values greater than 100% will fall below (or above) the starting point of the trendline. Some of the lines will probably not be visible because they will be off the scale.

### Note:

For instructions on how to edit a Fibonacci Study, go to the end of this section.

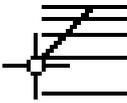


After a significant price move (either up or down), prices will often retrace a significant portion (if not all) of the original move. As prices retrace, support and resistance levels often occur at or near the Fibonacci Retracement levels. In the chart below, Fibonacci Retracement lines were drawn between a major trough and peak.

You can see that support and resistance occurred near the Fibonacci levels of 23% and 38%.

□ *To draw Fibonacci Retracement lines on a chart:*

1. Display a chart of the ticker you want to analyze.
2. Click the **Draw** command on the menu bar and from the drop-down menu select **Fibonacci Retracements**, or click the **Fibonacci Retracements** toolbar button. The arrow cursor will change to the Fibonacci Retracements drawing cursor.
3. Place the cursor at the point on the price chart where you would like the retracement trendline to begin and press the left mouse button.
4. While continuing to hold down the mouse button, move the cursor to the point that you want the trendline to end.
5. When you release the mouse button, a trendline will be drawn between the two points and the Fibonacci Retracement lines (shown as horizontal dashed lines) will be automatically drawn based on the length and position of the trendline.
6. To cancel the Fibonacci Retracements drawing cursor and return to the normal arrow cursor, press the **Arrow** on the toolbar (to the left of the *Trendlines* toolbar button).

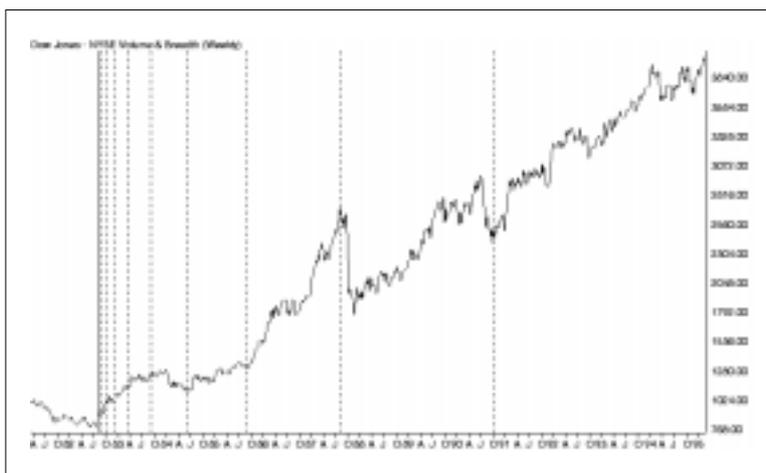


## Fibonacci Time Zones

---

Fibonacci Time Zones are a series of vertical lines that are spaced at the Fibonacci intervals of 1, 2, 3, 5, 8, 13, 21, 34, etc. The first line is placed at an extreme point on the chart and the lines that follow are spaced at increasingly wider intervals in accord with the Fibonacci sequence. Interpretation of Fibonacci Time Zones involves looking for significant changes in price at or near the vertical lines.

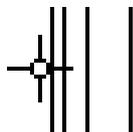
Time Zones are most applicable to a long-term analysis of price action and are probably of limited value when studying short-term charts. Users inexperienced with Fibonacci Studies should consider this type of analysis only when viewing charts that span multiple years. In the example charted on the next page, Fibonacci Time Zones were drawn on the Dow Jones Industrials beginning at the 1982 market bottom.



On the chart, you can see that significant changes in the Dow occurred on or near the Time Zone lines.

□ *To draw Fibonacci Time Zones on a chart:*

1. Display a chart of the ticker you want to analyze.
2. From the **Draw** sub-menu, select **Fibonacci Time Zones** or click the **Fibonacci Time Zones** toolbar button. The arrow cursor will change to the Fibonacci Time Zones drawing cursor.
3. Place the cursor at the point in time on the price chart where you would like the Time Zone lines to originate and click the left mouse button.
4. The Fibonacci Time Zone lines (shown as vertical dashed lines) will be automatically drawn. The first line is located at the specified time. Subsequent lines are drawn in sequence from left to right to define the Fibonacci Time Zones.
5. To cancel the Fibonacci Time Zones drawing cursor and return to the normal arrow cursor, press the **Arrow** on the toolbar (to the left of the *Trendlines* toolbar button).



## To edit Fibonacci Studies

---

### □ *To edit Fibonacci Arcs, Fans, and Retracement Lines:*

Fibonacci Arcs, Fans, and Retracement Lines are edited by relocating the trendline on which the study is based.

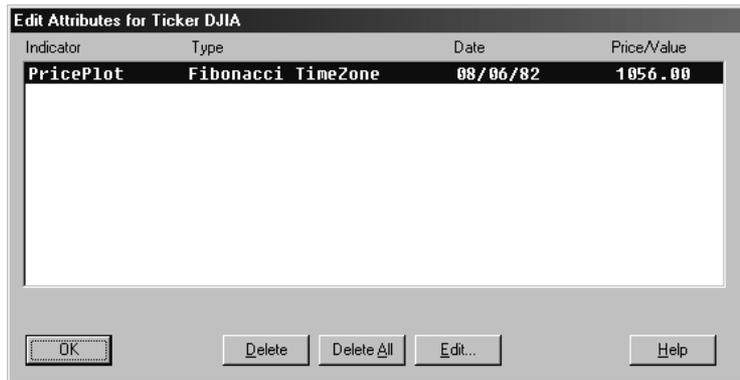
1. Relocate the study trendline. (See instructions on how to edit a regular trendline earlier in this section.)
2. Based on the trendline's new location, the study will be automatically redrawn.

### □ *To edit a Fibonacci Time Zone study:*

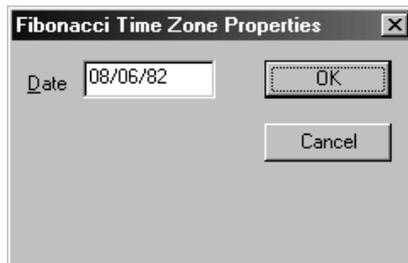
Fibonacci Time Zones are edited by simply changing the date when the study begins. You can do this in one of three ways.

1. Use the mouse to physically relocate the study on the chart.
  - Use the arrow cursor to select the left most (solid) Time Zone of the study that you want to edit by clicking anywhere on it with the left mouse button. Three small black dots will appear on the selected trendline, one at each end and one at the midpoint.
  - To edit (relocate) the trendline, move the arrow cursor over the selected line until the mouse pointer changes to a double ended arrow. Hold down the left mouse button while moving the trendline to its new location.
  - When you release the mouse button, the study will be automatically redrawn.
2. Use the *Properties* function on the right-click menu to enter a new date for the Time Zone study.
  - With the right mouse button click on the first (solid) vertical line. This will both select the study and display a menu.
  - Select **Individual Properties** from this menu. A dialog box titled *Fibonacci Time Zone Properties* is displayed.
  - The dialog box displays the date for the study. To adjust the study, enter a revised date.
  - Click **OK** and the study will be automatically redrawn.

- Use the *Edit* command on the *Draw* menu to enter a new date for the study.
  - Click **Draw** on the menu bar, then **Edit** on the sub-menu. The *Edit Attributes* dialog box that appears lists all studies and other items that have been drawn on the displayed chart.



- Select the Time Zone study that you want to edit and click the **Edit** command at the bottom.
- The next dialog box, *Fibonacci Time Zone Properties*, lists the date for the study. To adjust the study, enter a revised date.



- Click **OK** to return to *Edit Attributes* and click **OK** again and the study will be automatically redrawn.

## To delete Fibonacci Studies

To delete any of the Fibonacci Studies, selecting the **Delete** command from the right-click menu is the simplest approach.

□ *To delete a study using the right-click menu:*

- With the right mouse button click anywhere on the study trendline. For Fibonacci Time Zones, which are not based on a trendline, click on a solid (not dashed) line. This will both select the study (small black dots will appear on the trendline or other component) and the right-click menu will appear.
- Select **Delete** from this menu. The selected study will be removed from the chart.

## Alternative method for deleting a study

□ *To delete a study from the Edit Attributes dialog box:*

1. Click **Draw** on the menu bar, then **Edit** on the sub-menu. The *Edit Attributes* dialog box that appears lists all studies and other items that have been drawn on the displayed chart.
2. Select the study that you want to delete and click the **Delete** command at the bottom.
3. When the *Edit Attributes* dialog box reappears, the study will be removed from the list of chart attributes.

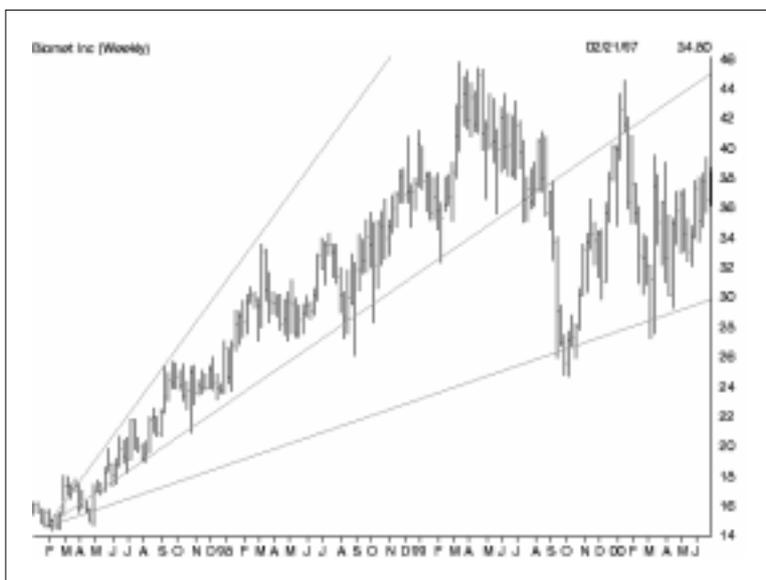
## Gann Fans

---

W. D. Gann (1878-1955) designed several unique techniques for studying price charts. Central to Gann's techniques is the use of geometric angles in conjunction with time and price. Gann believed that specific geometric patterns and angles had unique characteristics that could be used to predict price action.

Gann's techniques require that charts be drawn with equal time and price intervals, so that a rise/run of one price unit for each time unit (called a 1 x 1 trendline or angle) will equal a 45 degree angle anywhere on the chart. Gann believed that the ideal balance between time and price exists when prices rise or fall at a 45 degree angle relative to the time axis.

Gann angles are drawn between a significant bottom and top (or vice versa) at various angles. Deemed the most important by Gann, the 1 x 1 trendline is used as a criteria for both bull and bear markets. Gann felt that a 1 x 1 trendline provides major support during an uptrend; when the trendline is broken, it signifies a major reversal in the trend. A bull market is signified if prices are rising and are above the upward sloping 1 x 1 trendline. Conversely, a bear market is indicated when prices are falling and are below the downward sloping 1 x 1 trendline.



Although the theory relies on certain exact chart angles (Gann identified nine significant angles, with the 1 x 1 being the most important), an exact price/time relationship is not specified. Obviously, a 45 degree angle drawn on a chart is no longer 45 degrees when the price or time scale is changed without a corresponding change in the opposing scale. Therefore, Gann Fans should be used with caution, especially since the price scale on AIQ charts varies from one chart to the next. The technique is probably best suited to longer term studies where major trends can be identified and the width of the price scale is usually greatest.

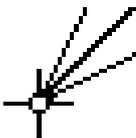
In addition to the 1 x 1 angle, Gann specifies eight different angles, four greater than 45 degrees and four less than 45 degrees, as lines of significant support and resistance. The AIQ Gann drawing tool creates only two of these lines, the 1 x 2 (63.75 degrees) and the 2 x 1 (26.255 degrees) in addition to the 1 x 1 (45 degrees) line. Gann observed that each of these angles can provide support and resistance depending on the trend. According to Gann, when prices move below the 1 x 1 angled trendline during an uptrend, prices should then be expected to fall to the next trendline (i.e., the 2 x 1 angle). In other words, as one angle is penetrated, expect prices to move and consolidate at the next angle.

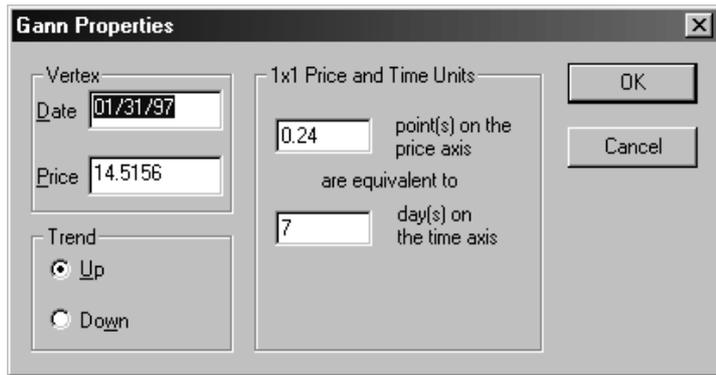
## To draw Gann Fans

---

□ *To draw a Gann Fan on a chart, do as follows:*

1. Display a chart of the ticker you want to analyze.
2. Click the **Draw** command on the menu bar and from the drop-down menu select **Gann Fans**. The arrow cursor will change to the Gann Fans drawing cursor.
3. Place the cursor at the point on the price chart where you would like the Gann Fan to begin and press the left mouse button. When you release the mouse button, the *Gann Properties* dialog box will appear.
4. The *Vertex* section of the *Gann Properties* dialog box lists the coordinates of the point on the chart where the mouse was located when you clicked the mouse. This where the Gann Fan will originate. You can change these coordinates if you wish.





5. The section titled *1x1 Price and Time Units* displays two values, one for each axis. If you were to measure along each axis from the lower left corner of the chart distances equal to these values and then drew a line connecting these points, the resulting line should be a 45 degrees angle on the chart. You can change these values if you wish.
6. The section titled *Trend* displays two options. If the trend of the data you are studying is up, select **Up**. If the trend is down, select **Down**.
7. When you are satisfied with the entries shown, click **OK** and the Gann Fan study will be automatically drawn.
8. To cancel the Gann Fan drawing cursor and return to the normal arrow cursor, press the **Arrow** on the toolbar (to the left of the *Trendlines* toolbar button).

## To edit Gann Fans

---

Gann Fans are edited by changing the price/date coordinate of the point where the study begins. The *Gann Properties* dialog box also allows revision of the price and time units that define a 1x1 angle on the chart.

□ You can edit a Gann Fan in one of three ways:

1. Use the mouse to physically relocate the study on the chart.
  - Use the arrow cursor to select the Gann Fan that you want to edit by clicking anywhere on one of the three fan lines with the left mouse button. A small black square will appear at the point where the three fan lines originate (vertex).

- To edit (relocate) the fan, move the arrow cursor over the vertex point and press the left mouse button. Two lines parallel to the two chart axis will appear. The intersection of these lines indicates the location of the Gann Fan vertex. Hold down the left mouse button while moving the fan to its new location.
  - When you release the mouse button, the study will be automatically redrawn.
2. Use the *Properties* function on the right-click menu to enter new coordinates for the Gann Fan vertex.
    - With the right mouse button, click on one of the fan lines. This will both select the study and display a menu.
    - Select **Individual Properties** from this menu. A dialog box titled *Gann Properties* is displayed.
    - The dialog box displays the date for the study. To adjust the study, enter a revised date.
    - Click **OK** and the study will be automatically redrawn.
  3. Use the *Edit* command on the *Draw* menu to enter new coordinates or new 1x1 price/time angle units for the study.
    - Click **Draw** on the menu bar, then **Edit** on the sub-menu. The *Edit Attributes* dialog box that appears lists all studies and other items that have been drawn on the displayed chart.
    - Select the Gann study that you want to edit and click the **Edit** command at the bottom.
    - The next dialog box, *Gann Properties*, lists the current fan vertex coordinates and the 1x1 angle units for the study. To adjust any of the data for this study, enter revised information.
    - Click **OK** to return to *Edit Attributes* and click **OK** again. Based on the revised information, the study will be automatically redrawn.

## To delete Gann Fans

To delete a study, selecting the **Delete** command from the right-click menu is the simplest approach.

□ *To delete a Gann Fan using the right-click menu:*

- With the right mouse button, click anywhere on one of the Gann Fan lines. This will both select the study (small black dots will appear at the fan vertex) and the right-click menu will appear.
- Select **Delete** from this menu. The selected study will be removed from the chart.

## Alternative method for deleting a Gann Fan

□ *To delete a Gann Fan from the Edit Attributes dialog box:*

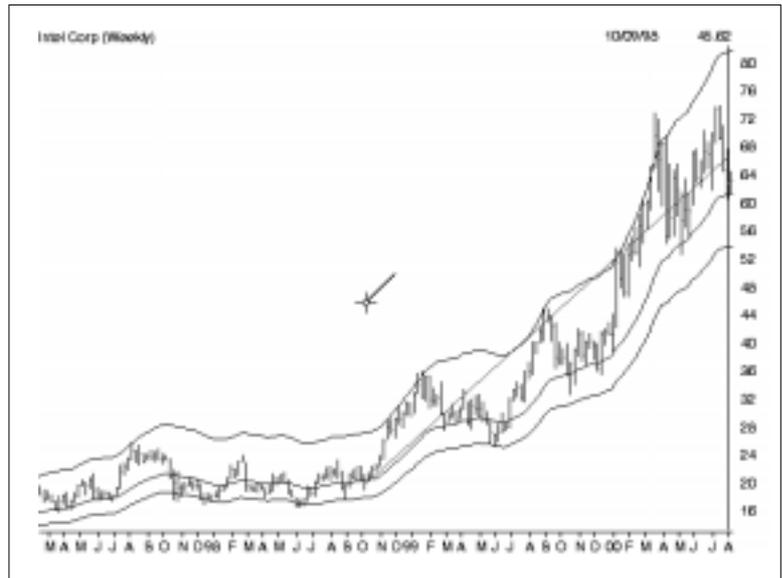
1. Click **Draw** on the menu bar, then **Edit** on the sub-menu. The *Edit Attributes* dialog box that appears lists all studies and other items that have been drawn on the displayed chart.
2. Select the Gann study that you want to delete and click the **Delete** command at the bottom.
3. When the *Edit Attributes* dialog box reappears, the study will be removed from the list of chart attributes.

# Regression Lines

Linear regression is a statistical procedure that is used to predict future values from past values. In the case of security prices, it is commonly used to determine quantitatively the underlying trend and to project future prices.

Simply put, a Linear Regression trendline is a straight line through a series of data values that is drawn to represent an average of all the values. The least squares method is used to determine the line that best fits the data. In this method, the objective is to minimize the distances between the resulting line and the data values.

If you had to guess what a particular security's price would be tomorrow, a logical guess would be "fairly close to today's price." If prices are trending up, a better guess might be "fairly close to today's price with an upward bias." Linear regression analysis is the statistical confirmation of these logical assumptions.



When drawing a Regression trendline on a chart, the user specifies the time interval which the trendline represents and the trendline is drawn using only those data values that fall within this interval. The trendline, which is displayed in the exact middle of the price data within the specified time interval, is always extended ahead in time to

the end of the chart. This allows you to easily determine if more recent price action is in line with or has deviated from a previously established trend.

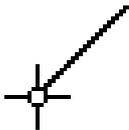
If you think of this trendline as the “equilibrium” price, the price where buyers and sellers are in equilibrium, any move above or below the trendline indicates overzealous buyers or sellers. While prices may deviate above or below the equilibrium level for short periods of time, these excursions will only be temporary as long as the trend remains in effect. However, if prices remain significantly above or below the established trend for a long period of time, a reversal in trend may be imminent.

## To create Regression Lines

---

□ *To draw a Regression trendline on a chart:*

1. Display a chart of the ticker that you want to analyze with a Regression trendline.
2. Click the **Draw** command on the menu bar and from the drop-down menu select **Regression**. The arrow cursor will change to the Regression trendline drawing cursor.
3. Place the cursor at the point on the price chart where you would like the trendline to begin and press the left mouse button.
4. While continuing to hold down the button, move the cursor to the time period that you want the trendline to represent.
5. When you release the mouse button, a trendline will be automatically drawn. Although the line is extended all the way to the right, the position of the line is computed only from the data values lying between the two selected points.
6. To cancel the Regression drawing cursor and return to the normal arrow cursor, press the **Arrow** on the toolbar (to the left of the *Trendlines* toolbar button).



## To edit Regression Lines

---

Regression Lines cannot be edited with the mouse but can be edited through the *Individual Properties* or *Edit* functions which allow you to enter revised *Start* and *End* dates for the line.

□ *Edit a Regression Line in one of these two ways:*

1. Use the *Properties* function on the right-click menu to enter new start or end dates for the line.
  - With the right mouse button click anywhere on the regression line. This will both select the study and display a menu.
  - Select **Individual Properties** from this menu. A dialog box titled *Regression Line* is displayed. This dialog box displays the Start and End dates for the study.
  - To adjust the study, enter revised dates.
  - Click **OK** and the line will be automatically redrawn.
2. Use the *Edit* command on the *Draw* menu to enter new start and/or end dates for the line.
  - Click **Draw** on the menu bar, then **Edit** on the sub-menu. The *Edit Attributes* dialog box that appears lists all studies and other items that have been drawn on the displayed chart.
  - Select the Regression Line that you want to edit and click the **Edit** command at the bottom.
  - The next dialog box, *Regression Line*, lists the current Start and End dates for the study. To adjust the study, enter revised dates.
  - Click **OK** to return to *Edit Attributes* and click **OK** again. Based on the revised information, the study will be automatically redrawn.

## To delete a Regression Line

To delete any type of study, selecting the **Delete** command from the right-click menu is the simplest approach.

□ *To delete a Regression Line using the right-click menu:*

- With the right mouse button click anywhere on the Regression Line. This will both select the study (small black dots will appear on the Regression Line) and the right-click menu will appear.
- Select **Delete** from this menu. The selected study will be removed from the chart.

## Alternative method for deleting a Regression Line

□ *Delete a Regression Line from the Edit Attributes dialog box:*

1. Click **Draw** on the menu bar, then **Edit** on the sub-menu. The *Edit Attributes* dialog box that appears lists all studies and other items that have been drawn on the displayed chart.
2. Select the Regression Line that you want to delete and click the **Delete** command at the bottom.
3. When the *Edit Attributes* dialog box reappears, the Regression Line will be removed from the list of chart attributes.

## 11. Using the Explore feature

---

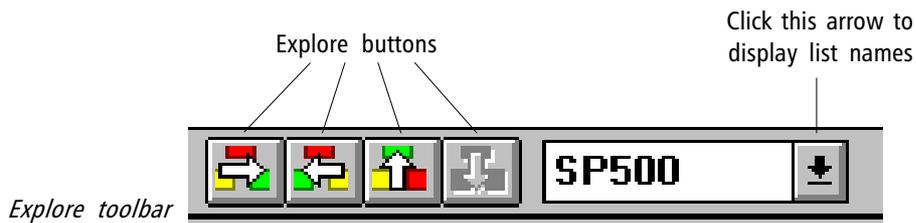
TradingExpert Pro's Explore feature provides a quick and easy way of looking at charts of tickers in your Group/Sector List or any of the other lists that you have created. The Explore feature provides direction buttons that you can use to move from chart to chart in a list. With this feature, you are able to navigate through a group/sector pyramid structure, moving easily from sectors to groups to stocks. Or, use Explore to quickly view charts of the equities and/or mutual funds contained within a portfolio.

### How to use Explore

---

□ *To use Explore, follow these basic steps:*

1. While working in **Charts**, choose a list to explore by clicking the **arrow** on the Explore List box on the toolbar, then clicking the name of a list.



2. If the Control Panel is in the indicator display mode, press the **Enter** key to switch to the Explore window.
3. Click one of the tickers in the list in the Explore window to display a chart. (If you selected the S&P 500 list, click **ZALL**.)
4. Use one of the three methods described below to quickly move from ticker to ticker in your selected list:
  - Use the four Explore buttons on the toolbar. You can move to the right, to the left, up, or down.
  - Click the **Explore** command on the menu bar and select one of the four directions from the drop-down menu.
  - Use keys to navigate:
    - + to move right
    - to move left
    - \* to move up
    - / to move down.

#### Note

When exploring a single-level list, such as a portfolio list where you can only move to the right or to the left, the navigation buttons or commands that are not available are dimmed.

□ *To switch to another list to explore:*

1. Click the **arrow** on the Explore List box on the toolbar, and select another list.
2. A chart of the first ticker in the selected list is displayed and the list appears in the Explore window. (If the Control Panel is in the indicator display mode, press the **Enter** key to switch to the Explore window.)
3. Use one of the methods described above to quickly move from ticker to ticker in your selected list.

## Example group/sector exploration

---

The S&P 500 industry group/sector structure is shown in the illustration. The structure, which is in the form of a pyramid, begins with the individual stocks in the S&P 500 list. These stocks form the base of the pyramid.

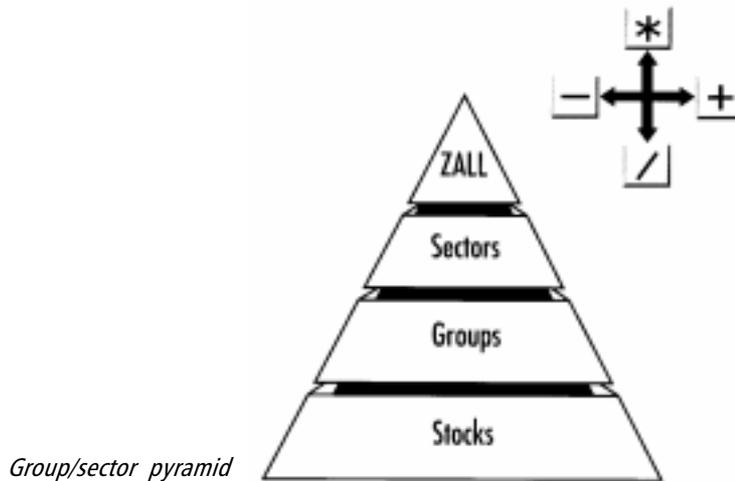
The next higher level of the pyramid consists of the groups into which the individual stocks have been combined. These groups of related stocks are then combined into industrial sectors and these sectors make up the next level.

Finally, at the apex of the pyramid, the industrial sectors are combined into a single index which AIQ calls the master sector (ZALL).

A navigation star is shown above the apex of the group/sector pyramid in the illustration. This star shows the four directions that you can move within the pyramid, and the keys that are used for each direction. As noted earlier, you can also use the toolbar buttons to navigate through the group/sector structure.

### Note

When exploring a list of charts using TradingExpert Pro's *Explore Feature* and you reach the beginning or the end of a list, the left or right Explore button will "wrap around" (take you to the opposite end of the list) and continue to display charts instead of dead-ending.



□ *To perform an example exploration, proceed as follows:*

1. Begin with a chart of the master sector, ZALL, displayed. Notice that the only direction you can move is down, and hence only the down button on the toolbar is active.
2. Press the down button (or slash key) to display a chart of the first industrial sector, the Automobile Sector.
3. Use the right button on the toolbar (or plus key) to display a chart of the next sector listed, which is the Building Sector.
4. Use the down button (or slash key) to move down one level and display a chart of the Building Materials Group (2949).
5. Using the right button (or plus key), you can move laterally and quickly view charts of all groups in the Building Sector.
6. Use the down button (or slash key) once more to move down to the lowest level, the individual stock level. By continued use of the plus key, you can easily view charts of all stocks in the group you are exploring.

## 12. Using the Tag List feature

---

The Tag List feature allows you to easily create a new list of tickers while working within *Charts*. Also, as you are working within *Charts*, you may come upon a ticker that you want to include in one of your existing lists. Or, you may want to delete a ticker from an existing list. With this feature, you can add or delete tickers to lists without leaving the *Charts* application. Using the Explore and Tag List features together gives you great flexibility in keeping your lists current.

The Tag List feature allows you to:

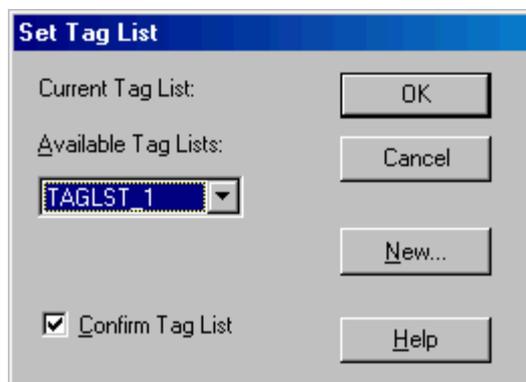
- Create a new list of tickers.
- Add a ticker to an existing list.
- Delete a ticker from an existing list.
- Add a ticker to multiple lists.

### How to create a new list

---

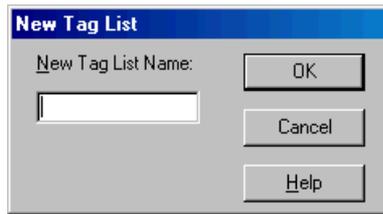
□ To create a list while working within *Charts*, follow these steps:

1. With a chart or charts displayed, click the **TagList** command on the menu bar.
2. Choose **Set TagList** on the drop-down menu. The *Set Tag List* dialog box appears.



*Set Tag List dialog box*

3. Click the **New** command button.



4. In the next dialog box, type the name of a new list in the text box and choose **OK**. The list name cannot include spaces or non-alphabetic or numeric characters (i.e., /, \, \*, etc.).
5. The name of your new list is displayed in the text box of the *Set Tag List* dialog box. Choose **OK**. The new list becomes the current list and its name appears in the status bar on the bottom of the chart. Also, its name is added to the Explore List box on the toolbar.
6. You now can add tickers to this newly created list.

#### Note

A closed Tag button indicates that the ticker is “untagged,” not in the list. An open Tag button indicates that the ticker is “tagged,” included in the list.

□ *To include tickers in a new list, proceed as follows:*

1. Display a chart of the ticker that you want to include in the list by selecting **Chart Ticker** from the **Chart** sub-menu. Also, you can display charts of tickers selected from an Explore List displayed in the Explore window.
2. If more than one chart is displayed on your screen, activate (by clicking) the chart of the ticker you want to include in your list.
3. Tag the ticker for inclusion in the new list in one of these two ways:  
Click the **Tag** button on the toolbar.  
— or —  
Select the **TagList** command from the menu bar and choose **Tag** on the drop-down menu.
4. When you tag a ticker, the *Set Tag List* dialog box appears with the name of the current list displayed so that you can confirm that you are placing the ticker in the correct list. Choose **OK** to include the ticker.
5. Continue the process to include other tickers in the list.
6. To keep track of tickers as you build the new list, display the list in the Explore window by selecting its name from the Explore List box on the toolbar. (If the Control Panel is in the indicator display mode, press the **Enter** key to switch to the Explore window.)
7. When you have completed the list, you now can use the Explore feature to monitor it.

#### Tip

When tagging multiple tickers, you can bypass the confirmation step by removing the check mark from the *Confirm* check box on the *Set Tag List* dialog box. To remove the check mark, simply click it. The dialog box will no longer appear after each ticker is tagged.

## How to add tickers to an existing list

---

□ *Follow these steps:*

1. Display a chart of the ticker that you want to add to the list.
2. Click the **TagList** command on the menu bar.
3. Choose **Set Tag List** from the drop-down menu. Click the **arrow** on the *Available Tag Lists* text box, then click the name of the list you want to add to. The list must be a user list. Tickers cannot be added to a group list with this function.
4. Choose **OK**. The list becomes the current Tag List.
5. If more than one chart is displayed on your screen, activate the chart of the ticker you want to add (highlight its title bar).
6. Click the **Tag** button on the toolbar (the button opens to indicate the ticker is tagged), or select the **TagList** command from the menu bar and choose **Tag** on the drop-down menu.
7. The *Set Tag List* dialog box appears with the name of the current list displayed so that you can confirm that you are adding the ticker to the correct list. Choose **OK** to add the ticker.
8. Continue the process to add other tickers to the list.

### Tip

To keep track of tickers as you add or delete from a list, display the list in the Explore window by selecting its name from the Explore List box on the toolbar. (If the Control Panel is in the indicator display mode, press the **Enter** key to switch to the Explore window.)

## How to remove tickers from an existing list

---

□ *Follow these steps:*

1. Display a chart of the ticker that you want to remove from the list.
2. Click the **TagList** command on the menu bar.
3. Choose **Set Tag List**. Click the **arrow** on the *Available Tag Lists* text box, then click the name of the list you want to delete from. The list must be a user list. Tickers cannot be removed from a group list with this function.
4. Choose **OK**. The list becomes the current Tag List.
5. Activate the chart of the ticker you want to delete (highlight its title bar).
6. Click the **Tag** button on the toolbar (the button closes to indicate the ticker is untagged), or select the **TagList** command from the menu bar and choose **Untag** on the drop-down menu.
7. Continue the process to remove other tickers from the list.

## How to add a ticker to multiple lists

---

□ *Follow these steps:*

1. Display a chart of the ticker.
2. Select the **TagList** command from the menu bar, then select **Set Tag List** from the drop-down menu.
3. Choose the name of a list in the *Available Tag Lists* box. Click **OK**.
4. Click the **Tag** button on the toolbar to add the ticker to the selected list.
5. Click **OK** in the *Set Tag List* dialog box.
6. Continue the process by repeating steps 2 through 5.

### Note

To delete a list, it is easiest to go to **Data Manager** and use the *Delete* function found on the *List* sub-menu.

## 13. Shortcut Keys for use in TradingExpert Pro charts

---

### Action keys

A	Toggle vertical date cursor line to a diamond and back
D	Quick-change the date
G	Toggle grid lines on or off
F	Display fundamental information
W	Toggle between daily and weekly data
M	Toggle trendline drawing on or off
S	Process a stock split or mutual fund distribution
T	Add ticker to a tag list
U	Untag ticker from tag list
O	Overlay feature
R	Refresh data for real-time charts
C	Connect or disconnect for real-time charts
P	Print active chart
L	Toggle Log Scales on or off
V	Set tag list
Z	Toggle Zoom feature on or off

### Function keys

F1	Help
F5	Close all open charts
F10	Toggle Control Panel on or off
Ctrl+O	Display <i>Chart Ticker</i> dialog box
Esc	Display <i>Chart Ticker</i> dialog box
Enter	Toggle between Indicator and Explore panels
Ctrl+M	Display Market Charts
Ctrl+Enter	Display <i>Indicator Constants</i> box
Ctrl+left/right arrow	Quick search for Expert Ratings
Alt+N	Display ticker Notes
?	Display ER rules
+	Explore right
-	Explore left
*	Explore up
/	Explore down
Left/right arrows	Move date one period
Up/down arrows	Select indicators or scroll through a list