

TeleChart User Guide

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Welcome to TeleChart Help

See What's New in TeleChart!

Welcome to the TeleChart Help System. It has been designed to help answer your specific questions and will also serve as a place to learn how to more effectively use TeleChart. Below is an interactive view of the TeleChart main screen. **Click anywhere on the screen to learn more about a specific feature.** Features that are exclusive to Platinum service will be so noted. For the most current version of the help files, click here to view the online version.



TeleChart 2007

1. **Entirely new data format engine resulting in much faster PCF calculation and data update times.** If you have a power computer, TeleChart will maximize its muscle by indexing stock data across your hard-drive and memory (RAM). If you have an older model, the program will intelligently conserve computing power. The unmatched industry leader in speed will make your analysis routine faster than ever - so you can do more or just spend more time living your life.
2. **All Criteria show actual value instead of rank value in the WatchList and Data Sheet.** In the past, TeleChart displayed estimated criteria values (ie. Revenue, Earnings, P/E's, Growth Rates, etc.) Now all values in WatchList Tabs and the Datasheet are displayed exactly as reported.
3. System criteria display the formula used to calculate them. Just click on the Info button beside the formula.
4. TeleChart has always been famous for the simplicity of its criteria rankings. Everyone can understand that 99 is the highest rank and 1 is the lowest. But the rank numbers have always been based on how a stock ranks versus the entire stock market. **Now you can scan based on how stocks rank versus other members of their specific WatchList** - whether it be a sector, index or personal WatchList. This new level of detail will help you dissect groups of stocks that already share remarkable strength or weakness in a particular area.
5. **New cross-hair pointer** (press the period key . to activate) with value boxes for date and price.
6. Down Color added to Price graph. **You can now set a different color for down days.**
7. Removed CD requirement. **All data is now on the hard drive. You no longer need to wait for a CD-ROM.** Download the latest software and entire stock market databank directly from the www.Worden.com website to your hard drive! This relatively small (just over 100 meg) download installs in about 20 to 30 minutes on DSL or cable modem. Dial up takes about 5 hours - which can be done while you are sleeping! Of course, we can still mail you a CD-ROM the old-fashioned way.
8. Changed Note data format. This cleared up many existing problems with note saving and attached charts.
9. Replaced User Number and Machine Key system with a Worden Username and Password. **You will now use the same username and password to sign into all Worden products and the Worden website.**
10. You can now run TeleChart 2007 from two machines with one subscription. You asked and kept asking - it was driving us crazy. The new TeleChart 2007 data engine allows us to deliver! **Now you can run TeleChart from two different computers (at no extra charge).** When you leave one computer, simply touch a button to backup your work to the Worden Server. When you get to your other computer, click 'Restore' to pick up where you left off. PLUS, you can now selectively restore anything that has been accidentally modified or deleted - including WatchLists, PCFs, EasyScans, etc.
11. Automatic upgrade utility allows for immediate delivery of new versions without having to wait for a CD-ROM.
12. More chat channel colors are now available
13. Reduced spike in memory requirement during download of data.
14. PgUp and PgDn buttons now scroll the WatchList
15. Added ability to **sort by Industry and Sub-Industry groups**, also able to add to WatchList tabs and data display above chart now
16. New backup/restore utility allows you to selectively restore individual WatchLists, PCFs, EasyScans, etc. that you've modified or deleted.
17. **Backup to the Worden servers** makes it easy to operate on two machines and always have settings on both.

18. **Display 8 charts across two separate monitors.** Did you know that most of today's computers allow you to run a second monitor? TeleChart lets you place a second layout window of up to four charts on this additional monitor. Don't need it? Before you jump to conclusions, consider this: Monitors are cheap today and getting cheaper. You can set the second monitor to always show a weekly and monthly chart of the symbol on your primary monitor. You can lock the second monitor to relevant indexes and sectors. You can set aside any "supporting" charts that you don't want to interfere with your primary work area. The Bottom Line: Most traders who try the second monitor love it and can't go back. This ability was already a popular feature in TCNet and has been extended to all TeleChart users.
19. Easily pause slide shows with the '=' key.

What's New Beyond TeleChart?

Grow and learn with new online Video Notes, special features and discussion forums.

The new Worden website, www.Worden.com, is fast becoming a favorite meeting place for individual investors to talk about the market, trading ideas, and their favorite TeleChart software strategies. We also periodically feature special "Help/Tutorial Videos" and "Strategy Videos" right on the home page. You already have access to the library of over 50 current videos.

"Ask a Trainer" and get an answer!

TeleChart is so rich with features that, inevitably, you are going to have at least some questions. Go to the "Training" tab on www.Worden.com and click on "Ask a Trainer". A Worden trainer will promptly respond with an explanation by video or text. You can also view other users' questions and trainer responses - an indispensable learning tool. These are the same experienced TeleChart pros that have criss-crossed the country teaching our award-winning stock market training class.

A single username and password is your key to everything in the Gold service level... now and in the future

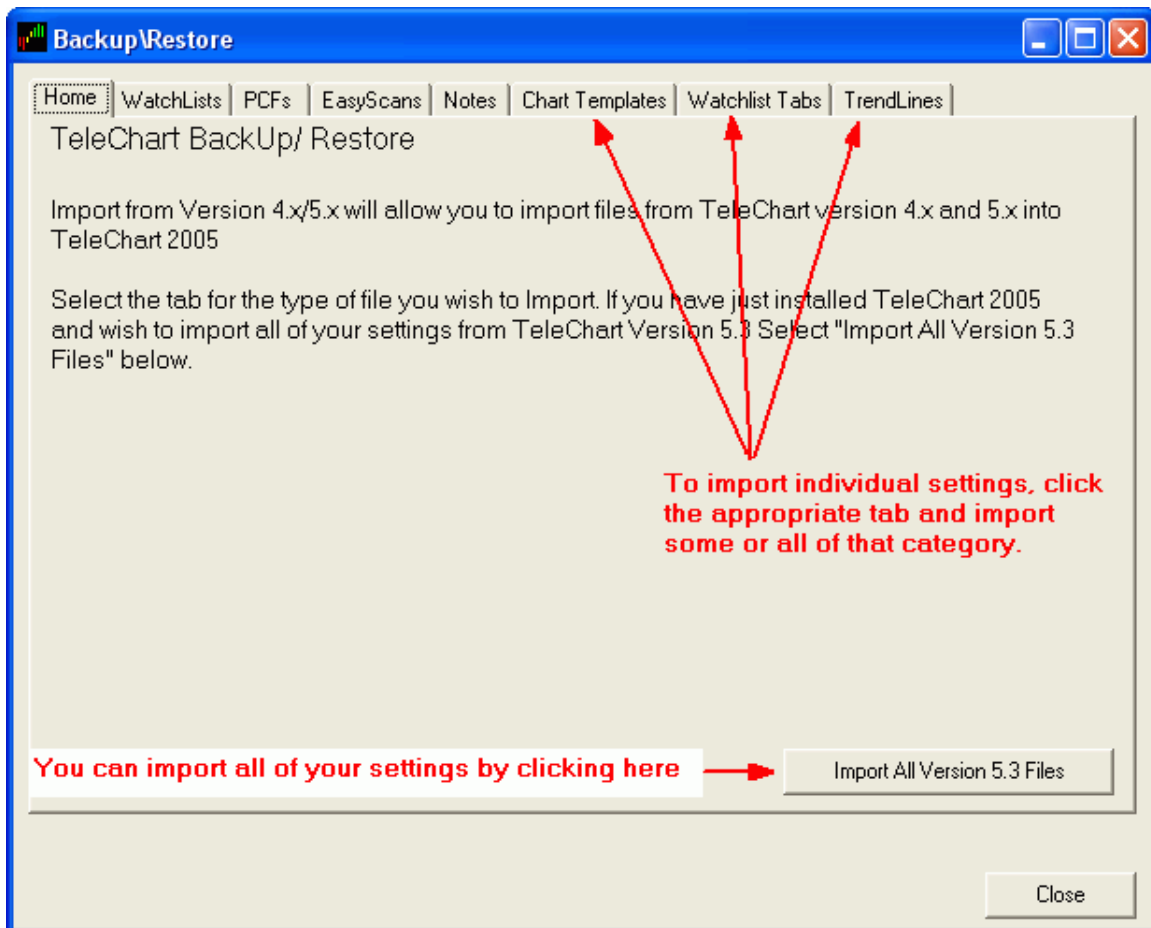
Whether you're using software or online resources, a single username and password now gives you access to all Gold- and Platinum-level services. Your sign-in information is your key to a more personalized experience as well as convenient & secure online account maintenance.

Import TeleChart 5.x settings into TeleChart 2007

Importing your existing WatchLists, PCFs, EasyScans, Chart Templates, Notes and WatchList tabs into TeleChart 2007 is easy. The steps below assume that you have installed TeleChart 2007 on the same computer as the previous version.

Click **File | Import TeleChart 4.x/5.x Files**, then click **Import All Version 5.3 Files**. This will transfer all of your settings and notes from the old version into TeleChart 2007. If, for some reason, you do not want to import everything, then just click on the tab for each setting type and you can click and import items individually.

If you have installed TeleChart 2007 on a different computer, the easiest way to get your settings to the new machine is to also install TeleChart 2007 on the old machine, import your settings as described in this topic and then Export your TeleChart 2007 settings to disk or to the Worden Servers.

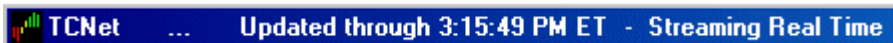


TeleChart Data

Streaming Real-Time vs. Databank updating

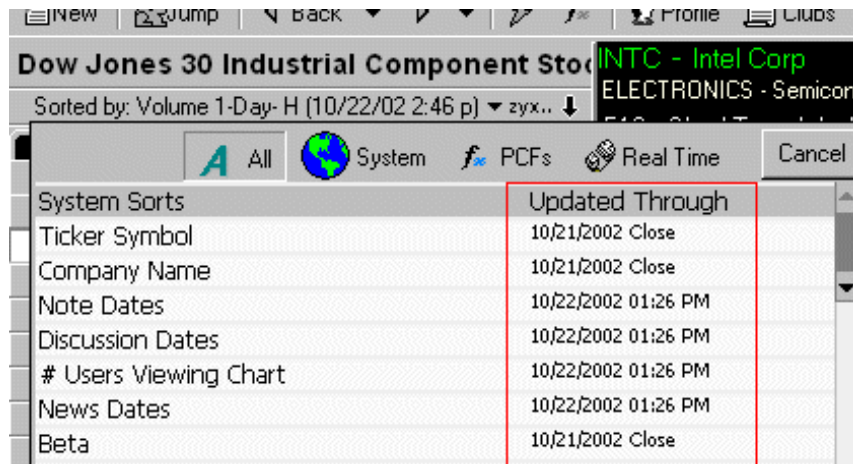
Streaming Real-Time (Platinum Only)

To connect to the real-time stream, you must have an active Internet connection. To activate the stream, click **Databank | Real-Time Settings | Automatically Connect to Realtime**. The title bar of the program should now look similar to the graphic below.



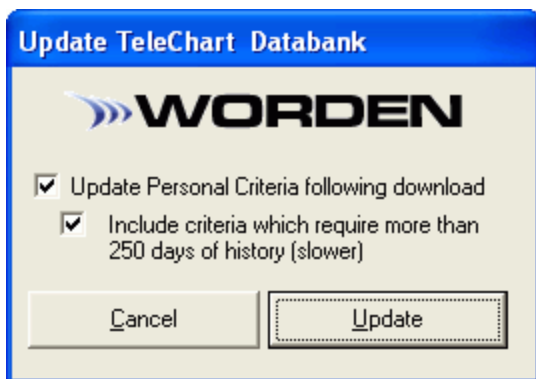
Real-time data will begin streaming at 9:30am ET each market day and will continue until the market closes. You may see a few trades trickle in as the market settles, but the feed does not cover after hours trading.

Keep in mind that although you may be viewing Real-Time data, it is not actually being saved on your computer. Your Sort Criteria (with the exception of real-time sorts), EasyScans, and Personal Criteria Formulas use the data on your computer so you must occasionally update your TeleChart databank in order to use these tools. You can always tell how current your sort criteria are by looking at the time stamp to the right of the criteria name.



While the real-time stream will always show you the current data on the active symbol and those visible in the WatchList, you will still need to run **Databank | Update via Internet** at least once per day for maintenance of symbol changes, splits, data corrections, etc. You can choose to have TeleChart alert you whenever new data is available. To do this, select System Settings from the Tools menu at the top of the screen and choose the Update tab. Now, anytime the system detects that a new databank file is available on the TeleChart server, a message box will appear indicating that the file will be downloaded automatically unless you click the Cancel button.

To update your TeleChart databank click the Update button at the top of the screen and you'll see the update TeleChart box. The updates normally only take a few minutes and your TeleChart data will be up-to-date and ready to go.



Criteria Descriptions

Included in your TeleChart data downloads is a huge list of real time (Platinum only), technical and fundamental criteria that you can use to instantly filter the market. This information also acts as the cornerstone of TeleChart's massive organizational capabilities, allowing you to sort and categorize huge lists instantly by Price, P/E, Exchange... whatever you choose.

Below is a complete list of current TeleChart criteria. Additions to the criteria libraries are ongoing, meaning you will periodically receive new criteria automatically (and at no extra cost) through your regular data downloads.

Real Time criteria (Platinum only) are updated every minute you are connected to the internet. Criteria ending in -H are updated with a 20 minute delay each time you update your TeleChart data. All other Technical criteria are updated at the end of the market day and all of the Fundamental criteria are updated weekly as the new information is posted on the server at 12:00 noon on Saturdays.

Fundamental data provided by Hemscott Americas. www.hemscottdata.com

General Criteria:

# Users Viewing Chart	This is the number of TeleChart users currently viewing a stock. This conditions updates every minute.
Company Name	
Discussion Dates	This is the date and time of the most recent discussion posting.
Exchanges	Displays the exchange the stock primarily trades on.
News Dates	This is the date and time of the most recent news article. This condition updates dynamically as news is posted.
Note Dates	This is the date and time of the

most recent note published by any author you have chosen in the note selector. This condition updates dynamically as notes are published.

Optionable

Ticker Symbol

Real Time Criteria (Platinum only):

Per Share - RT

The current price per share updated every minute.

Percent Change – RT

The difference between the current price and the previous day's close expressed as a percentage. This is updated every minute.

Volume – RT

The current day's trading volume updated every minute.

Technical Criteria:

30 Day Price Trend vs Market

View calculation method

5 Day Price Trend vs Market

View calculation method

BOP Net Change

BOP-BOP.1

BOP Value Today

Current value of Balance of Power™ indicator

Gappers

Stocks that gapped up (L>H1) or down (H<L1) from the previous day. Values of 1=GapUp and 2=GapDown. The formula used to calculate these values is:
 $(L>H1)^{-1} + (H<L1)^{-2}$

MoneyStream 1-Year Range

This is MoneyStream as a % of its one year range. Values of 100 would display MoneyStream at a one year high. Values of 0 would display MoneyStream at a one year low.

MoneyStream 3-Month Range

This is MoneyStream as a % of its three month range. Values of 100 would display MoneyStream at a three month high. Values of 0 would display MoneyStream at a three month low.

MoneyStream 3-Year Range

This is MoneyStream as a % of its three year range. Values of 100 would display MoneyStream at a three year high. Values of 0 would display MoneyStream at a three year low.

MoneyStream Surge 1 Week

This is the net change of MoneyStream over the past week as a % of the range of MoneyStream over the past six months. A value of 90 would mean that 90% of the

	MoneyStream movement over the past six months happened over the past week.
MoneyStream vs Price 1-Yr. Period	This is the difference between MoneyStream as a % of its one year range and price as a % of its one year range.
MoneyStream vs Price 3-Mo. Period	This is the difference between MoneyStream as a % of its three month range and price as a % of its three month range.
MoneyStream vs Price 3-Yr Period	This is the difference between MoneyStream as a % of its three year range and price as a % of its three year range.
Price 1-Year Range	This is price as a % of its one year range. A value of 100 would display price at a one year high. A value of 0 would display price at a one year low.
Price 3-Month Range	This is price as a % of its three month range. A value of 100 would display price at a three month high. A value of 0 would display price at a three month low.
Price 3-Year Range	This is price as a % of its three year range. A value of 100 would display price at a three year high. A value of 0 would display price at a three year low.
Price as Percent of 30-Day High	This is the current price divided by the most recent 30-day high. The highest possible value is 100%. Stocks with a value of 100% are at their 30-day high.
Price as Percent of 30-Day Low	This is the current price divided by the most recent 30-day low. The lowest possible value is 100%. Stocks with a value of 100% are at their 30-day low.
Price as Percent of 52 Week High	This is the current price divided by the most recent 52 week high. The highest possible value is 100%. Stocks with a value of 100% are at their 52 week high.
Price as Percent of 52 Week Low	This is the current price divided by the most recent 52 week low. The lowest possible value is 100%. Stocks with a value of 100% are at their 52 week low.
Price as Percent of 90-Day High	This is the current price divided by the most recent 90-day high. The highest possible value is 100%. Stocks with a value of

Price as Percent of 90-Day Low	100% are at their 90-day high. This is the current price divided by the most recent 90-day low. The lowest possible value is 100%. Stocks with a value of 100% are at their 90-day low.
Price Growth Rate 1-Yr	This is the compound annual growth rate of price over the last year, derived using the least squares method.
Price Growth Rate 2-Yr	This is the compound annual growth rate of price over the last 2 years, derived using the least squares method.
Price Growth Rate 3-Yr	This is the compound annual growth rate of price over the last 3 years, derived using the least squares method.
Price Growth Rate 5-Yr	This is the compound annual growth rate of price over the last 5 years, derived using the least squares method.
Price Per Share	This is the current price per share (quotes are 20 minute delayed).
Price Percent Change 1 Month	This is the difference in the current price per share and the price per share 1 month ago expressed as a percentage.
Price Percent Change 26-Week	This is the difference in the current price per share and the price per share 26 weeks ago expressed as a percentage.
Price Percent Change 30-Day	This is the difference in the current price per share and the price per share 30 trading days ago expressed as a percentage.
Price Percent Change 5-Day	This is the difference in the current price per share and the price per share 5 days ago expressed as a percentage. This value is updated every 20 minutes.
Price Percent Change Today	This is the difference in the price today and the price yesterday expressed as a percentage.
Price Volatility	(Relative Volatility) - This is a measure of the propensity of a stock's share price to fluctuate widely. This indicator is calculated as follows: The stock's calendar weekly percentage magnitude change over the last 13 calendar weeks is averaged. The stock's final

Price vs. 200 Day Moving Average	<p>volatility is found by multiplying its average by 10.</p> <p>For scanning purposes, the Value of this criterion is expressed as a percentage of the moving average. For example, stocks with a Value greater than 100 are trading above their 200-day moving average.</p>
Price vs. 40 Day Moving Average	<p>For scanning purposes, the Value of this criterion is expressed as a percentage of the moving average. For example, stocks with a Value greater than 100 are trading above their 40-day moving average.</p>
Relative Strength 1-Yr (vs SP-500)	<p>The relative change in price of a stock over the past year compared to the change in the SP-500 over the same time. The calculation is : (Latest Close Price of Stock / Latest Close Price of SP-500) / (Close Price of Stock 1 year ago / Close Price of SP-500 1 year ago) * 100.</p>
Short Interest Ratio	<p>Short interest shares divided by average daily volume, representing the number of days of average trading needed to cover the shorts. Latest month as reported by the Exchanges.</p>
Stochastic Short Term	<p>This is 12 day stochastic smoothed by a 5 day moving average.</p> <p>Stochastic is a measure of where the stock is with in a price range for a specific time period. A stochastic of 100% would mean the stock price is at the high of the range, while a stochastic of zero would mean the price is at the low. As a general rule, stocks above 80% in this indicator are considered over bought and values of less than 20% are considered oversold.</p>
Total Volume Last 13 weeks	<p>Total number of shares traded in the last 13 weeks.</p>
Volume (Dollars) 1-Day	<p>Today's volume multiplied by latest closing price. Value</p>

Volume (Dollars) 5-Day	displayed in 10000s. This the average daily number of shares traded over the last week times the average closing price over the last week. Value displayed in 10000s.
Volume (Dollars) 90-Day	This is the average daily number of shares traded over the last 90 days times the average closing price over the last 90 days. Value displayed in 10000s.
Volume 1-Day	Number of shares traded for the most recent market day. Value given in 100s.
Volume 5-Day	Average number of shares traded over the last five market days. Value given in 100s.
Volume 90-Day	Average number of shares traded over the last 90 market days. Value given in 100s.
Volume Surge 5-Day	5-day moving average of volume divided by 200-day moving average of volume
Volume Surge Today	Today's Volume divided by the 100-day moving average of volume

Fundamental Criteria:

Asset Turnover	Equals revenue divided by the average of total assets from the most recent two balance sheets. It measures the ratio at which each dollar of assets will generate a dollar of revenues.
Beta	The coefficient which measures the volatility of a stock's returns relative to the market (S&P 500). It is based on a 36/60-month historical regression of the return on the stock onto the return on the S&P 500:

$$R_i = a + (R_m) + e$$

where R_i is the monthly total returns on the stock, a is the stock's Alpha, R_m is the monthly total returns on the market (S&P 500), and e is a random error term. A minimum of 12 monthly returns are required for this calculation.

A beta of 1 means that the market and the stock move up or down together, at the same rate. That is, a 5% up or down move in the market should theoretically result in a 5% up or down move in the stock. A beta coefficient of 2 suggests that the stock will tend to fluctuate twice as much as the market. That is, if the market moves up 5%, then the stock should move up 10%. A beta coefficient of 0.5 indicates that the stock will move one-half as much as the market, either up or down.

A negative beta indicates the stock tends to move in the opposite direction from the general market. That is, the stock price declines when the overall market is rising, or rises when the overall market is declining. Negative beta stocks are rare.

Capitalization

This is the latest closing price of a share times the number of shares outstanding as indicated in the latest quarterly report. Sometimes called Market Valuation. This is useful for controlling the size of the company you are scanning for. You can also sort by this value if you wish to rank the companies by size. The units are in millions of dollars.

Debt to Equity Ratio

From the most recent fiscal quarter, it is the Long Term Debt divided by Common Stock Equity.

Dividend Growth Rate 5-Yr

This is the compound (shows accrued interest/dividend re-invested) annual dividend 5 year growth rate. The units are in percentages.

Dividend Yield

This is the latest dividend divided by the share price. It reads in percentage.

Earnings (\$Millions) 1-Yr

This is the sum of the trailing 4 quarters of net income (profit) as taken from the quarterly report. This is not the earnings per

	share. This value will also provide some insight into company size. It reads in millions of dollars.
Earnings as a percent of Sales 1-Yr	This is an indication of profit margin. Weak profit margins are often a sign of hidden vulnerability in a stock that appears to have high earnings. Be careful of companies that pay high dividends while having low profit margins. Within industries, the companies with the highest profit margins are usually the leaders. It is a sign of good management. This reads in percentage.
Earnings Growth Rate 5-Yr	The compound annual earnings per share 5-year growth rate. In looking for quality companies, well established companies of good size, this criterion is indispensable. The units are in percentages.
EPS Latest Qtr	Fully Diluted earnings per share from Total Operations, as taken from the latest 3-month ending period.
EPS Percent Change (Latest Q)	The percentage change in earnings per share from the comparable quarter a year before. Timely stocks will usually have strong recent quarterly earnings to validate the annual earnings strength. This reads in percentage.
EPS Percent Change (2nd Q back)	The percentage change in earnings per share from the comparable quarter a year before.
EPS Percent Change (3rd Q back)	The percentage change in earnings per share from the comparable quarter a year before.
EPS Percent Change (4th Q back)	The percentage change in earnings per share from the comparable quarter a year before.
EPS Percent Change (Latest Yr)	The percentage change in earnings for the latest 4 quarters compared to the preceding 4 quarters. An appropriate criterion to include in many types of screens. Also a common criterion to sort by, with

the best earners on top.

Long Term Debt to Equity Ratio	The fiscal year Long-term debt divided by the Total Common Equity.
Latest Float	Shares outstanding minus shares held by insiders. Reported in 1000's.
Latest Net Profit Margin	The after-tax Net Income from Total Operations of the latest 4 quarters, divided by the latest 4 quarters Operating Revenues.
Latest Short Interest Ratio	The short interest shares divided by average daily volume, representing the number of days of average trading needed to cover the shorts.
Latest Total Net Income	Includes all the operations (continuing and discontinued) AND all the other income or charges (extraordinary, accounting changes, tax loss carryforward, and other gains and losses).
Net Profit Margin (post tax)	The after-tax Net Income from continuing operations of the latest 4 quarters, divided by the latest 4 quarters Operating Revenues.
Operating Cash Flow 1-Yr	The sum of net profit, depreciation, change in accruals, and change in accounts payable, minus change in accounts receivable, minus change in inventories.
P/E Ratio	The price per share divided by the trailing 12 month's earnings per share. Companies with negative earnings are designated N/A. This well known criterion is a quick and dirty way of evaluating whether a stock is richly priced or reasonably priced. The P/E ratio must, however, always be evaluated in conjunction with growth rate. A high growth rate deserves a high P/E. Generally a low P/E would merit a long position.
P/E Ratio vs. 5-Yr-Average P/E	This is the current P/E ratio divided by the average of the last five year's P/E ratio. Expressed as a percentage: a

	value of 80, for instance, would mean that the current P/E is 80% of the five year average. This value shows whether a stock is reasonably priced relative to its own history.
Percent Change Revenue 1-Yr	The difference between the revenue from the latest 12 months and the previous 12 months expressed as a percentage.
Percent Change Revenue Last Qtr	The difference between the latest quarter revenue and the revenue for the same quarter one year ago, expressed as a percentage.
Percent Shares Held by Insiders	The percentage of the latest shares outstanding held by insiders of the company.
Price to Sales Ratio	Determined by dividing current stock price by revenue per share (adjusted for stock splits). Revenue per share for the P/S ratio is determined by dividing revenue for past 12 months by number of shares outstanding.
Percent Shares Held by Institutions	The total number of shares held by institutions divided by the total number of shares outstanding.
Sales (\$Millions) 1-Yr	This is the sum of revenues for the last 4 quarterly reports. This is an excellent gauge of company size.
Revenue Growth Rate Last 4 Qtrs	The difference between the latest fiscal year revenue and the previous fiscal year revenue, expressed as a percentage.
Sales Growth Rate 5-Yr	This is the compound annual revenue per share growth over the last 5 years. This is an indication of growing market share (especially in issues with over 15.93% since the average compound inflation rate for five years in the USA is 15.93%). Never forget, it takes revenue to produce earnings.

Pre-Built Personal Criteria

10 day movavg crossing 200 day	Returns a value of TRUE if the 10 day simple moving average crossed above or below the 200 day simple moving average any
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	time between the previous day's close and the current price.
BOP Net Change	Returns the difference between the value of BOP yesterday and the current value of BOP.
New High	Returns a value of TRUE if the current day's high is the highest high over the last 250 trading days (1 year).
New Low	Returns a value of TRUE if the current day's low is the lowest low over the last 250 trading days (1 year).
RSI Today	Returns the current value of RSI 14.
RSI Yesterday	Returns yesterday's value of RSI 14.
Stochastic crossing down thru 80	Returns a value of TRUE if Stochastic 12,5 crossed below 80 any time between the previous day's close and the current price.
Stochastic crossing up thru 20	Returns a value of TRUE if Stochastic 12,5 crossed above 20 any time between the previous day's close and the current price.
Today's range crossing 40 day movavg	Returns a value of TRUE if the current value of the 40 day simple moving average is between the current day's high and low.
Trending/Consolidating (25 day)	Compares the average trading range to the trading range over the past 25 days. Lower values reveal consolidation while higher values reveal trending.
Up 5 days in a row	Returns a value of TRUE if each close over the last 5 days was higher than the previous.

Display Only Criteria (Platinum only)

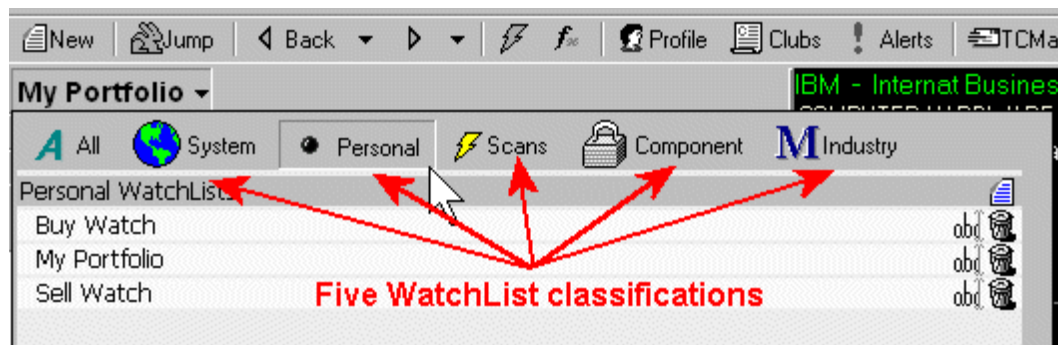
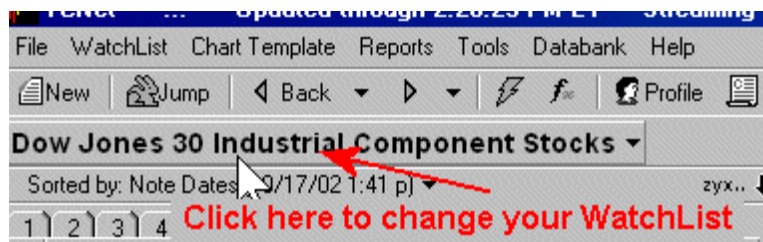
% Change – RT	The difference between the last executed price of the stock and the previous day's close expressed as a percentage.
Ask – RT	The lowest price the stock is currently offered for sale.
Ask – Vol	The number of shares (in hundreds) offered at the current Ask.
Bid – RT	The highest current bid to buy the stock.
Bid – Vol	The number of shares (in

	hundreds) wanted at the current Bid.
Exchange – RT	The exchange that processed the latest trade of the stock.
High – RT	The current high of the day.
Last – RT	The last executed price of the stock.
Last Time – RT	The time of the last trade.
Last Vol – RT	The size of the last trade.
Low – RT	The current low of the day.
Net – RT	The difference between the last executed price of the stock and the previous day's close.
Volume – RT	The current volume of the day.

WatchList - Your Organization Tool

WatchLists

A WatchList is simply a logical group of stocks. Any reason you can think of to group stocks together is a good reason to have a WatchList. A WatchList that most investors pay close attention to is the WatchList that contains the stocks they own, this could be a WatchList called "My stocks" or "My portfolio" and would be classified as a Personal WatchList. There are five main WatchList classifications in TeleChart and if you click on the name of your active WatchList you will see them listed



To change to a different WatchList, simply scroll to the list you want and click on it. The five WatchList classifications are System, Personal, Scans, Component and **M**Industry. They are described below.

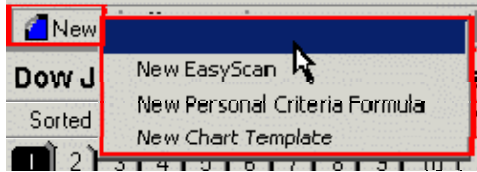
- System WatchLists - These are typically very large and include WatchLists like All Stocks and All Indexes.
- Personal WatchLists - These are WatchLists that are personal to you. You can add and/or remove these and have complete control over what ticker symbols are contained within them.
- Scans - These are special WatchLists called EasyScans. The stocks within these WatchLists are grouped together because they all meet the same criteria as defined in the EasyScan.
- Component - Lists contain stocks found in specific indices. You will find a WatchList called the Dow Jones 30 Industrial Component stocks here that contain all 30 Dow Industrial stocks. You'll also find WatchLists for the S&P 500, the Russell 1000 and others. The components of these WatchLists are automatically maintained for you.

- **MI**ndustry - Under this classification you will find the Hemscoff Industry Groups and Sub-Industry groups. Each WatchList here contains stocks found in the same Industry or Sub-Industry. The components of these WatchLists are automatically maintained for you.

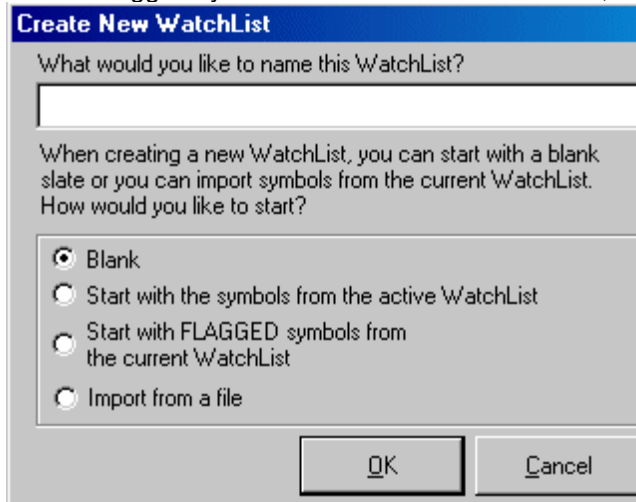
Creating, Renaming and Deleting a WatchList

To create a new WatchList:

1. Click New in the upper left corner of the screen, and choose New WatchList.



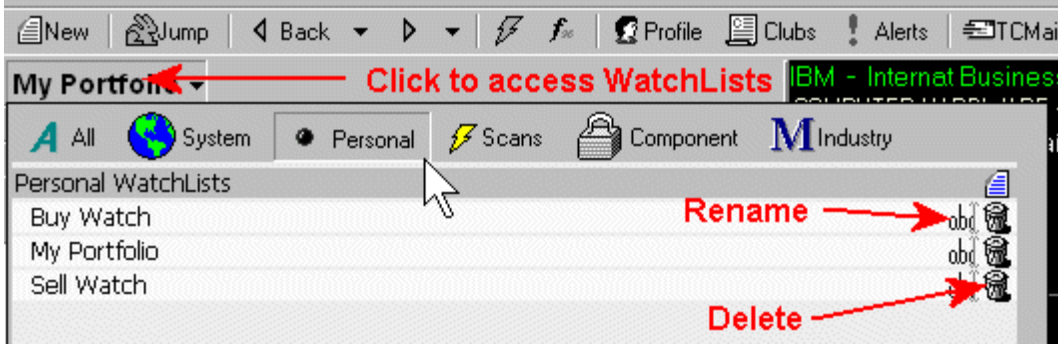
2. Type in a name for your new WatchList.
3. Select whether you want to start with a blank list, symbols from the active WatchList, flagged symbols from the active WatchList, or import symbols from a text file.



4. This creates a Personal WatchList that you have complete control over.

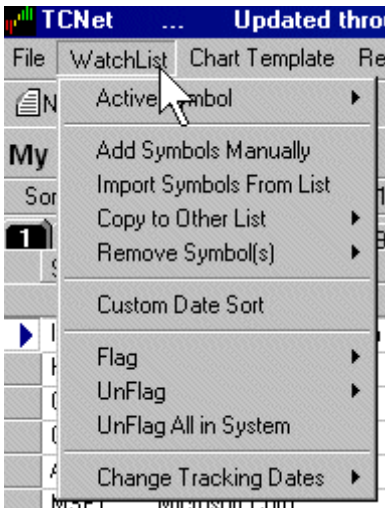
To rename or delete a WatchList:

1. Find the WatchList you want to rename or delete in the WatchList pulldown. Click the abc button to the right of the WatchList name to rename it. Click the trash can to delete it.



Adding & Removing symbols from a WatchList

To add or remove symbols from a personal WatchList, begin by clicking the WatchList menu.

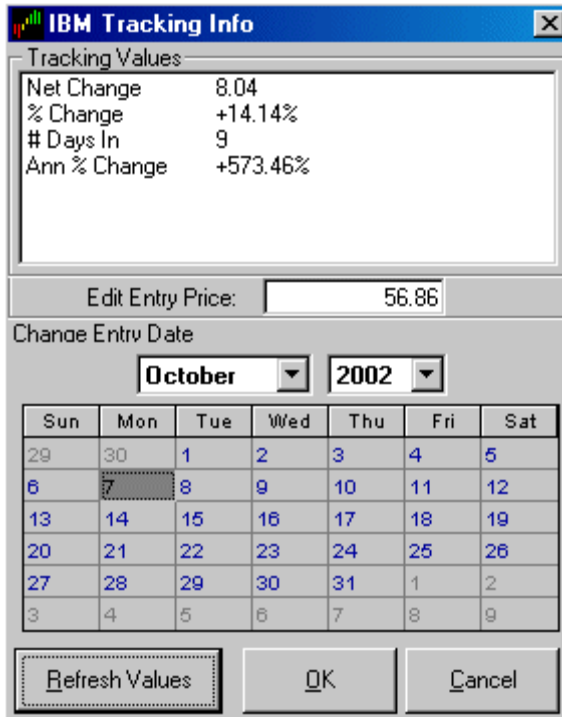


From here you have 4 options as described below.

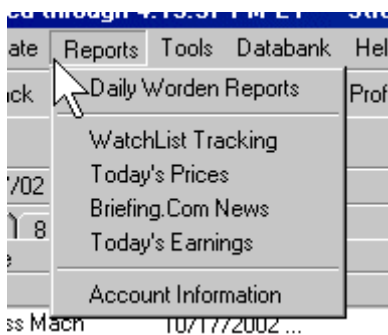
- **Add Symbols Manually** - This will give you the Add Symbols box. Type in the ticker symbols you want to add to your WatchList.
- **Import Symbols From List** - This allows you to import symbols located in a text file. You'll be asked to locate the file on your computer and TeleChart will import the symbols automatically. Note: You cannot import symbols not already found in the TeleChart database.
- **Copy to Other List** - From here you can copy the Active Symbol, all of the symbols in the active WatchList, or all of the flagged symbols in the active WatchList to another Personal WatchList.
- **Remove Symbol(s)** - From here you can choose to remove the Active Symbol, all of the symbols in the active WatchList, or all of the flagged symbols in the active WatchList.

WatchList Auto-Tracking

Whenever you add a symbol to a Personal WatchList, TeleChart automatically records the date and price last downloaded for that symbol. You can view the tracking information of the active symbol by opening the WatchList menu, clicking Active Symbol, and choosing Tracking Information. This brings up the "Tracking Info" dialog, which shows the Net Change, Percent Change, Annualized Percent Change and total number of days since the symbol was added to the list. You can edit the entry date and entry price from the Tracking Info dialog. This enables you to enter the exact date and purchase price if you own the stock. Tracking values are also available as sort criteria when sorting a Personal WatchList.



All of the tracking information for the stocks in your WatchList can be viewed with the WatchList Tracking Report. Click on the Reports menu and choose WatchList Tracking to access this report.



Company Name	Date Added	Entry	Close	% Change	# Days In	Ann % ...
Time Warner	07/25/2002	9.64	12.20	+26.56%	83	+116.78%
CSCO	10/08/2002	8.60	9.81	+14.07%	8	+641.93%
MSFT	08/08/2002	49.39	50.41	+2.07%	69	+10.92%
IBM	10/16/2002	64.90	64.90	0.00%	0	0.00%
HRB	08/08/2002	49.39	44.00	-10.91%	69	-57.73%
GE	08/13/2002	30.95	25.60	-17.29%	64	-98.58%
HD	04/09/2002	49.08	28.45	-42.03%	190	-80.75%
				-3.93%	69	+76.08%

WatchList Gainers - 3
WatchList Losers - 3

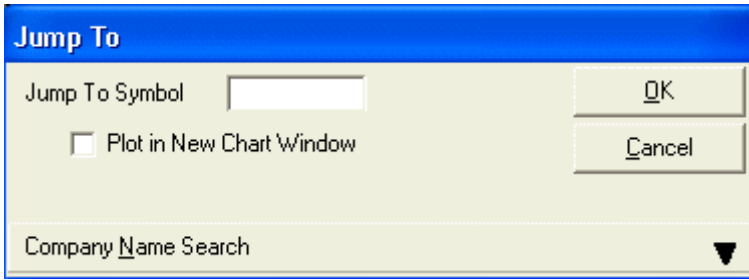
Active Symbol

The Active Symbol is the ticker of the chart you are currently viewing. If the active symbol is also a member of the active WatchList, a blue arrow will be pointing at its ticker symbol in the WatchList. In the upper left section of the chart you can see your active symbol, its name and the industry it belongs to. Just about everything on the TeleChart screen is giving you information about your active symbol. The chart reflects the price history of your active symbol and the notes are about your active symbol. It is a great way to focus on one ticker symbol. Other features and characteristics of the active symbol are discussed below.

Changing the active symbol (Jump to):

There are several ways to change your active symbol. Pressing the space bar will make the next ticker symbol in the WatchList the active symbol. Pressing the CTRL key while you press your space bar will take you back up through your WatchList. Clicking on a different symbol will also change your active symbol. The easiest way to change the active symbol to a symbol that you don't currently see is to Jump. You can Jump to any symbol at anytime by pressing the letter "J" on the keyboard or by clicking the Jump button on the screen.

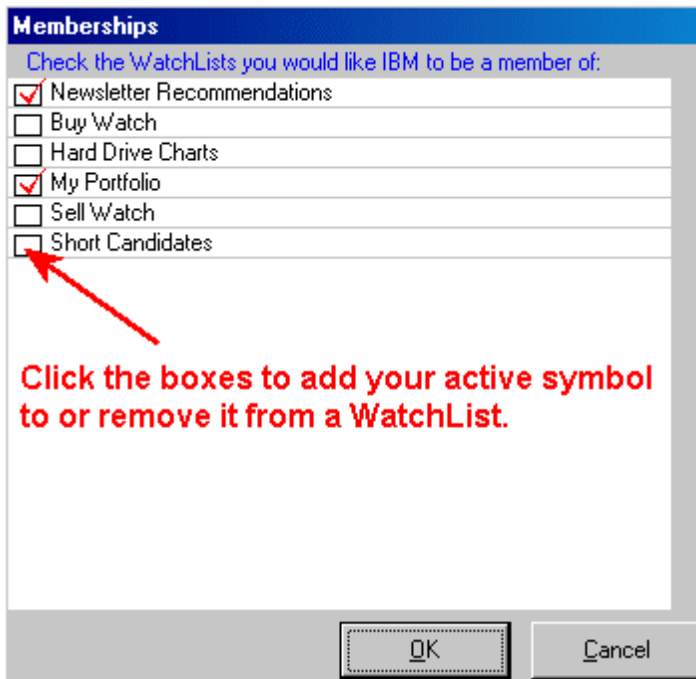




Type the symbol you want to jump to or click Company Name Search to find the symbol. To jump to a new symbol and have it plotted in a separate window select the "Plot in New Chart Window" option.

Active symbol memberships:

You can easily see which Personal WatchLists the active symbol is a member of by pressing the CTRL key on your keyboard while you press the letter "M" for memberships. This will give you the Memberships box. You can also add your active symbol to or remove it from a personal WatchList by clicking the box next to the WatchList name.

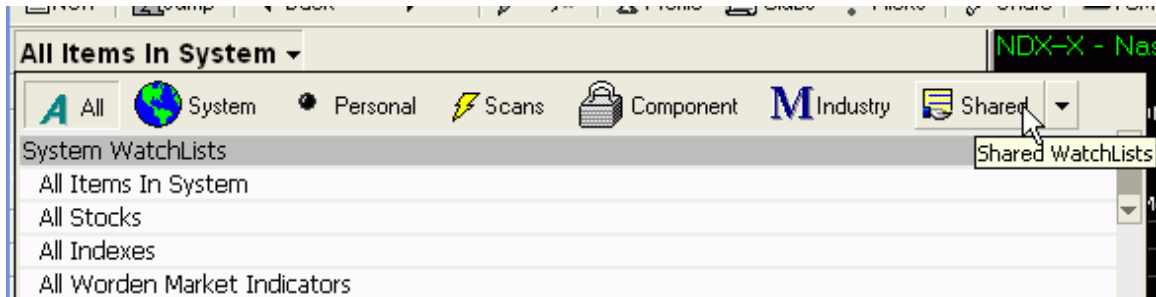


Shared WatchLists (Platinum only)

You can share any list in the system except for System, Component and Industry lists. These are maintained automatically by the TeleChart database so every user already has these lists.

Each WatchList is time stamped when you share it. You cannot go back and update a previously shared list. If you want to update a list, just Delete it and re-add it. You can delete shared WatchLists by clicking the Delete icon (garbage can) to the right of your list. You can only delete lists that you share, not those shared by others.

To view Shared WatchLists, just click the Shared button on the WatchList pulldown. You can view lists shared to any club you belong to.



To select which club lists are visible, click the down arrow beside the Shared button and check the clubs you want to view, then click the Close button.

The name of each shared list is the TCName of the person who shared it + the list name as it appears on their machine (e.g. Clutch - Market Watch). The Group Name indicates which club the list is shared to.

Each list is time stamped with the date/time it was shared. The shared lists are listed alphabetically by club name and then by date/time within each club.

If you share an EasyScan result list, you are sharing the list of symbols that passed the scan at the time you share the list. You are not sharing the scan itself and the shared list doesn't update the next time you run the scan.

When you share a list, you also have the opportunity to type in a short description.

TeleChart User Guide


Kuf- Briefing 4Q Earnings Breifings 4th Quarter Earnings	ALPHA TESTERS	12/5/2003 1:22:59 PM
ItsShowtime- WOOCZ Just testing	BETA TESTERS	12/13/2003 9:13:20 AM
SirPoolPlayer- hgsi stocks 12052003 Sir Pool Player's swing profit portfolio to test sharing watchlists.	BETA TESTERS	12/12/2003 2:35:53 PM
Kuf- Briefing Positive Earnings Q4	QUALITY ASSURANCE	12/4/2003 5:23:08 PM
Kuf- Another Short List my second short list	QUALITY ASSURANCE	12/4/2003 3:34:29 PM
Clutch- Market Watch Market Watch	QUALITY ASSURANCE	12/4/2003 2:24:18 PM
Kuf- Daily Volume Surge Daily Volume Surge	QUALITY ASSURANCE	12/4/2003 12:14:08 PM
Kuf- Daily Volume Surge Daily Volume Surge	QUALITY ASSURANCE	12/4/2003 12:11:07 PM

The Platinum Community

Profile (Platinum only)

When you log on the first time with Platinum service, you are prompted to create a Profile. A profile is how other users will know you. It consists of your TeleChart Username, a list of your shared notes, your home club, and optional fields such as location, age, sex, bio, and picture. To view your profile or someone else's click the Profile button at the top of the screen and type in their Username, or click their name in the Chat window and choose View Profile. When viewing someone's profile, you can also view any notes they have shared.

The screenshot shows a web interface for a user profile. At the top, there is a search bar labeled "View Profile for" with a "GO!" button. A red arrow points to this search bar with the text "View profiles of other TCNet users". Below the search bar is a table with the following fields:

Online Status:	Online
User Created:	9/5/2001 2:08:26 PM
Location:	Boca Raton, FL
Home Club:	All TCNet
Age:	35
Sex:	Male
Bio:	Trading was 7 years. Was a broker, but quite to teach. Trade well and prosper!
Pic:	

Below the table is a section titled "Your Customer Information" with fields for "User Number", "Machine Key", and "Referral Code". A red arrow points to this section with the text "View all shared notes". Below this are two links: "Edit My Profile" and "Edit My Note Filters". At the bottom, there is a table with columns "Rating", "Note Date", "Symbol", "Note", and "Preview". A red arrow points to the "Note" column with the text "View all shared notes". The first row in the table shows a note with the text "This stock shows absolutely no sign of strength. The only way it".

Note Filters:

Note filters allow you to specify note authors and news sources you do not want to view. Notes from these authors and news from these sources will not be visible.

Clubs

Clubs (Platinum only)

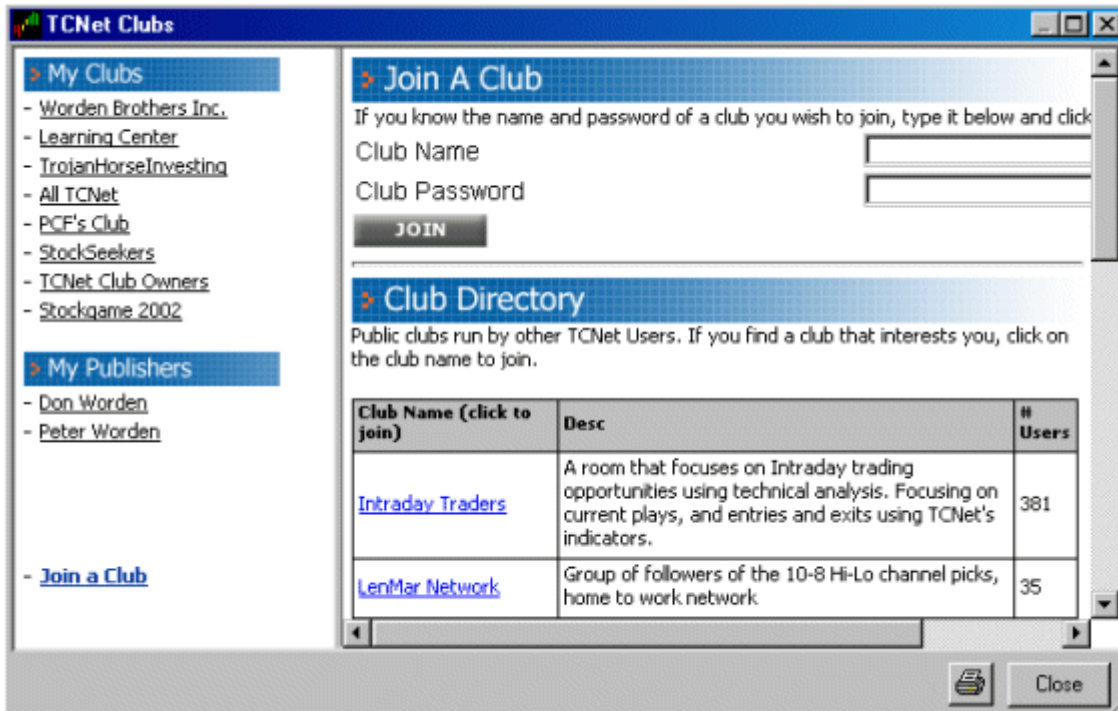
A club is an organized group of TeleChart users who can share notes, charts, files, URLs, reports, discussions, and can chat with each other. As a Platinum user you are a member of the All-TCNet club so you can share notes, chat, and can even chat with other Platinum users. You can also create your own club and/or join clubs others have created. This is discussed further below.

Creating a club

To create a club click the Clubs button near the top of the screen and click on Create a Club. You'll be asked to give you club a name and a description. You also have the opportunity to add your club to the club directory (clubs are private by default) where others can see it and join. Once you have created a club you can invite others to join. Members of your club can share notes and participate in private club discussions. You can also share files, website addresses, create club polls, and publish a club report just like Don Worden does with the Worden Reports. Creating a club is a great way to share tips, ideas, and information with other investors you know. Remember it's your club and you have control, what you do with it is completely up to you.

Joining a club

Joining a club is easy and there are many to choose from. You can be invited to join a private club or join one of the public clubs posted on the club directory. To access the club directory click the Clubs button near the top of the screen and choose Join a Club. You'll find clubs for all types of people in the directory and new clubs are always being added so check back often.



Club Administration (Platinum only)

When you create a new club in TeleChart, you are, of course, the owner of that club and have full rights to add, edit and delete club reports, discussion boards, discussion topics, links, etc. If you click the Admin button on your club page, you will see several options for club administration.



Using these tools, you can create user roles, change member rights (assign them a new role) and control the message boards. Click on any of the Admin choices above for more detailed information.

Message Boards (Platinum only)

Boards give the club owner/administrator the ability to create multiple boards to help better organize Discussions. The picture below shows the new boards in the All-TCNet channel. You can see that the General Discussion board has 247 entries. These are all of the Discussion topics in the All-TCNet channel to date. (By the time you read this, the old discussions will be moved to different boards as appropriate.)

All TCNet Kuf

[View New Posts](#) Search all boards:

Message Board	Posts	Last Post Date
General Discussion Anything that doesn't fit in the other message boards.	247	12/15/2003 7:20 AM
PCF, EasyScan and Custom Indicators Discuss PCF, EasyScans and Custom Indicators. Get formula help and exchange ideas		
Technical Analysis and Indicators Discuss different TA techniques and how to read and interpret different indicators		
TCNet Tips and Tricks Have a tip or trick for your fellow TCNet users? Share it here.		
Club Announcements Announcements for other TCNet Clubs		
Comments / Suggestions Comments and Program Suggestions only. No Tech support.		

Message Board Administration (Platinum only)

Any user with the rights to Add and Edit Discussions will see three additional buttons when they view a Discussion topic: Move, Stick and Lock.

Move allows you to move topics from one board to another. This allows club administrators to organize discussion entries if they're entered under the wrong Board or find another (possibly new) board is a better fit.

Stick will move the topic to the top of the board. It will stay at the top no matter how the discussion list is sorted. This is a good way to make sure that club members see this topic, because otherwise in a very active club it will move down the list as more topics are added. To un-stick the topic, just select the topic and click the Un-Stick button.

Lock will lock a topic so that no more replies can be posted.

Anyone with Delete rights on Discussions will also see a Delete button on the far right.

The screenshot shows a forum interface. At the top, there is a header bar with "All TCNet" on the left and "Kuf" on the right. Below the header, there are navigation links: ">> [Message Boards](#) >> [General Discussion](#) >> **For those who love moving averages**". Below the navigation links, there is a post header: "Posted: 5/8/2003 2:09:30 PM by Borankin". To the right of the post header, there is a button bar with four buttons: "Edit", "Move", "Stick", and "Lock". The "Move", "Stick", and "Lock" buttons are highlighted with a red box. Below the button bar, there is the main text of the post: "No doubt this is something of which most TCNet users are already aware. But for those who aren't, this is both simple and quite helpful. There are many uses for moving averages. And a lot of us think the more moving averages we have the better. However, as one who is not blessed with the greatest vision, I find I am uncomfortable when I look at charts which are overly cluttered with too many lines. So, how can TCNet help people like me? Answer is simple. In the price window, set up as many moving averages as you wish. However, only select a few to be 'visible'. Then, when you want to look at all of the moving averages at once, while in the daily mode, simply hit the dot '.' once, and the familiar vertical pointer appears. Hit the dot again and all of your moving averages are displayed in numeric form. I really like this and figure it is something some of you might benefit from as well. Good luck."

Shared Files (Platinum only)

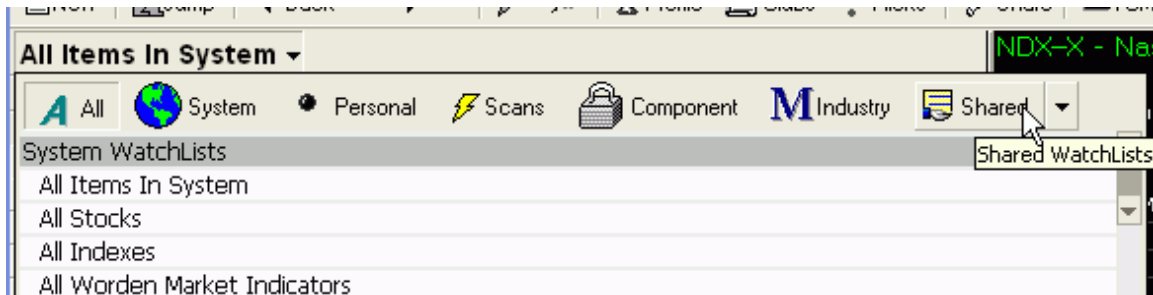
Shared files allow a user to upload a file to a club that anyone in the club can then download. Support file formats include Word documents, Excel spreadsheets, PDF files, and text files. Club owners must grant rights to share a file to the club, but any club member may download a shared file. While we do perform a virus scan on all files that are uploaded to TeleChart, we do not guarantee that all files downloaded will be virus free. It is up to the end user to perform virus scans and keep their virus software up to date with the latest virus definitions.

Shared WatchLists (Platinum only)

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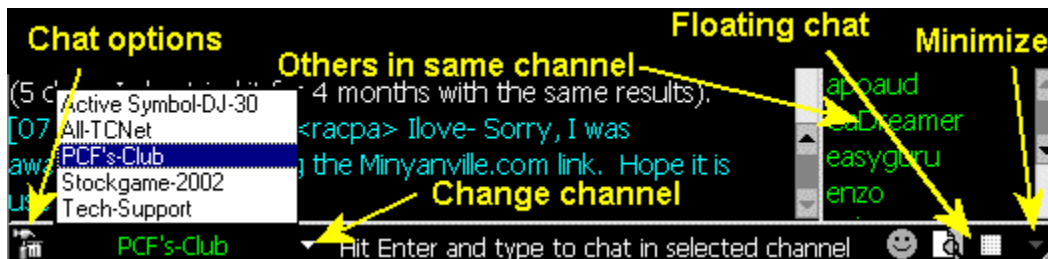
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Kuf- Daily Volume Surge Daily Volume Surge	QUALITY ASSURANCE	12/4/2003 12:14:08 PM
Kuf- Daily Volume Surge Daily Volume Surge	QUALITY ASSURANCE	12/4/2003 12:11:07 PM

Chat

Chat (Platinum only)

Chat enables you to communicate directly with other TeleChart users who are online. There are different chat channels you can choose to chat within. The channel you chat in determines who can see and respond to your comments. You can also chat discreetly with another user using the Private Message feature. To send a private message, type */p username your message* then press Enter.



Chat Channels:

When you chat, only others in the same channel will be able to view your comments. Chat channels allow for a more focused discussion. Below are the types of channels you will find and a description of each.

All-TCNet – Every TeleChart user can view and respond to any chat posted in this channel. The users seen in this channel represent all TeleChart Platinum users currently online.

Club Channels – Every club you belong to will have its own channel. Members of the club may have private discussions (only seen by other club members) within these channels.

Active Symbol – With this channel activated, every symbol in the TeleChart database has its own chat channel. If you're currently viewing IBM and have the Active Symbol channel on, you can chat with other users who are currently viewing the chart on IBM. Press the Spacebar to go to the next stock in your WatchList, and you're now able to chat with any user viewing that symbol.

Floating chat channel - if you click the Float Channel button on the chat toolbar, the active channel will be displayed in its own window. This allows you to monitor an individual channel without the clutter of the other channels.

Chat users:

Clicking on any of the profile names allows you to send a private message, view that user's profile, or ignore their comments.

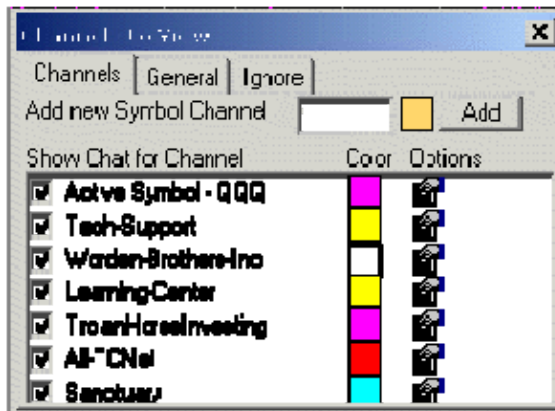


Tip: If you want to find out which symbols other users are looking at, set your WatchList to "All Items in System" and set your Sort to "# Users Viewing Chart". Sort in Descending (zyx..) order and press the Home key on the keyboard.

Chat Options (Platinum only)

Click the hammer in the lower left corner of the chat window to access the Chat Options box. There are three Chat Options tabs: Channels, General, and Ignore. Each tab allows you to adjust different chat options as described below.

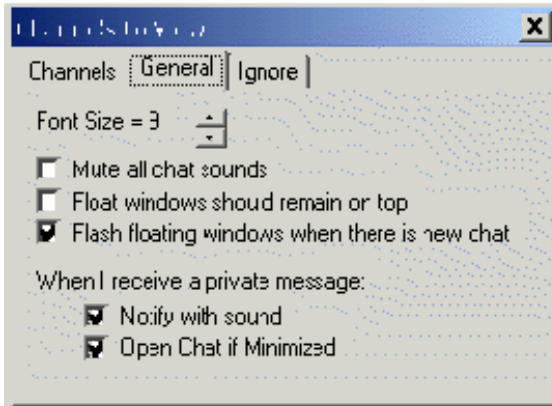
Channels –
Under this tab you can select which channels you would like to view chat for, change the color of the chat for each channel, and adjust your chat notification options. You can also add another Symbol Channel. This



is a channel dedicated to a specific symbol, similar to the active symbol channel but will not change as you use TeleChart. This allows you to view chat on a specific symbol no matter what other symbol you happen to be viewing.

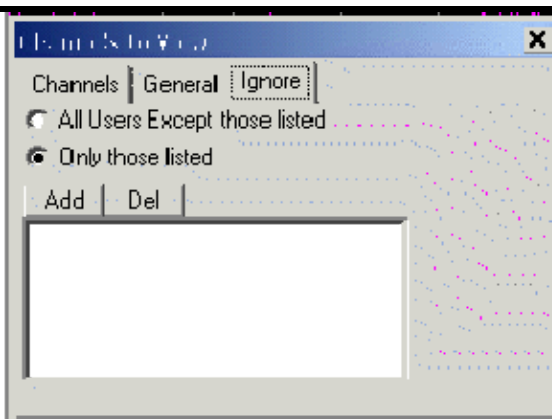
General –

Under this tab you can adjust the size of the chat, mute all chat sounds, adjust floating chat properties, and change how TeleChart notifies you when you receive a private message.





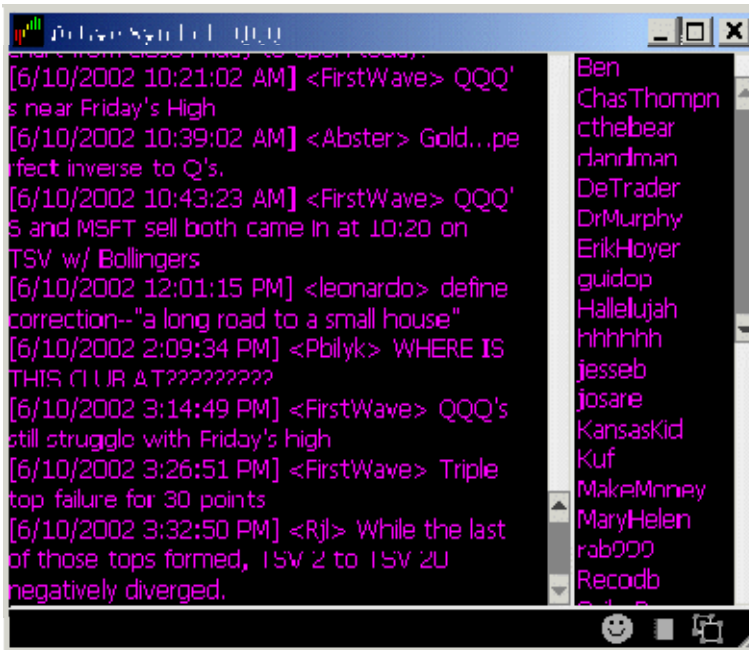
Ignore –

Options under this tab allow you to choose not to view the comments of selected TeleChart users.



Floating Chat

Click the Float Chat button  to activate floating chat. When you select this option, a floating chat window opens. The floating chat window is independent from the main TeleChart window and will display chat only for the currently selected chat channel. The main screen can now be minimized and the floating chat window will remain. Selecting the  button will keep the floating chat window in front of every other window you have open on your computer. Floating chat allows you to minimize TeleChart and still view chat while using other programs on your computer. This can be very helpful if you want to monitor chat on a specific symbol but not have the program taking up your entire screen.



Shared Charts (Platinum only)

Shared Charts allow Platinum users to share charts with each other in real-time. Any adjustment to a shared chart is instantly seen by those viewing it. This is a great way to add more meaning to your chat discussions.

To Share a Chart:

To share your chart, click the Share button at the top of the screen, click the Share My Chart tab, and choose what club you want to share your chart with. Your chart will remain shared until you go back and remove the check mark. Once your chart is shared it may be viewed by any member of the club(s) you shared it with.

To View a Shared Chart:

To view a chart another user has shared click the Share button at the top of the screen, click the View Another User tab, and choose the shared chart you want to view. This will automatically open a new chart window displaying the shared chart.

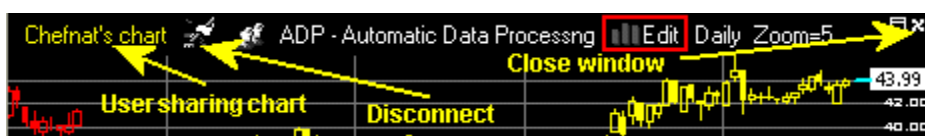
When you are viewing a shared chart you see the exact same chart the user sharing it sees. If they decide to go to a different symbol, change the zoom level or make any other changes, you

will see the changes as they happen. This allows you to sit back and follow a chat discussion or simply learn from another user's activities.

When you are viewing a shared chart, you cannot make changes to the chart. In the upper left corner of the shared chart you'll see whose chart you are viewing and the option to disconnect from the shared chart.

Saving Indicators from a Shared Chart:

If you want to save the indicators from a shared chart, just click the Edit button on the shared chart. This will show you the Shared Chart Template Summary. Click Save As and name the new template.



News

News (Platinum only)

TeleChart provides news from over forty different sources. The news feed is automatically turned on when you start TeleChart (you must be connected to the Internet). News stories on every symbol in the database are displayed in the Notes & News window with a date/time stamp and the publisher's name in the header. In the example below you can see that along with the most recent note by Peter Worden, there are several news stories about the Active Symbol (IBM) displayed. You can turn the news display on and off in the window by clicking the News button (outlined below).

Most stories will be available for viewing up to one year after the publication date, but some publishers have more stringent archive limits. Stories published by the Associated Press (AP), for instance, can only be view for two weeks after the publication date.



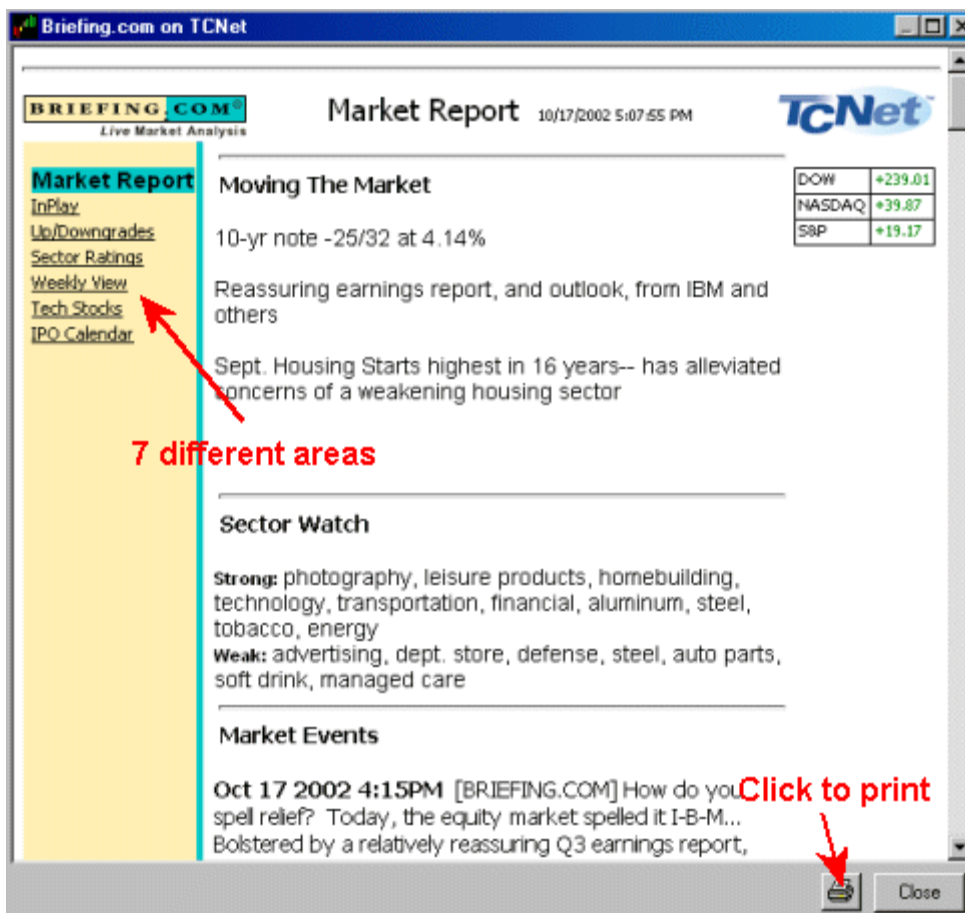
News Filter:

You can have TeleChart ignore specific news sources by activating the news filter. To activate the news filter, click the Profile button at the top of the screen and choose Edit My Notes Filter.

Briefing.com News (Platinum only)

News from Briefing.com can be found by clicking Briefing.com News from the reports menu.





Briefing.com news is updated throughout the market day to keep you on top of major market moves and announcements. There are seven areas, each providing different information as described below.

Market Report - Includes major news moving the market, strong & weak sectors for the day, and a recap of market event about ever 30 minutes.

InPlay - A list of stocks moving on big news.

Up/Downgrades - A list of stocks that were upgraded or downgraded by various brokerage houses and analysts.

Sector Ratings - Briefing.com's proprietary 5-star sector rating system.

Weekly View - Commentary on the previous week's activity.

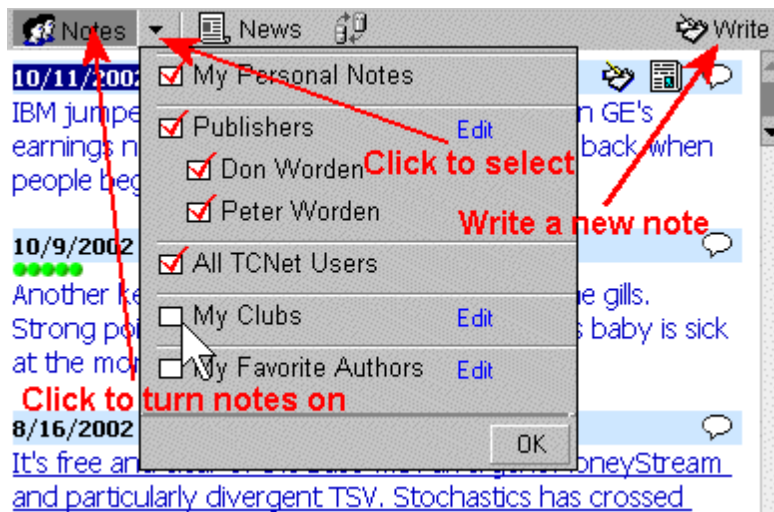
Tech Stocks - A full page devoted to tech stocks and the various tech industries.

IPO Calendar - A list of IPOs scheduled for the week.

Notes

Selecting Notes to view

Before you can view your notes, Worden notes, or notes written by anyone else, you need to know how to select what notes to view. The notes window is in the lower left corner of the TeleChart screen and will display all notes written by those you've chosen for your active symbol. First click the Notes button to turn notes on, then click the arrow next the categories, clubs and authors you want to view.



Note Marker:

A blue marker is placed on the chart showing you when the note you're viewing was written. Use the arrows on your keyboard to scroll through the notes.



Worden Notes and Publisher Notes

Chart reading is as much an art as it is a science, and the best way to learn the art is by example. That's what makes TeleChart so valuable... because every time you download, you'll receive the personal chart notes of Peter and Don Worden, two of the most experienced technical analysts in the field. If you're connected to the internet during the day, you will get the Worden Notes as they are written and see the Wordens' thoughts even before the market closes. No book is as timely ... no book teaches you by real life example. To view Worden Notes, click the Notes to View menu and make sure Publishers as well as Peter Worden and Don Worden are checked. From there

you can click a note headline, read the commentary and view any charts attached to the notes. Below is a sample of the kind of charts and notes you'll receive on a daily basis.



Once you've pulled up a note you can print it, view the chart settings used, add current data to it, and add your own comments just below the note text (TCNet only).

Other Publishers (Platinum only)

Some TeleChart partners will also offer daily commentary and notes on particular symbols. If you signed up for Platinum service from one of our partners that has a Publisher club, the club will appear along with Peter and Don Worden under Publishers in the "Notes to View" menu.

Personal Notes

In the bottom left hand corner of the TeleChart screen you will see the Notes window which displays your Personal Notes and any Worden Notes on the active symbol. But this is more than just a notepad, it is also a way to organize your charts and, more importantly, your thoughts. Notes are vital, even if it's a two or three word note you'll be able to go back and look at the note which will remind you what your thoughts and feelings were about the symbol when you added the note.

Writing personal notes:

To add a Personal Note to the active symbol press the letter "N" on your keyboard or click the write button.

Notes

- My Personal Notes
- Publishers [Edit](#)
- Don Worden [Click to select](#)
- Peter Worden [Write a new note](#)
- All TCNet Users
- My Clubs [Edit](#)
- My Favorite Authors [Edit](#)

Note

Options [Add text to your chart](#)

Note for DELL on 10/17/02 7:12 PM

DELL - Dell Computer Corp COMPUTER HARDWARE - F
10/17/02 27.95 28.01 27.26 27.74 300086 NASDAQ

Price Chart

MS

Volume

Shared [Check here to share your note](#) [Check Spelling](#) [Cancel](#) [OK](#)

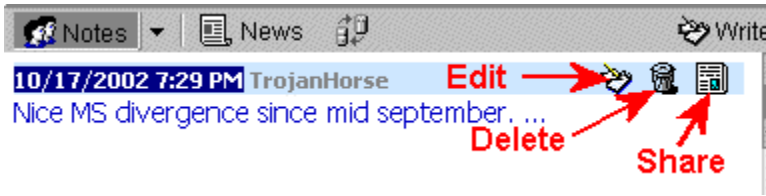
Change date, re-attach chart, & change text size.

Type your note here

Note: Note date can only be changed before a note is saved.

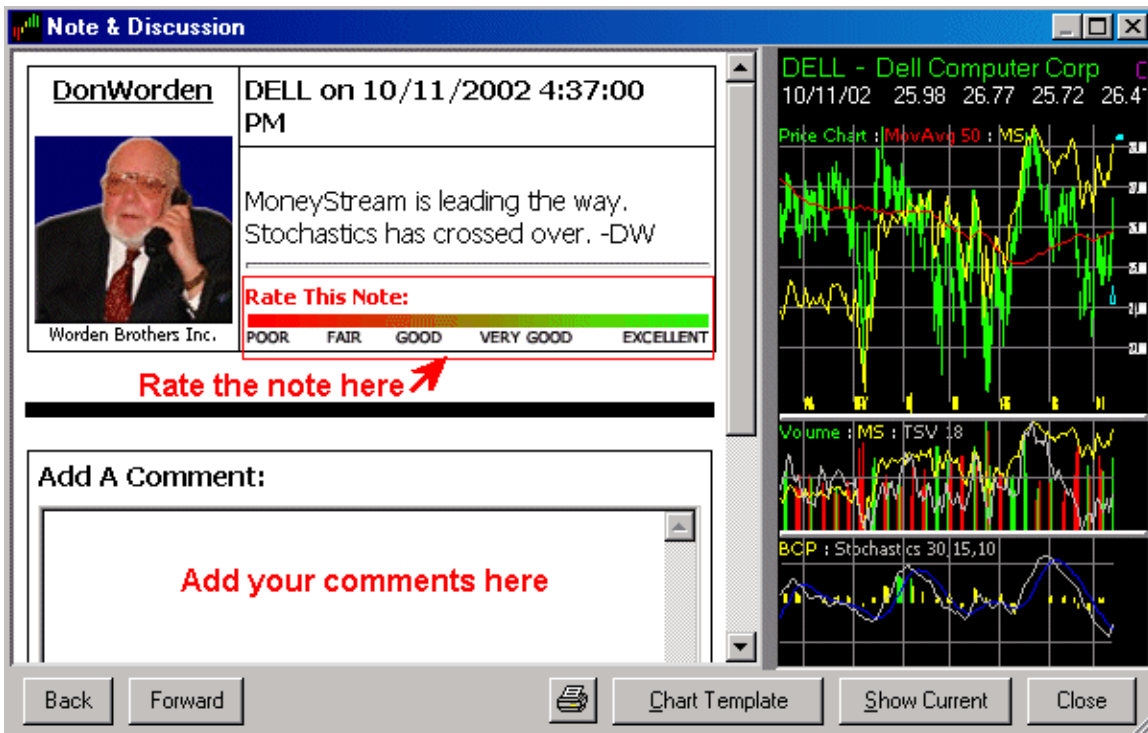
Editing, Deleting, and Sharing Notes:

Use the buttons shown below to edit, delete, and share your notes. Keep in mind that once you have shared a note, it can no longer be edited or deleted, you can only append, or add to what you have written. When you choose to share a note a list of your clubs will pop up and you can choose which clubs to share the note with. Every member of that club can now view your note. Note sharing is a Platinum only feature.



Note Ratings and Discussions (Platinum only)

Once a note is published, anyone viewing the note can rate the note and/or add to a discussion about the note. This gives you the opportunity to communicate with the author or others viewing the note. If it's a note that you have authored, you can see what others are saying about it and add to the discussion yourself. This creates an invaluable learning environment where you can discuss what others have written as well as get feedback on your own notes.



Daily Worden Reports

In addition to Worden Notes from Don and Peter Worden, you will also receive market commentary, analysis lessons, announcements from Worden Brothers, and other valuable information in the Daily Worden Report. When available, the Daily Worden Report will automatically come up after you update your TeleChart data. Any unread postings will be marked with an asterisk (*). You can access the Worden Reports by clicking Daily Worden Reports under the Reports menu, or by pressing the letter "W" on your keyboard. The buttons in the upper left corner of the Worden report allow you to increase and decrease the font size.

The screenshot shows a window titled "Daily Worden Reports" with a blue title bar. On the left is a list of dates from "Tips 11-20-02" down to "Tips 10-15-02", with "Tips 11-18-02" selected. The main content area displays the following text:

The Worden Report (Monday, November 18, 2002)

Heads and Shoulders

What looks like a head-and-shoulders top but isn't a head-and-shoulders top? *Answer: A price pattern consisting of a high (the head) flanked by two rallies peaking lower than the head (the shoulders), but that lacks the required volume pattern.*

And what is the required volume pattern? The volume at the head must be lower than the volume on the left shoulder. And finally, the volume on the right shoulder (which is a failed rally) is lower than the volume on the head. Generally, particularly in averages, MoneyStream and/or TSV are used as surrogates for volume bars, because they paint a clearer picture (and they are both volume based).

With this in mind, check the head-and-shoulders shapes in the Dow and the SP-500. Both MoneyStream and TSV were higher at the respective heads. That would tend to rule out the validity of the head-and-shoulders, since the volume pattern appears indecisive. But wait! Just to be sure, try running a five-day simple moving average of volume. This will make any variations clearer. *What you will see is that the volume is lower at the head than on the right shoulder and still lower on the right shoulder, which is now forming.*

At the bottom of the window are three buttons: "Print", "Next Unread Message", and "Close".

Charting

Chart display settings

Price graph type

There are four types of price graphs available in TeleChart: bar chart, open bar chart, line chart and Japanese Candlesticks. The type of chart is selected by clicking Price Graph Type from the Chart Template menu at the top of the screen. You can also toggle between the three types of price graphs by pressing CTRL-B.

Bar Chart

The vertical line represents the day's range with the top of the line being the high for the day and the bottom being the low. The horizontal bar represents the day's close. For charts other than daily charts, the vertical bar represents the range for the time period (3-day, weekly, etc.) and the horizontal line represents the close on the last day of the specified period.

Bar Chart with Open

Same as a Bar Chart but with a horizontal bar to the left of the vertical line (range) representing the open.

Line Chart

A line chart simply connects the closing prices for each day. In the case of a multi-day chart, the line connects the closing prices for the last day of the specified period (3-day, weekly, etc.)

Japanese Candlesticks

Candlestick lines represent a single period's trading activity, be it a day, week, month or otherwise. The candlestick shows the open, high, low, and close for the period. The candlestick has two elements, the body and the wick. The body is the thick part of the candle and represents the range between the opening and closing prices. If the close is higher than the open, the body will be hollow. Conversely, if the open is higher than the close, the body will be solid. The wick shows the day's range when either the high or the low falls outside the range of the close and the open.

Setting the Time Frame and Zoom Level

Time frame per bar

You can use the Time Frame pulldown at the top of the chart to designate the time period each bar on the chart will represent. The pulldown has selections for Daily, Weekly, Monthly, 2 days/bar, 3 days/bar, etc. It also has selections for intra-day intervals like Tick, 1 Minute, 5 Minutes, etc (Platinum only).

All indicators are drawn based on the time frame per bar. A ten bar moving average would be a 10 day moving average on a daily chart but would be a 10 week moving average on a weekly chart.

Tip: You can select any period from 1 to 9 days by simply pressing a numeric key. For example, pressing the number 5 on your keyboard would give you a weekly (5-day) chart. TeleChart also has quarterly and yearly time frame settings so you can view the DJ-30 going back to 1915! The number 9 key toggles between 9-day, Monthly, Quarterly and Yearly time frames.

Zoom level

Using the Zoom In and Zoom Out buttons on the toolbar, you can zero in on a chart to see exactly where price and indicator crossovers or breakouts occur. You can zoom in or out using the zoom buttons at the top of the chart, or you can use the zoom hot keys Shift-1 through Shift-9. (**Note:** Shift-1 toggles between zoom level 1, 1+ and 1++. Zoom level 1 displays 500 bars of data, level 1+ 750 bars and level 1++ 1100 bars.)

By default, the zoom setting and time frame is not saved as a characteristic of the Chart Template. You can choose to have the time frame and zoom setting saved to the Chart Template by clicking System Settings under the Tools menu at the top of the screen and selecting the Chart Templates tab.



Chart Scaling

Chart scaling determines how far apart the prices are on the scale to the right of the chart. To change the scaling of the chart choose Scaling from the Chart Templates menu at the top of the screen or click the red scaling value in the lower right corner of the chart. TeleChart gives you four chart scaling options as described below.

You can change scaling on the fly using the scaling options at the bottom of the price scale.

Arithmetic

A	
L	Logarithmic
T	Tight
M	Medium
L	Loose

Arithmetic scaling

Each price is a fixed distance from the next price on the scale. For example, each line may represent a 2.00 increase in price. The red number in the lower right corner of the chart represents the increment between prices on the scale.

Logarithmic scaling

Displays the price data on a logarithmic scale where the distance between each price on the scale is a fixed percentage. The percentage (shown in red at bottom of price scale) will vary depending on the volatility on the chart.

Note: Because log of a negative number does not exist, symbols or indicators with negative values, such as T2106 and T2118, will need to be set to an arithmetic scale.

Custom scaling

Same as Logarithmic, except you set the percentage between each line. For example, if you enter 3 for the percentage, all charts will be displayed on a 3% log scale. Note: this may cause more volatile charts to run off of the top or bottom of the display.

Auto scaling

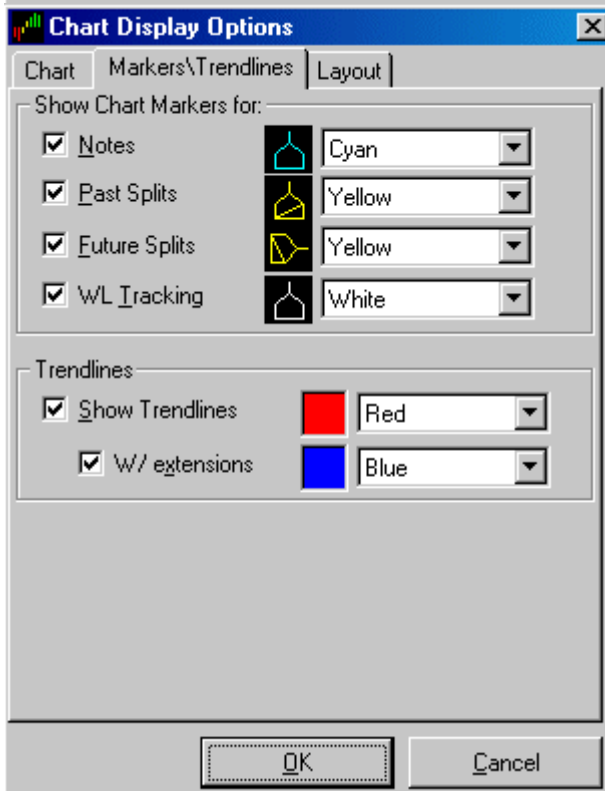
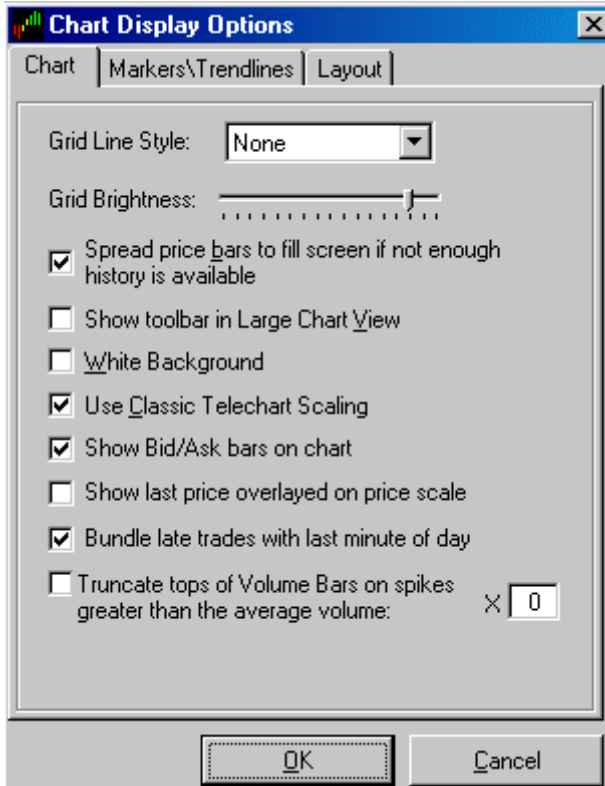
Allows you to set a threshold for the scaling to automatically switch from arithmetic to logarithmic based on the time frame (days per bar) you have selected.

Custom by Time Frame

You can set custom scaling values for each time frame on the chart from Minute through Yearly. Click the Configure button next to Tight, Medium or Loose and you can customize the values in each profile to your liking.

Chart Display Options

The Chart Display Options found under the tools menu allow you to change many of the display characteristics. Click any of the options below for a more detailed description.



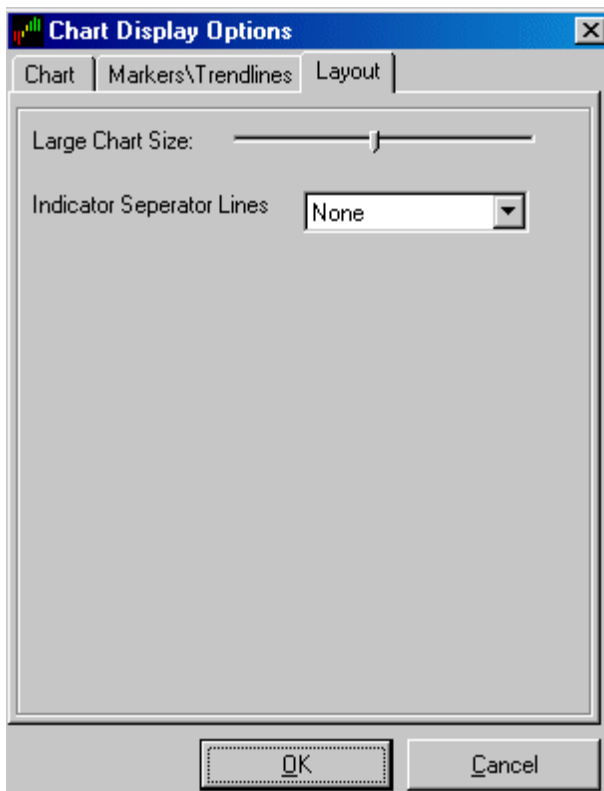


Chart Templates

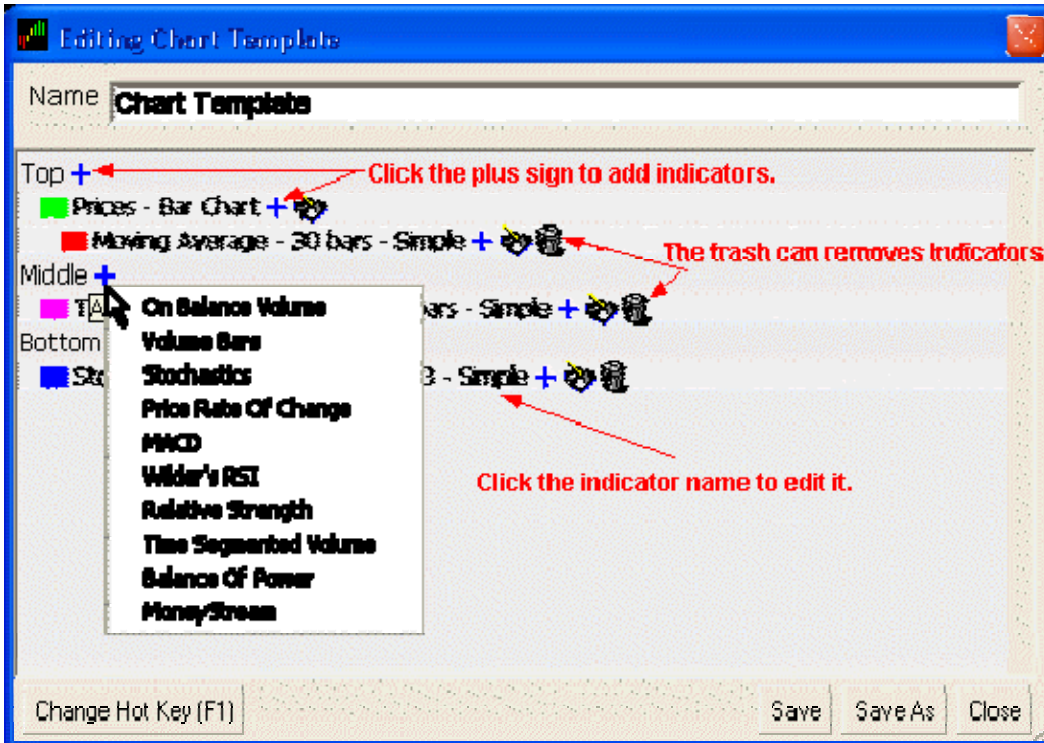
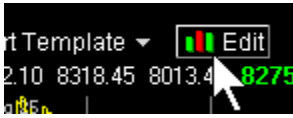
Chart Templates allow you to store sets of indicators for quick retrieval. When you change your active symbol the indicators you have set on the Chart Template will adhere to your new active symbol. There are 12 Chart Templates by default in TeleChart but can edit these any way you like and create additional templates as well. You are encouraged to adjust the indicators on any of the Chart Templates, as well as create and name your own Chart Templates.

To load a chart template, click on the currently selected template name and you will see a drop-down list of templates. From here you can add a new template, edit, delete or rename an existing template.



Edit a chart template:

To edit the indicators saved to a chart template, select the chart template that you would like to adjust and then click Edit on the chart to the right of the Chart Template name. This will bring up the Editing Chart Template window where you can add, remove or adjust any of the indicators on that chart template.



Create a new chart template:

To create a new Chart Template simply click the New button in the upper left of the screen and choose New Chart Template. You will be asked to name it and can then begin customizing it as desired.

You can set the saving characteristics of the chart templates by clicking **Tools | System Settings** and selecting the Chart Templates tab.

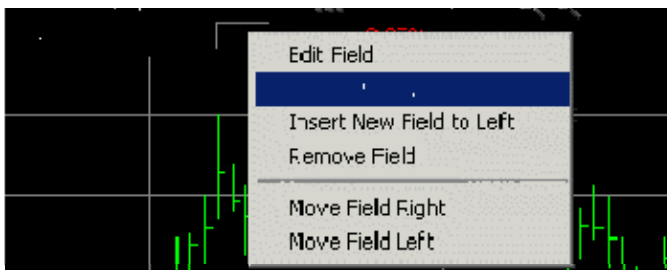
***Note:** There is a limit of 29 indicators per template.

Data Bar

The Data Bar is located in the chart window below the chart template name and can be customized to display any criteria you choose.



To edit the Data Bar click on any of the Data boxes and choose the appropriate option.



There are eight criteria that can only be used in the data bar. These are bar specific criteria. For example, bar % change displays the % change between bars on the chart. On a daily chart this would be the same as Price % Change Today, but on a 1 minute chart it would display the % Change from the last minute. The criteria are:

Bar Open – Displays the opening price of the current bar

Bar High – Displays the highest price of the current bar

Bar Low – Displays the lowest price of the current bar

Bar Close – Displays the last price of the current bar

Bar Volume – Displays the total volume of the current bar (in 100's)

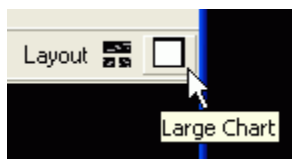
Bar Net – Displays the net difference between the last price of the current bar and the previous bar.

Bar % Change – Displays the Bar Net as a percentage

Bar Date/Time – Displays the date of the last price of the current bar and the time if the bar's time frame is less the one day.

Large Chart Button

You can easily switch to a full screen view of a chart by clicking the Large Chart button on the far right of the toolbar:



All charting functions are still available in Large Chart mode using the menus, popup menus or the hot keys. To return the regular view, just click the button again.

Slide Show

Slide Show automatically scrolls through the charts in the Active WatchList. You can increase or decrease how long a chart will be displayed on the screen by using the + and - keys on your keyboard. Pressing the = key will pause the slide show. The minimum setting is two (2) seconds per display.

Start the slide show by clicking **Tools | Slide Show**. To end your slide show session, press the <ESC> key.



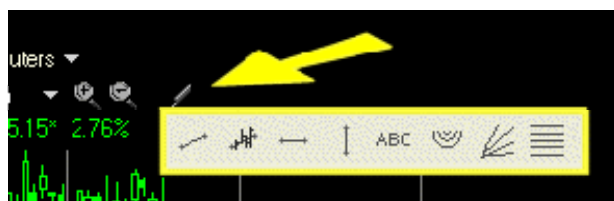
Drawing Tools

Trendlines

Trendlines have always been one of the most widely used charting tools among market technicians. Trendlines are used to help determine whether an individual stock or a market index is in an up-trend, downtrend or a sideways trend (trading range). A Trendline is a straight line that generally connects points on a price graph. These points are usually either a series of price tops or price bottoms. When connecting two or more of these tops or bottoms you get a feel for the overall trend in price.

Drawing Trendlines

Click the Drawing Tools button at the top of your chart and you'll be able to choose from several different types of trendlines: Trendline, Linear Regression Trendline, Horizontal Trendline, or Vertical Trendline. Once you've selected the type of trendline your mouse becomes your drawing tool. The mouse arrow becomes a cross hair; simply place the cross hair where you want the trendline to begin, click and drag to draw the trendline. Trendlines are automatically saved to the symbol you are viewing.



Parallel Trendlines

To draw a trendline parallel to one that you have previously drawn, right click one of the two endpoints or the center of the trendline and choose Create Parallel Line. The new parallel trendline has been created but cannot be seen because it is on top of the original. To move the new parallel line click the center of the line (you will see a little yellow circle appear) and drag it where you want it.

Extended Trendlines

A unique feature of TeleChart is extended trendlines. When you draw a trendline from point A to point B, the program automatically extends the trendline back into the past and into the future. The extended area is plotted in a different color and the extensions can be toggled on and off by clicking Tools | Chart Display Options and checking W / Extensions (or you can use the hotkey CTRL-T.)

Clearing Trendlines

To clear a trendline you have drawn, simply right click on one of the two endpoints of the trendline and choose Delete.



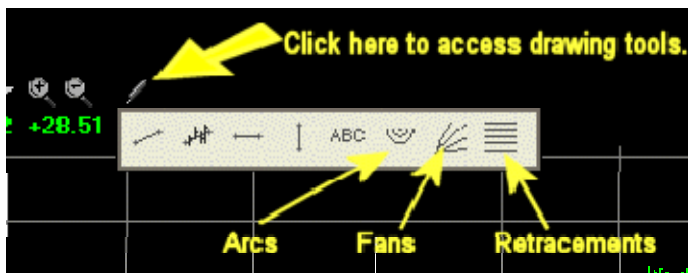
Adjusting Trendlines

To adjust a trendline you have drawn, simply click on one of the two endpoints of the trendline and use your mouse to drag it to its new location. You can also click the circle that appears when you hover over the middle of the trendline to move the trendline while keeping its original slope.

To customize the colors of your trendlines choose Chart Display Options from the tools menu.

Fibonacci Arcs, Fans, and Retracements

Fibonacci Arcs, Fans, and Retracements can be drawn on any chart by clicking the drawing tools button at the top of the chart, then clicking on a specific tool. Once selected, your mouse cursor will turn into a cross-hair. Fibonacci studies are displayed by first drawing a trendline between two extreme points, for example, a trough and opposing peak.

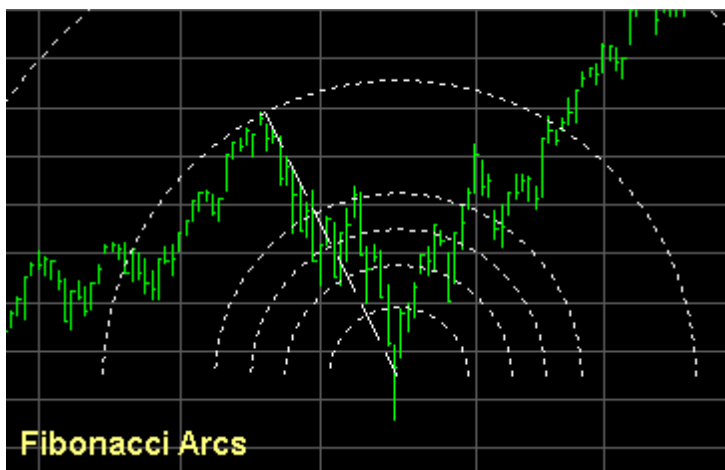


The Fibonacci drawing tools in TeleChart are based on the Fibonacci summation series. The series is the sum of the previous two numbers 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144 to infinity. The numbers have many mathematical relationships which are found throughout nature. Many traders have applied these relationships stock charts to help interpret the natural fluctuations of stock prices. The relationships found in this series of numbers are used to plot Fibonacci Arcs, Fans, and Retracements in TeleChart.

Fibonacci Arcs, Fans, and Retracements are all plotted by initially selecting two points on the chart, a start point and an end point. These two points are often two extreme points on the chart like a high and low. Once this is done, the Arcs, Fans, or Retracement Lines are then plotted. Each of them is described below.

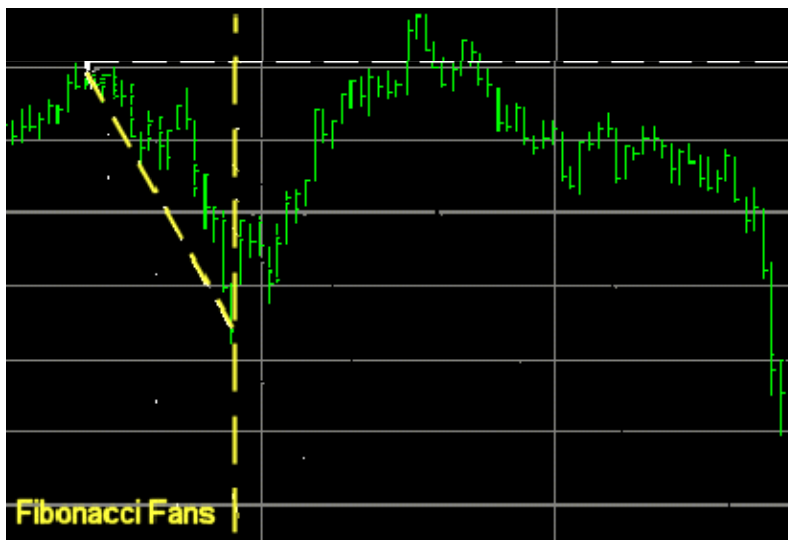
Fibonacci Arcs

Once you have established your start and end points, the Fibonacci arcs are then drawn. The arcs are centered around the first point chosen and spaced at intervals of 23.6%, 38.2%, 50%, 61.8%, 100%, 161.8%, and 261.8% of the distance between the two points chosen.



Fibonacci Fans

Once you have established your start and end points, an imaginary line is then plotted, running vertically from your end point to the price of your start point. The Fan lines are then drawn from your start point outward and intercept the imaginary vertical line at intervals of 23.6%, 38.2%, 50%, 61.8%, 100%, 161.8%, and 261.8% of the distance between the price of the start point and the end point.



Fibonacci Retracements

Once you have established your start and end points, horizontal retracement lines are then drawn. The lines are spaced from the price of the end point toward the start point at intervals of 23.6%, 38.2%, 50%, 61.8%, 100%, 161.8%, and 261.8% of the distance between the prices of the two points.



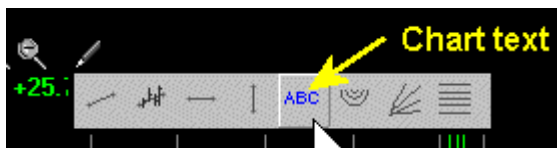
Editing and deleting Fibonacci drawing tools

To edit or delete Fibonacci Arcs, Fans, or Retracements right-click on the start point or end point and choose edit or delete.

Chart Text

Click the drawing tools button at the top of the screen and click ABC to place text on the chart.

Text written on the chart will remain where you place it until you move it or delete it. The text is saved to the symbol and will appear no matter what Chart Template you are using. This can be a great way to visually record events or observations on the chart.



Indicators in TeleChart

Parent vs Child Indicators

Parent Indicators

Parent, or base indicators are indicators that can be plotted in a window by themselves. The indicators listed below are parent indicators.

- On Balance Volume
- Price Rate of change
- Stochastics
- MACD
- Wilder's RSI
- Relative strength
- Time Segmented Volume (TSV)
- Balance of Power (BOP)
- MoneyStream
- Volume Bars
- Custom Indicator
- Custom Percent True
- Custom Cumulative
- Custom Price Channel

Child Indicators

Child indicators cannot be plotted by themselves. They are plotted against other indicators. The best example of this is a moving average. You cannot plot a moving average by itself in its own window. It must be a moving average of something else such as price, TSV, etc. and is plotted in the same window as the parent indicator. The indicators below are child indicators.

- Moving Average
- Envelope channel
- Linear regression
- Bollinger bands
- Rate of change

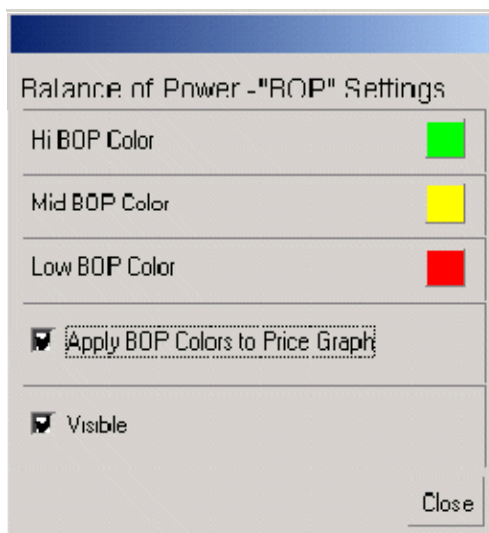
Balance of Power

BOP is the exclusive intellectual property of Worden Brothers, Inc. It was developed by Don Worden, a leading technical innovator and writer dating back to the nineteen fifties. In 1994 he was the recipient of the award for significant contribution to technical analysis, given annually by the Market Technicians Association.

BOP tells you whether the underlying action in the trading of a stock is characterized by systematic buying (accumulation) or systematic selling (distribution). The single most definitive and valuable characteristic of BOP is a pronounced ability to contradict price movement. BOP goes far beyond the "divergences" that many technical indicators are capable of. In divergence analysis, the price and the indicator tend to move together. A divergence is detected when, for example, the price makes a new high and the indicator fails to confirm.

BOP is capable of outright contradiction. Thus, while the price is attaining new highs, BOP may very well be attaining new lows. It is not unusual for BOP to move in the exact opposite direction of price.

BOP is plotted above and below a zero line. However, it is not an oscillator. It does not swing up and down with the price. It goes its own way, often quite independent of price movement. When BOP is above the zero line, it is depicting systematic buying. When it is below the line, it is revealing systematic selling.



For convenience, BOP is plotted in color. Green signifies dominant buying, red dominant selling. When BOP is close to the zero line, revealing no clear dominance of either buying or selling, it is plotted in yellow. (This is all patterned after stop and go lights). For even greater convenience, the price bars are plotted in the same colors as the corresponding BOP bars below. It is possible to interpret BOP using only the colored price bars. This is a boon to those who have difficulty rectifying the spatial relationships inherent in chart reading.

BOP fits into a category of devices that can be termed "trend quality" indicators. A variety of methods lead naturally to buy and sell signals. What BOP tells you is something about the quality of the underlying trend. Not itself a pinpoint timing indicator, BOP will modify your assessment of the vital risk-reward ratio of a trade or investment. It will help you determine whether the supply-demand balance will be in your favor. It will help you spot changes of character in a stock's action.

Why isn't BOP a perfect indicator? First, because there is no such thing. What BOP does, it does extremely well. BOP brings out hidden patterns of accumulation or distribution, and it does so with great reliability. But you see, a significant increase in price is not the inevitable result of informed accumulation. Distribution does not inevitably lead to a collapse in price. Even well informed buyers and sellers can be wrong about future price trends. BOP offers an inside glimpse of informed accumulation or distribution, not a sure-fire key to riches.

Let us just say that if you invest consistently in the same direction as informed money, your chances of success will increase significantly. Watch particularly for changes in character at potential tops and bottoms. Be suspicious of stocks in which BOP hasn't worked well. If the BOP pattern was misleading in the past, it will probably continue to be so in the future. Look for charts where BOP has shown selling at tops and buying at bottoms. Look for honest charts and avoid the double-crossers.

The BOP scale runs from 100 to -100. The indicator itself can rise above or below these extremes, but it is relatively rare. When it happens, we just truncate the profile at the top or bottom of the chart. Since the scale is consistent from chart to chart, you are able to make direct comparisons from stock to stock. Some will ask, which is the most important: (1) Whether BOP is above or below the zero line? Or (2) whether the direction of the BOP profile is up or down, which is to say, whether BOP is improving or deteriorating? Of first importance is whether BOP is above or below the zero line. This indicates dominant buying or selling on an absolute basis. However, a positive BOP with a deteriorating pattern can be significant as well. But only in a divergent situation. Thus a positive BOP moving down in tandem with an eroding price could not be interpreted bearishly. But a positive BOP moving down into a rising price must be construed bearishly. This would be all the more so if the price is actually attaining new highs. Conversely, a positive BOP moving up into a falling price should be interpreted as a positive, and all the more so if the price is breaking so-called "support levels." Where absolute BOP versus improving or deteriorating BOP seem to be contradictory, you will often find that the answer lies in the time implications. Absolute BOP (green or red) usually has the longer-term implications.

One last point. Before you arrive at a decision on any stock, check BOP (as well as all other indicators you find useful) in a variety of time frames. Even if you are a so-called day-to-day "scalper," you will benefit greatly by being aware of a stock's pattern over a period of at least five years. "Tips and Hints" in the Worden Report often features examples of BOP interpretations. These demonstrations are often written by Don Worden himself.

NOTE: Balance of Power can only be used to analyze stock charts. It is not available for mutual funds.

For scanning purposes, Green BOP represents values greater 30, Yellow BOP represents values from 30 to -30, and Red BOP represents values less than -30.

Read Don Worden's **Evolution of the Cumulative MoneyStream and Balance of Power** for more insight into how BOP was developed.

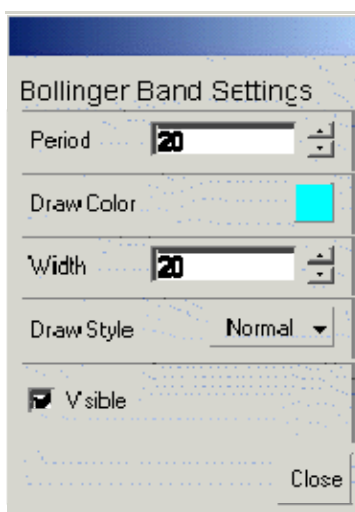
Bollinger Bands

Bollinger Bands, developed and introduced by John Bollinger, are trading bands based on the volatility of prices around a simple moving average. The result of using volatility to compute the spacing of the bands above and below the average is that the spacing varies with volatility. Volatility in this case is measured as the statistical standard deviation computed on the same set of data as the moving average. To compute his bands, Bollinger recommends using a 20-Day Moving Average, which is the arithmetic average of the previous 20 days of data. Volatility for the same period, the same 20 days, is the variation of the data around the average for the last 20

days. This variation is measured by the standard deviation of the data from the average. The actual trading band is plotted some number of standard deviations above and below the average. Aside from the computational differences, Bollinger Bands are used in the same way as other trading bands. In addition, Bollinger has developed several rules for these Bands that can be used to look for indications of possible price moves.

The Bollinger rules are:

- Sharp moves in price tend to occur after the Bands tighten, and the closer to the average the better. Since reduced volatility denotes a period of consolidation, the first increase in volatility after a consolidation tends to mark the start of the next move.
- Moving outside the Bands signals a continuation of the move until the prices drop below or inside of the Bands.
- Moves starting at one Band tend to go to the opposite Band.



Width

The variation of the data around the average for the last 20 days. This variation is measured by the standard deviation of the data from the average. The actual trading band is plotted some number of standard deviations above and below the average. A width of 20 would be 2 standard deviations, 10 would be 1 standard deviation and so on.

Period

The period of the moving average in the Bollinger Band calculation.

Custom Indicator

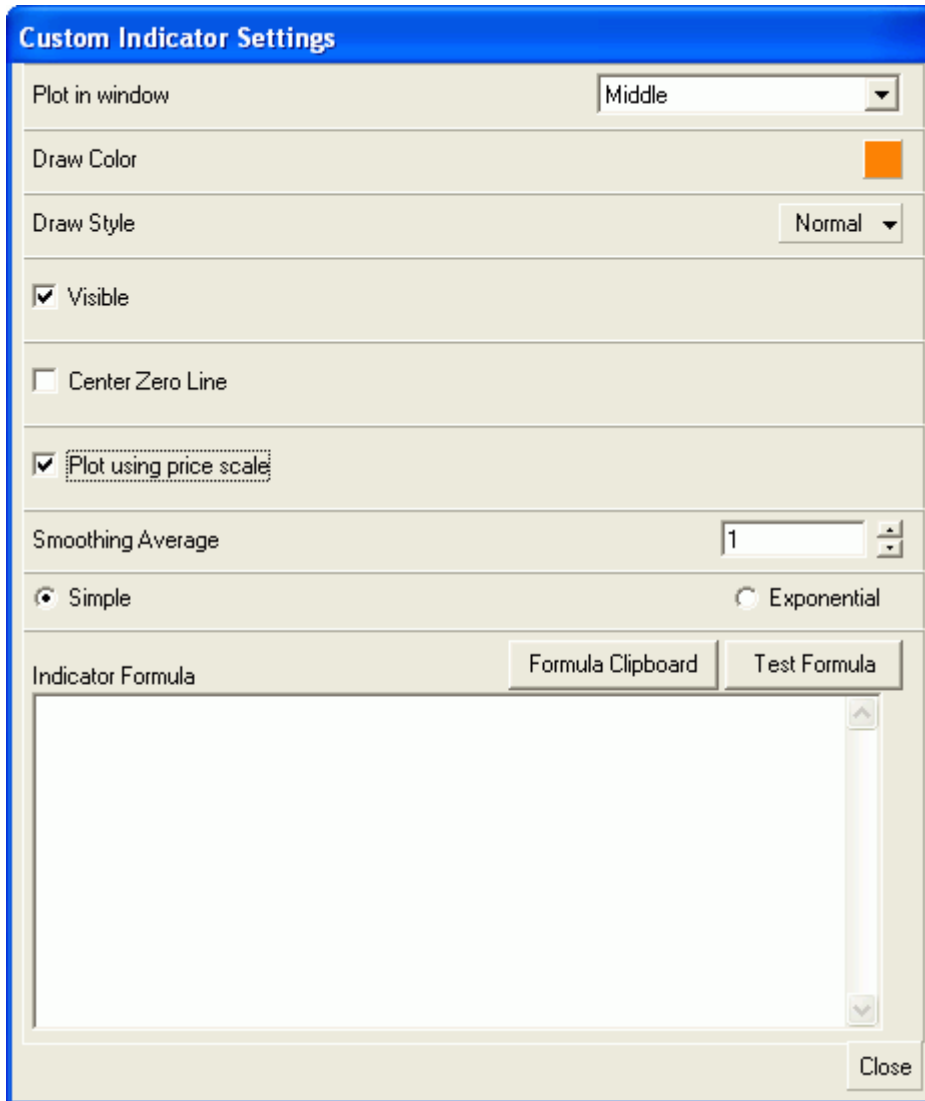
Click **Chart Template | Add Indicator**, then click on **Custom Indicator**. You can also add a new indicator by right-clicking on the chart and clicking Add Indicator.

You can enter your own formula to plot on the chart. The formula must calculate a value and not True/False result.

Plot Using Price Scale - each indicator is scaled based on the high and the low for the time period displayed on the chart. By checking this option, your indicator will be drawn using the same scale as Price. This is a must if you're plotting custom moving averages of price. However, if you check this option on and your custom indicator produces values outside the scale of the price line, then your indicator will not be visible.

The **Formula Clipboard** brings up a list of all formulas currently in the program. This includes any PCFs you may have as well as any formulas used in other custom indicators.

Click the **Test Formula** button to verify the syntax of your formula.



Custom Percent True

Click **Chart Template | Add Indicator**, then click on **Custom Percent True**. You can also add a new indicator by right-clicking on the chart and clicking Add Indicator.

Smoothing average - Simple vs. Exponential

The indicator is actually calculated using a moving average. For each period (bar on the chart) the value is 0% (false) or 100% (true).

So if you use a Smoothing Average of 10, Simple, and the Boolean formula was true 7 times, then the current value would be 70%. ($700/10=70$).

If you select Exponential, then exponential averaging is used and the more recent the period, the more weight it

carries.

The **Formula Clipboard** brings up a list of all formulas currently in the program. This includes any PCFs you may have as well as any formulas used in other custom indicators.

Click the **Test Formula** button to verify the syntax of your formula.

Custom Price Channel

Click **Chart Template | Add Indicator**, then click on **Custom Price Channel**. You can also add a new indicator by right-clicking on the chart and clicking Add Indicator.

The **Formula Clipboard** brings up a list of all formulas currently in the program. This includes any PCFs you may have as well as any formulas used in other custom indicators.

Click the **Test Formula** button to verify the syntax of your formula.

Custom Cumulative

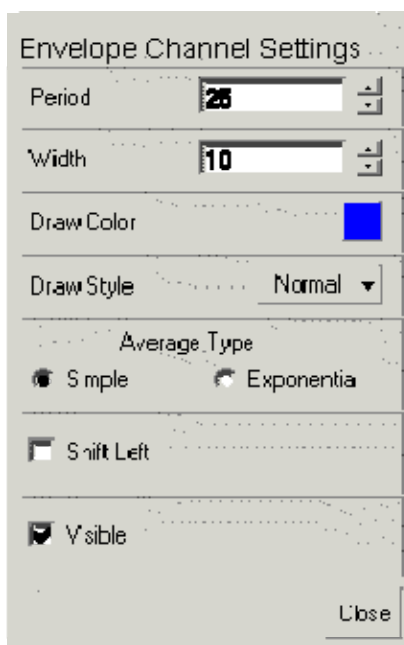
Click **Chart Template | Add Indicator**, then click on **Custom Cumulative**. You can also add a new indicator by right-clicking on the chart and clicking **Add Indicator**.

The **Formula Clipboard** brings up a list of all formulas currently in the program. This includes any PCFs you may have as well as any formulas used in other custom indicators.

Click the **Test Formula** button to verify the syntax of your formula.

Envelope Channels

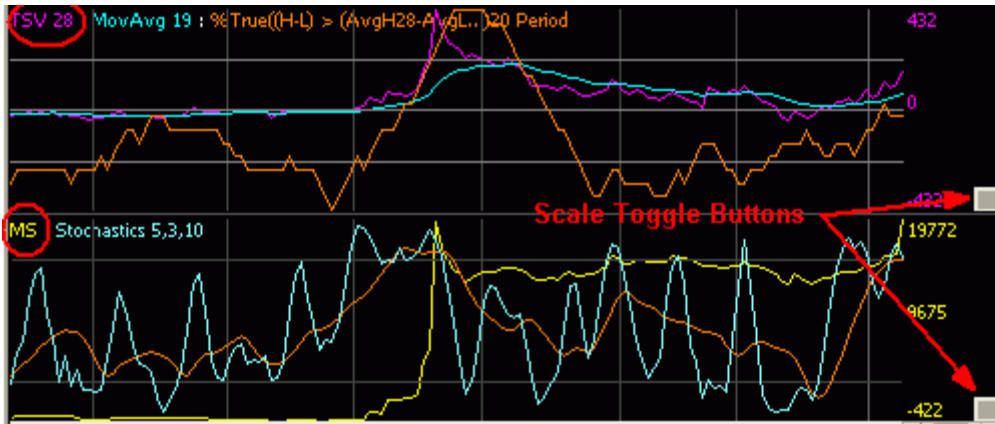
The construction of Envelope Channels is similar to that of price moving averages. In fact, an envelope channel is simply two lines formed around an invisible moving average. One line is above the moving average and one line is below it. The period parameter shown below is the period of the invisible moving average. The distance between the channel lines and the invisible moving average is a deviation determined by the user. This is referred to as the channel width. These channels help you see whether a stock is high or low within its price trend. A width of 10 would be 1 deviation, 20 would be 2 deviations and so on.



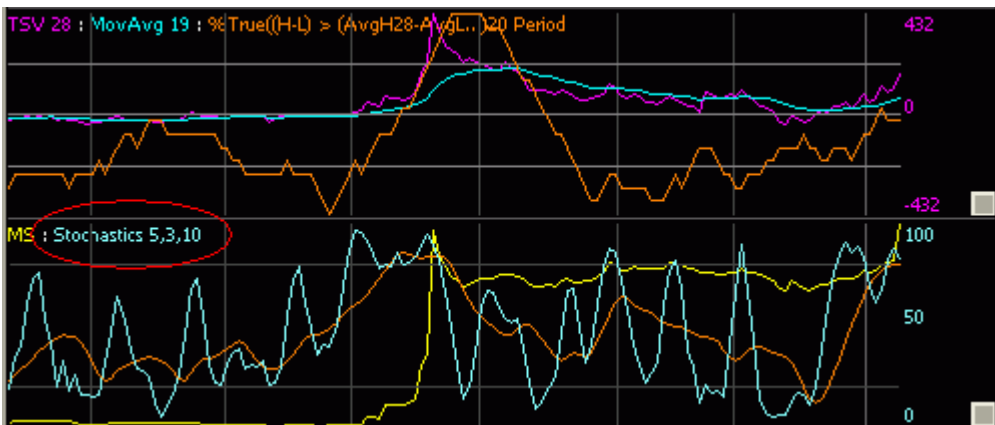
Indicator scale toggle

In version 5.3, indicator scales were added to the middle and bottom indicator windows so that you can see the approximate value of each indicator plotted. If you have more than one indicator plotted in the window, you can toggle between the scales for each indicator. The color of the scale corresponds to its indicator.

In the example below you can see that the upper window is showing the scale for TSV28. Both the indicator and the scale values are in magenta. The lower window is showing the scale for MoneyStream in yellow, same as the MoneyStream indicator.



To change the scale in a particular window, just click the scale toggle button for that window. After clicking the toggle in the lower window you can see that its scale has changed to light blue which corresponds with the Stochastics drawn in the lower window.



Linear Regression

In TeleChart, a Linear Regression line can be applied to price, another indicator, or a moving average price or an indicator. Linear Regression lines are drawn backward from the most recent day. The length of the line is the period specified. (i.e. on a Daily chart, a period of 50 would mean that the Linear Regression line is 50 days long.) Linear Regression fits the best average line between any two points, thereby showing the trend clearly and accurately. To plot a linear regression line, click Edit on the chart, click the plus sign next to the indicator you want a linear regression line plotted for, and choose Linear Regression from the list. You then need to select a period for the linear regression line.

You can also add a Linear Regression to an indicator by right-clicking on an indicator to select it and clicking Edit.

Period determines the length of the Linear Regression line.

Extension determines the offset of the linear regression line. Set to 0 for a regular Linear Regression line.

Setting a **Width** value will plot upper and lower channels around the Linear Regression line. The channel width is the average of the absolute differences between the parent value minus the average of the parent values up until that point calculated from the oldest to newest values in the Linear Regression Period. The width value is in tenths, so a value of 20 will result in a width equal to twice the result of the channel width calculation.

You can choose separate colors for the Linear regression line and the extension/channel lines.

The example below shows a snapshot of the QQQs with a Linear Regression plotted using the parameters selected here. You can see the extension and channel lines are colored gray.



MACD (Moving Average Convergence Divergence)

Gerald Appel created MACD for the purpose of producing specific trading signals. The primary reason for its popularity among technicians is the fact that it is a very easy indicator to interpret.

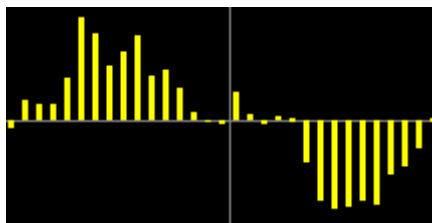
Price moving averages (PMA) help us to identify trends more effectively by smoothing out daily price fluctuations. Most of us are familiar with using crossovers of simple price moving averages to arrive at buy and sell signals (i.e. when price crosses up through its moving average a bullish condition exists). MACD is a very similar concept. However, MACD consists of three price moving averages, instead of just one or two Price Moving Average's.

MACD is displayed as two separate lines in the indicator window at the bottom of the chart. The first line plotted is actually the difference between two exponential moving averages. The first MA should be set to a shorter term time frame (e.g. 12-day) and the second MA is typically set to a number about twice as long as the first. These parameters are determined by the user, based on his or her particular time horizons. The calculation of the second indicator line is simply an exponential moving average of the first line. A common parameter used here is a 9-day moving average, but we encourage you to experiment with varying parameters since NO indicator parameter works best for all market conditions. The interpretation of MACD can be explained in just a few simple sentences. Trading signals are produced when the MACD crosses through its moving average. If MACD crosses up through its moving average, it's a buy signal. Conversely, the opposite would be true. This is how the indicator is most commonly used. However, our experience with MACD has taught us that positive and negative divergences between the indicator and price are also highly significant and generally work very well for picking major turning points.

Plot MACD as Histogram

The histogram is the difference between the two MACD lines. Where the histogram crosses the zero line is the point where the two MACD lines are crossing (the difference between the two is zero).

Note: You cannot set the "Avg Color" of MACD to black AND save MACD as a histogram.



MoneyStream

The Cumulative MoneyStream (CMS) was also developed by award-winning technician Don Worden and is the exclusive intellectual property of Worden Brothers, Inc. The MoneyStream

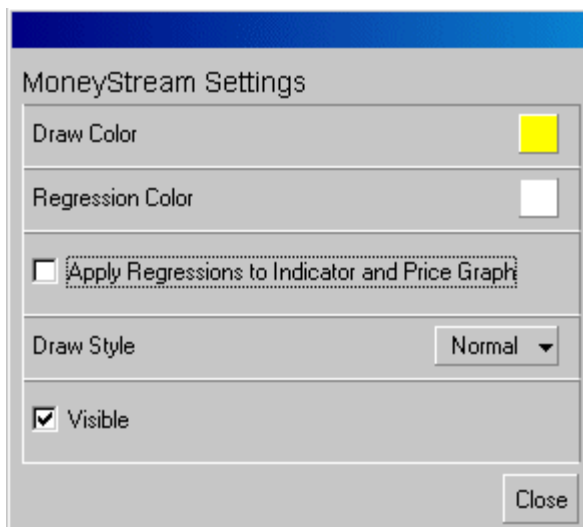
grew out of joint venture with a large regional brokerage firm to develop a price/volume indicator. The result is an indicator with much the same objectives as OBV. CMS is interpreted in the same way you would interpret OBV. Generally, you look for divergences.

Important divergences can be seen at a glance, owing to our use of automatic linear regression lines in both the price and indicator profiles. The chart is setup so that you can make direct comparisons between the slopes of the price regression lines and the indicator regression lines. (However, do not neglect to look closely for movements not necessarily reflected in the regression line, which is meant as a help, not a crutch.) If the CMS regression lines are sloping upward at greater angles than those of the price, the message is bullish. And vice versa.

The main difference between OBV and CMS is that CMS has a greater ability to contradict price movement than OBV does. This is achieved by using all of the elements within the daily price bar rather than just the close. The high, low, close and daily range are related to volume in a unique and proprietary way. You may wish to compare CMS and OBV in a variety of stocks and time frames. Generally you will find that CMS has the greater predictive power. But not always. Sometimes OBV does the better job. The more things you look at, and the more time frames you habitually check out, the better you are going to do.

The MoneyStream was developed after years of experience with price-volume indicators. In addition to Joe Granville's OBV, ideas by David Bostian and Mar Chaikin were influential in the formulation. The final result embodies a method of filtering out what is believed to be a logical error in the preceding indicators. CMS is not as volatile as Bostian's and Chaikin's creations and it has more power to contradict than OBV.

CMS works very well in conjunction with BOP. CMS and BOP are based on entirely different concepts and sometimes they disagree completely. The idea is to wait for mutual confirmation. Together they are potent medicine. CMS lends itself better to precise timing than BOP. This is because CMS is affected considerably by the price trend itself. BOP, on the other hand, is incomparable at ferreting out hidden patterns of accumulation or distribution.



MoneyStream has the option to be plotted with 30- and 100-period linear regression lines on the MoneyStream graph and the price graph so you can compare the trends of the two graphs.

Read Don Worden's **Evolution of the Cumulative MoneyStream and Balance of Power** for more insight into how MoneyStream was developed.

Moving Average

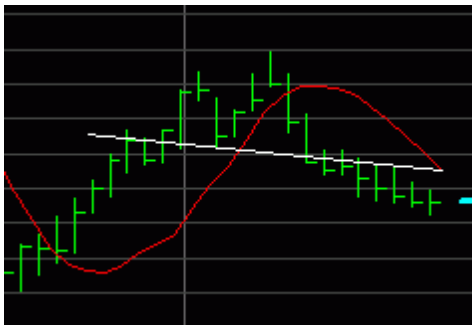
Moving averages are used to smooth trends. A 10-day simple moving average would be the mathematical average of the closing prices over the last 10 days. An exponential moving average is similar to a simple moving average but places more emphasis on recent price movements.

A 200-day price moving average is very popular among longer-term investors. For intermediate term traders, a widely used parameter is a 10-week (50-day) price moving average. Some technicians interpret crossovers of moving averages as buy or sell signals.

Moving Linear Regression

This indicator plots the path of the endpoint of a linear regression line back through the chart.

The example below shows a 21 period Linear Regression and a 21 period Moving Linear Regression. You'll notice that the end of the Moving Regression (red) coincides with the endpoint of the Regression line (white). The Moving Linear Regression doesn't actually display the regression line itself, but in the graphic examples here it's displayed for illustrative purposes.



To plot a Moving Linear Regression line, click **Chart Template | Add Indicator | Moving Linear Regression**.

Period - length of the linear regression line used in the moving plot.

Extension - allows you to plot a moving regression line based on a linear regression line plotted with an extension. **Example A** shows a 21 period linear regression line (white) plotted with an 11 bar extension (magenta). The moving regression (red) has an extension of 11 bars as well and you can see where it's plotting relative to the regression line.

Point to Plot - you can choose which point on the linear regression line is used in the Moving Regression. You may want to plot path of the

endpoint of the regression line (which is the default) or you may want to plot a different point along the regression line. **Example B** shows a 21 period moving regression (red) with a Point to Plot of 11. The gray line illustrates that the moving regression is drawn based on the 11th point on the line (in this case the middle).

Width - Setting a Width value will plot upper and lower channels around the Linear Regression line. The channel width is the average of the absolute differences between the parent value minus the average of the parent values up until that point calculated from the oldest to newest values in the Linear Regression Period. The width value is in tenths, so a value of 20 will result in a width equal to twice the result of the channel width calculation.

On Balance Volume

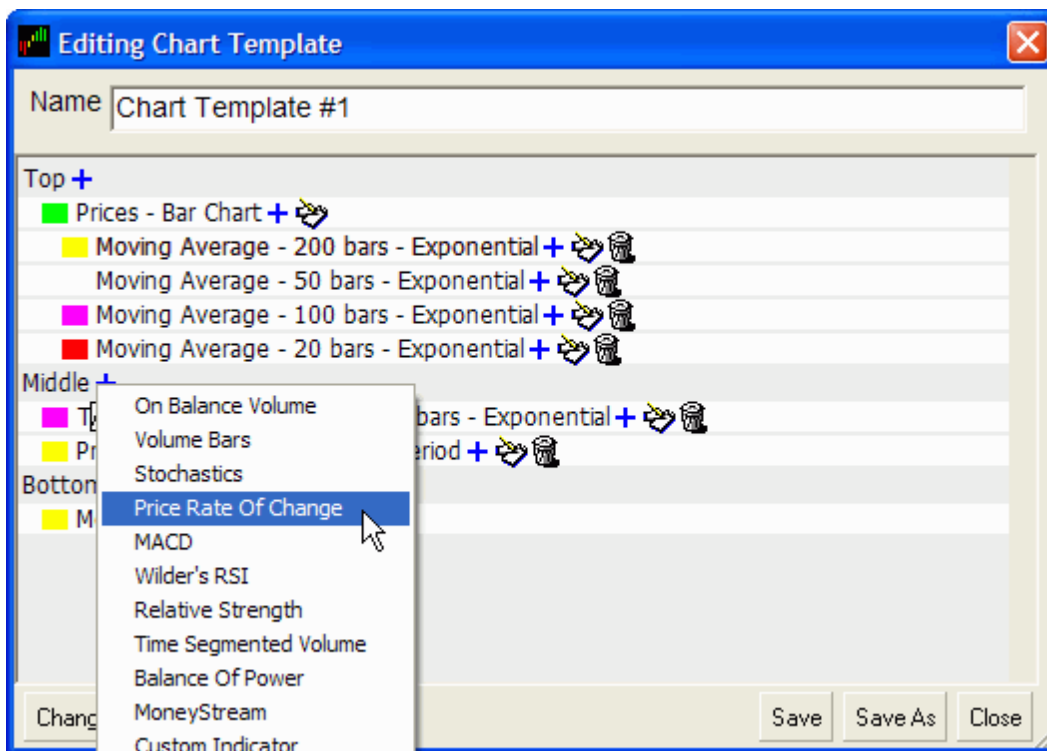
On Balance Volume (OBV) was developed by Joseph Granville, a well-known technician and market letter writer. It is a cumulative indicator that essentially measures positive and negative volume. It is calculated by adding the total volume on up days and subtracting the volume on down days. The numerical value of OBV is statistically irrelevant, just as it would be with a cumulative advance/decline line. This is because the value of the indicator will be dependent upon when the indicator was first calculated. (i.e. An OBV line started one year ago will look exactly the same over the past year as an OBV line started five years ago, even though the value of the latest plot for each line will be very different.)

With OBV, the key is to look for divergences between price and the OBV line. If both the price and the OBV line are rising, it means that OBV is confirming price, which should be interpreted as bullish. If the price is rising and the OBV line is declining it is bearish. If the price is declining and the OBV line is rising (moving counter-trend to price), it is a bullish indication.

Price Rate of Change

Price Rate of Change is calculated from the price of an individual stock or a market index. The rate of change measures changes as a running difference rather than actual points. The latest plot is calculated as the current closing price less the price a certain number of periods ago. For example, assume you are looking at 10-day price rate of change of a particular stock - the indicator is calculated by subtracting the closing price ten days ago from the current day's closing price.

To plot Price Rate of Change, click Edit on the chart to open the indicator editor. Then click the plus sign next to the window where you want the indicator plotted (top, middle, or bottom) and choose Price Rate of Change from the list.



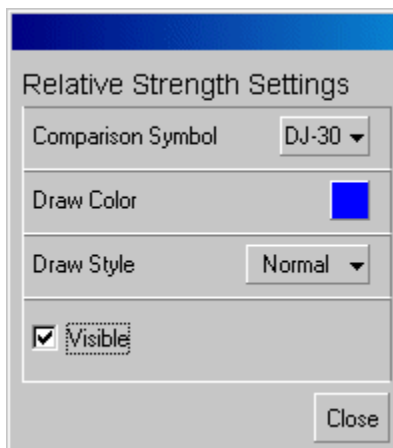
Rate Of Change (ROC)

This is a momentum oscillator calculated from the value of the indicator to which it is applied. The ROC oscillator measures the Net Change in the actual value of the parent indicator over the specified period. The latest plot is calculated by subtracting the value of the indicator a certain number of periods ago from the current value.

Relative Strength Graph

The relative strength (RS) graph is generated by comparing the relative price performance of any two items (such as two stocks or a stock and a market index). If the RS line is ascending, then the active symbol is out-performing the comparison symbol. If the RS line is descending, the active symbol is under-performing the comparison symbol.

If you plot the RS graph in the Top (price) window, keep in mind that the position of the RS line relative to price is insignificant since the two lines are plotted on independent scales.



Stochastics

An indicator that measures the price velocity of a particular stock or market index. It essentially shows us where price is trading within a given range. The boundaries of the range would be the high and the low for a specific time period determined by the user. A stochastic of 100% would mean price is currently trading at the extreme high of the range and a stochastic of 0 would mean price is trading at the extreme low.

Stochastics, like the Relative Strength Index, helps us to determine whether price is overbought or oversold. When the Stochastics crosses up through the 80% line, it is considered overbought. Below 20% is considered oversold. The shorter the stochastic period, the more signals the indicator will produce. However, if your period setting is too short, the majority of your signals will be false. A moving average of the stochastic provides a basis for buy and sell signals. When an overbought stochastic turns down through its MA, a sell signal is produced. When an oversold stochastic moves up through its MA, a buy signal is produced.

Stochastics was developed by George C. Lane and is calculated as follows:

$$K = ((C - Ln)/(Hn - Ln)) * 100$$

Where

K is Lane's Stochastics

C is the latest closing price of the stock

L is the n-period low price of the stock

H is the n-period high price of the stock

n can be any number (Lane suggests 5 to 21)

Furthermore, Lane recommends that the stochastic line be smoothed twice with three-period simple moving averages: SK is the three-period simple moving average of K, and SD is the three-period simple moving average of SK. In TeleChart you can make these settings whatever you like.

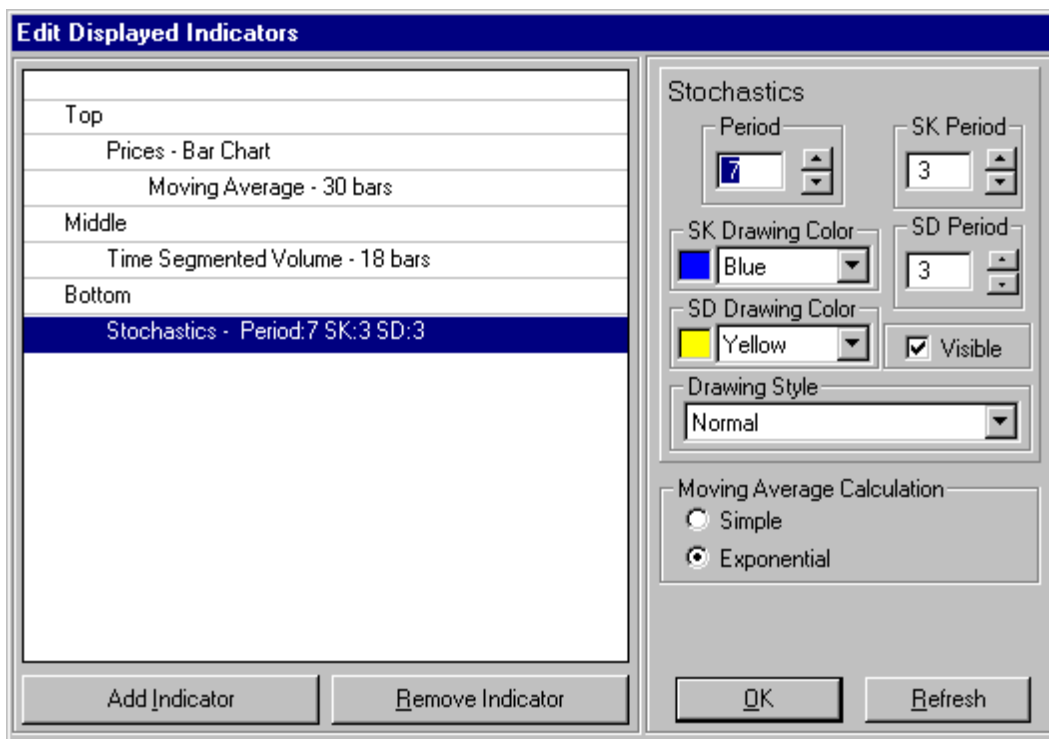
When plotting Stochastics in TeleChart three parameters are required:

Period - The number of bars used to calculate stochastics (n is the formula above)

SK Period - The factor by which stochastics will be smoothed. A value of 5 would plot a 5 bar moving average of stochastics.

SD Period - The factor by which the SK line will be smoothed. A value of 10 would plot a 10 bar moving average of the SK line.

When you look at stochastics plotted, the two lines you see are the SK line and the SD line.



Time Segmented Volume

A proprietary technical indicator developed by Worden Brothers, Inc. TSV is an oscillator, which is calculated by comparing various time segments of both price and volume. TSV essentially measures the amount of money flowing in or out of a particular stock. The horizontal line in the middle, which extends across the entire length of the indicator window, represents the zero line. When TSV crosses up through the zero line it signals positive accumulation or buying pressure. This action is considered bullish. Conversely, when TSV crosses below the zero line it indicates distribution or selling pressure, which typically precedes a move down in price.

Another important thing to look for when interpreting TSV is a contradiction of trends between price and TSV. Look for positive or negative divergences between price and TSV in order to determine potential tops and bottoms. Several consecutive divergences increase the reliability factor in trying to pinpoint price reversals. For instance, if price has been making successively higher highs while TSV has been making successively lower highs, this would constitute a series of negative divergences. This would be an indication of a possible top.

TeleChart gives you the ability to calculate a TSV on a wide variety of moving averages, which simply allows you to smooth the indicator, thereby filtering out the less significant swings. You will notice that as you increase the value of the moving average (and this applies to any indicator, not just TSV) the result is a smoothing effect. However, there is a trade-off. As you increase the length of the moving average, the indicator becomes less sensitive to daily fluctuations. And as a result, the indicator will have a greater tendency to lag price.

One of the new features of this indicator is the ability to calculate a moving average of another moving average. This addition has made TSV more effective and easier to use. Now you can calculate a moving average of an already smoothed TSV and use it much in the same way the MACD indicator is used. Positive and negative TSV crossovers are one more thing to consider when trying to form an opinion on a particular stock or market index.

Example Settings:

Short Term Trading: TSV period between 9 and 12

Intermediate Term Trading: TSV period between 18 and 25

Long Term Trading: TSV period between 35 and 45

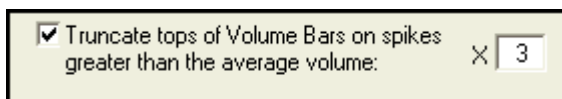
Volume Bars

Volume Bars are the familiar red and green bars. A green bar indicates that the closing price is higher than the close of the previous bar while a red bar indicates that the closing price is lower than the previous close.

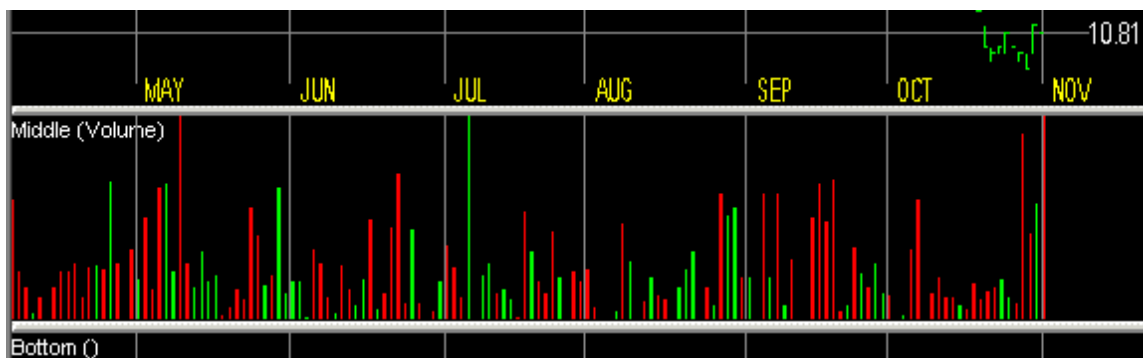
Unusually high volume days produce spikes in the volume indicator that make it hard to see the relative volume activity on other days. In the example below, the current days trading volume far exceeded the norm for this symbol and, as you can see, the volume indicator is almost useless.



To compensate for this, you can set the display to truncate the bars on any day where the volume exceeds the average displayed volume by X times. Click on Chart Display Options in the Tools menu at the top of the screen and place a check in the box to truncate volume bars that exceed the average by X times.



In this example we've set it to truncate any volume bars that exceed the average displayed volume by 3 times. This is the same volume chart as above after truncating.



Wilder's RSI

The Relative Strength Index (RSI) is a rate of change oscillator developed by J. Welles Wilder, Jr. RSI is calculated purely from the price of the individual stock or market average. Please DO NOT confuse RSI with the more conventional Relative Strength analysis or RS Ran. RSI essentially compares the price of something to itself. It does NOT compare the relative performance of one stock or market average to that of another. The RSI indicator is most effective when used to spot positive and negative divergences with price. It is also used to determine when a stock or index has reached an overbought or oversold condition within the confines of its primary trend.

When RSI registers a reading of 70% or higher, price is generally in an overbought position. Conversely, when RSI reaches the 30% level, price can be considered oversold. When using RSI as an overbought/oversold indicator, it is extremely important to first determine whether a definable primary trend actually exists. This is best determined by using other technical indicators such as price moving averages, Trendlines, and our own Time Segmented Volume (TSV). Once the direction of a primary trend has been successfully identified, use RSI to trade strictly with the trend. For example, if a stock is in a definable uptrend, use RSI to identify optimum entry points. A spike down in RSI (below 30%) would signal just such an entry point. RSI is also capable of positive and negative divergences with price. Wilder suggests using a 14-day RSI although other settings have also proved useful.

How it's calculated....

$$RSI = 100 - (100 / (1 + RS))$$

Where RS is the ratio of the Moving Average of n-Period gains (value of up closes) divided by the absolute value of the Moving Average of n-Period losses (value of down closes). Please note the Moving Average of n-Period gains is calculated using all of the bars during the Period, not just the up closes (non-up closes count as zero). The same is true when calculating losses.

When entering the parameters for Wilder's RSI in TeleChart, the first parameter (RSI Period) is the value for n and the second parameter (Average Period) is the value of the period for a Simple or Exponential Moving Average to be applied to the RSI.

You will also see a check box to "Use Wilder's Smoothing". We've always used Simple Averaging in the calculation of RSI, but Wilder used his own smoothing method (a variation of Exponential Averaging), which is available by placing a check in the box. When using Wilder's Smoothing, the Average Period should normally be set to one. Please note that PCFs created using RSI will not use Wilder's method.

Worden's Market Indicators (T2s)

With all of the powerful filtering and organizational capabilities of TeleChart, some of its unique offerings have a tendency to go unnoticed. Our list of 23 Market Indicators is just such an offering. We hope you don't make the mistake of overlooking these useful tools. Most investors are familiar with the advance / decline line, but, with TeleChart, that's just the beginning. TeleChart goes beyond counting the number of stocks moving higher and lower in the market. TeleChart asks "How High?" and "How Low?". TeleChart shows you the percentage of stocks above and below their moving averages. TeleChart even counts stocks attaining new highs versus new lows. TeleChart does it all, so all you do is browse the charts with a few clicks per day.

TeleChart gives you a full toolbox of powerful big-picture indicators designed to help you perfect your market timing. Just as standard technical indicators give you insight into overbought and oversold conditions in individual stocks, this collection of indicators helps you spot trends in the market as a whole, so you can ride the big rallies, and cash in before major market corrections.

Worden's Market Indicators, known as T2s because each symbol begins with T2, are calculated using the daily market activity of the NYSE. They are internal market statistics which are calculated by counting stocks that meet certain criteria and then publishing the results as a percentage value between 1 and 100. T2107 "Percentage of stocks above their 200-day moving average" for example, counts the number of stocks currently trading above their 200-day price moving average and then plots this as a percentage. So if the daily value of T2107 is 14, you know that 14% of the stocks on the NYSE traded above their 200-day PMA.

Most other indicators and indexes are based on price and will usually give a good reading of the overall trend of the market. T2s, however, are count-based indicators that give you a sort of "behind the scenes" look at the market. By counting every issue on the NYSE, T2s show the true volatility of each issue. They show you things like the fact that advancing issues are outpacing declining issues; when the number of stocks trading above their 200-day price moving average is declining; when the number of stocks reaching new highs each market day is increasing, etc. You can then compare these with a major market index to see how the activity of every stock on the NYSE compares to the trend of the overall market.

When plotting a comparison of a T2 and a market index, you'll want to set your scaling to Arithmetic. TeleChart will plot the T2 and the market index on independent scales. If you use logarithmic scaling, the T2 and the index are plotted on a common-linked log scale and you won't be able to compare the true volatility of each.

T2100 Advance/Decline Line

You have probably heard of the advance/decline line. It is calculated by subtracting the number of declining stocks for the day from the number of advancing stocks for the day. It is a cumulative indicator meaning that each day's calculation is added (or subtracted) from the previous day's indicator value.

First, our advance/decline line represents a great improvement over the common one. It is calculated only from NYSE common stocks (omitting preferred stocks, warrants, etc., which have a markedly distorting influence). It is calculated from the percentage of advancing stocks minus the percentage of declining stocks, rather than using raw numbers. For example, if 55% of the NYSE were up today and 30% were down, the net change today would be 25 (55% - 30%).

Let's take a look at a chart. Hit the J key and enter T2100. Set your zoom to level 1 and time frame to a weekly chart. This will display a chart spanning about ten years. Now plot a comparison graph (CTRL-C) using the S&P 500 index (SP-500) as the comparison symbol.

Note: When viewing symbols such as the T2 indicators that only have one price point for each market day (no open, high or low), you'll want to set the price graph to a line chart. CTRL-B will toggle the chart mode between bar, line and candlestick charts. Press CTRL-B until a line chart is displayed.

Be sure to set the scaling to Arithmetic. The price scale to the right shows the prices for the active symbol (in this case T2100). The price scale of the comparison symbol (SP-500) is not displayed. However, you can swap the active and comparison symbol by pressing CTRL-F. This makes the SP-500 the active symbol and displays its price scale. Press CTRL-F again to make T2100 the active symbol again.

When the advance/decline line rises in lock step with a broad average such as the SP-500, it is an indication that a majority of stocks are in agreement with the strength shown by average. This is called "strong breadth." When the advance/decline line and the broad average decline together, breadth is weak. When the two line disagree, it is called a divergence, and the advance/decline line is more apt to be correct, although it is by no means a certainty.

T2125 Nasdaq Advance/Decline Line

T2126 Nasdaq 100 Advance/Decline Line

T2127 Russell 1000 Advance/Decline Line

T2128 Russell 2000 Advance/Decline Line

T2129 Russell 3000 Advance/Decline Line

T2101 Absolute Breadth Index

This index was developed by Norman Fosback. It is simply the absolute value of the number of advancing issues minus the number of declining issues. For example, if the number of advancing issues is 1200 and the number of declining issues is 600, the Absolute Breadth Index equals 600. If the number of advancing issues is 400, and the number of declining issues is 900, the Absolute Breadth Index equals 500. Remember, the sign is ignored in the calculation of an absolute number.

For charting purposes, we take the daily Absolute Breadth value (calculated as described in the previous paragraph) and publish it as a percentage increase or decrease from the previous day's value. For example, let's say yesterday's Absolute Breadth value was 1000 and the chart shows a value of 31. Now, today's calculated value comes in at 960, so $960 / 1000 = .96$, which is a 4% decrease from the previous day, so today's reading would be 27, a 4% decrease.

The theory behind the Index is that when the absolute difference between the number of advancing and declining stocks is high, you are more likely to be near a market bottom than a top since a selling climax, with most stocks participating, often occurs near a market bottom. On the other hand, a low Absolute Breadth Index reading is more likely to signify the slow topping activity that frequently occurs at a market peak.

T2102 Bolton-Tremblay Indicator

This is a cumulative advance-decline indicator that uses the number of unchanged issues as a basic component. It is computed in five steps. First, divide the number of advancing issues by the number of unchanged issues. Second, divide the number of declining issues by the number of unchanged issues. Third, subtract the declining ratio from the advancing ratio. Fourth, calculate the square root of the difference. Fifth, add the square root to the previous day's Bolton-Tremblay Indicator, respecting the sign (plus if there were more advances, minus if more declines).

For example, if there are 1500 advancing issues and 700 declining issues and 800 unchanged issues, the Bolton-Tremblay Indicator is calculated as follows:

Today's Bolton-Tremblay Indicator = Yesterday's Bolton-Tremblay Indicator + Square Root of $(1500/800 - 700/800 = \text{Yesterday's Bolton-Tremblay Indicator} + 1$

On the other hand, if there had been 700 advancing issues and 1500 declining, today's Bolton-Tremblay Indicator equals yesterday's value minus 1.

The Bolton-Tremblay Indicator should be interpreted in a manner similar to the advance-decline line. In fact, if you plot a comparison graph using T2100 as the comparison symbol, the two graphs are almost identical. Keep in mind that the actual value of the indicator is far less important than its trend.

T2103 Zweig Breadth Thrust

Developed by Martin Zweig (The Zweig Forecast, PO Box 5345, New York, NY 10150), this indicator is calculated by taking a 10-day moving average of the number of advancing issues divided by the number of advancing issues plus the number of declining issues. Since it is a percentage indicator, it cannot go below 0 or above 100. However, it is rare that it goes below 40 or above 60.

Greg Morris (G. Morris Corporation, Forest Park Tower, 9500 Forest Lane, Suite 301, Dallas, TX 75243-5914) claims that Martin Zweig says any time this indicator thrusts from below 41 to above 60 in under 10 days that the market will be significantly higher 18 months later. We find the indicator useful as an overbought/oversold indicator, also.

T2104 Cumulative Volume Index

This indicator is sometimes called up volume/down volume. It is calculated by taking the volume of the advancing issues and subtracting the volume of the declining issues. It is a cumulative indicator, so the value is meaningless. This indicator is interpreted the same way the advance/decline line is interpreted. If it begins to trend down while the averages are trending up, it is a bearish sign. If it begins to trend up while the averages are trending down, it is a bullish sign.

T2105 High Low Logic Index

Developed by Norman Fosback, the Index is computed as the lesser of the number of new highs or new lows divided by the total number of issues traded. Daily or weekly NYSE data typically is used in the calculation.

The concept behind the indicator is that either a large number of stocks will reach new highs or a large number will establish new lows, but normally not both at the same time. Since the High Low Logic Index is the lesser of the two ratios, high readings are infrequent.

When a high indicator reading does occur, it signifies that market internals are inconsistent with many stocks reaching new highs at the same time that many stocks establish new lows. Such a condition is considered bearish for stock prices.

Extreme low indicator readings reveal a uniform market. They are considered bullish for stock prices.

T2106 McClellan Oscillator

The McClellan Oscillator is reported each day by many financial news services. Their reported value will almost always be different than our value because, as mentioned earlier, we use every stock on the NYSE. The overall trend of the indicator, however, will be the same.

The McClellan Oscillator is calculated by subtracting a 39 day moving average of (Advances – Declines) from a 19 day moving average of (Advances – Declines). It not only works as an overbought/oversold indicator, it works fairly well at making short-term trend changes when it crosses the zero line.

Here again it is very important that you set your chart scaling to Arithmetic because the McClellan Oscillator will be negative on some market days and negative values cannot be displayed on a Logarithmic scale.

Note: Scaling must be set to Arithmetic for the chart to be displayed properly.

T2118 McClellan Summation Index

The McClellan Summation Index is simply a cumulative indicator of the McClellan Oscillator. It also can be interpreted as bullish or bearish when it crosses over the zero line. We find crossovers on a 10- or 20-day moving average of this indicator to make for a great trend following system. It tends to get you into trends early and keep you in...very few whipsaws.

Note: Scaling must be set to Arithmetic for the chart to be displayed properly.

This next section, beginning with T2107, covers T2s that count the number of stocks on the NYSE trading above or below their moving averages. When plotted against a market index such as the S&P 500 (SP-500) or the Russell 2000 (RUT-X), you can see how the market reacted when large numbers of stocks were trading above or below their moving averages and what patterns to look for in the future.

T2107 Percentage of stocks trading ABOVE their 200-day moving average

In this T2, every stock on the NYSE is represented because (except in rare cases) stocks do not trade exactly AT their 200-day moving average. This is why there is no T2 for "Percentage of stocks trading BELOW their 200-day moving average". One quick glance at the indicator on a day when it reports a value of say 21 instantly tells you that 21 % of stocks on the NYSE are trading above and 79% are trading below their 200-day price moving average.

This is very valuable information because it's a good general indication of whether the overall market is overbought (spike up in T2107) or oversold (spike down).

T2108 Percentage of stocks trading above their 40-day moving average

Very similar to T2107 above, but this indicator will be a little quicker moving because there is less resistance to a stock breaking out above its 40-day moving average versus its 200-day. Here again there is no complimentary T2 for stocks below their 40-day average because every NYSE stock is covered by this one T2.

T2109 through T2116 indicate the percentage of stocks trading 1 or 2 channels above or below their moving averages. The channels are envelope channels. One channel is equal to one standard deviation from the moving average and two channels equals 2 standard deviations from the moving average.

Tip: When plotting envelope channels on a chart in TeleChart, two parameters have to be entered: Period and Width. The Width parameter determines the number of standard deviations from the moving average (Period parameter) that the envelope channels will be drawn. A Width of 10 equals 1 standard deviation, a width of 20 equals 2 standard deviations, and so on.

These T2s show you the extremes. Stocks that not only are trading above or below their moving averages, but those that have exceeded or fallen below their averages by as much as 2 standard deviations.

T2109 Percentage of stocks trading 1 channel above their 200-day moving average

T2110 Percentage of stocks trading 1 channel above their 40-day moving average

T2111 Percentage of stocks trading 2 channels above their 200-day moving average

In a Worden note on February 18, 1998, Don Worden made some compelling observations of the overall market by plotting a comparison of T2111 and SP-500 (Standard & Poor's 500 index). Take a look at his comments and the chart of T2111 vs. SP-500 in the online discussion forum at www.worden.com.

T2112 Percentage of stocks trading 2 channels above their 40-day moving average

T2113 Percentage of stocks trading 1 channel below their 200-day moving average

T2114 Percentage of stocks trading 1 channel below their 40-day moving average

T2115 Percentage of stocks trading 2 channels below their 200-day moving average

T2115 points out instances where too many stocks have surged or plummeted at once by showing you what percentage of stocks are trading 2 channels below their 200-day moving average. The channels are envelope channels and each channel represents one standard deviation from the 200-day moving average. To make the count for T2115, a stock must have fallen very far very quickly in recent trading. Peaks in T2115 naturally coincide with lows in the market because if a large number of stocks are trading well below their 200-day moving averages, then the market is going to be down.

To best understand T2115, pull up the chart and plot a comparison graph using the Dow Jones Industrial Average (DJ-30). Set the time frame to weekly and remember to set your scaling to arithmetic when using the T2 indicators compared to a market index for a true picture of volatility.

It also helps to pull the upper splitter bar all the way to the bottom of the chart so you can maximize the viewing area of the top window.

Look at the inverse relationship between T2115 and the Dow during the market surge in the second half of 1997. Just after a pullback in the market around April of 1997, the Dow surged from around 6400 to an amazing 8200 points in early August, a 22% increase. The value of T2115 dove from 14 (14% of the market trading below their 200-day averages) to less than 2.

Although you can see this pretty clearly on the chart, you may be asking "So how is this going to help me in the future?" Well, when T2115 spikes up, and assuming the economy is stable, it's a good indication that there are some good values out there because this also mean that P/E ratios have gone down. Scroll your chart back to 1990 using the history scroll bar at the bottom of the chart. Look at how T2115 spiked up during the pullback in the second half of the year. T2115 peaked as high as 35%, and we haven't seen a value higher than 14 since. This was just before the Dow took off on its upward run throughout the 1990s.

T2116 Percentage of stocks trading 2 channels below their 40-day moving average

Look for the same patterns described in T2115. Keep in mind that with a 40-day moving average, you will probably see more frequent spikes and higher percentages that with a 200-day moving average but this may give a better short-term picture.

T2117 52-week New High / New Low Ratio

This indicator is calculated as follows: new highs for the last 52 weeks divided by new highs + new lows. Another indicator which moves between 0 and 100, this one gets closer to 0 and 100 than some of the others. It's a good overbought/oversold indicator as well as a good confirmation/non-confirmation indicator when you plot a moving average of it.

T2120 26-week New High/New Low Ratio

New highs for the last 26 weeks divided by new highs + new lows. Research results have revealed a bullish tendency at extreme high readings and a slightly bearish tendency at extreme low readings.

T2121 13week New High/New Low Ratio

New highs for the last 13 weeks divided by new highs + new lows. Research results have revealed a bullish tendency at extreme high readings and a slightly bearish tendency at extreme low readings.

T2122 4week New High/New Low Ratio

New highs for the last 4 weeks divided by new highs + new lows. Research results have revealed a bullish tendency at extreme high readings and a slightly bearish tendency at extreme low readings.

T2123 Cumulative 4week New High/New Low

This is simply the difference between the number of issues reaching new highs (during a 4-week period) and the number of issues reaching new lows (during the same 4-week period). Research results revealed a slight bullish tendency at extreme high readings and

a slight bearish tendency at extreme low readings. However, results were not significant enough to warrant reliance on this indicator for market timing purposes.

T2126 Nasdaq 100 Advance Decline Line

Calculation is the same as T2100.

T2127 Russell 1000 Advance Decline Line

Calculation is the same as T2100.

T2128 Russell 2000 Advance Decline Line

Calculation is the same as T2100.

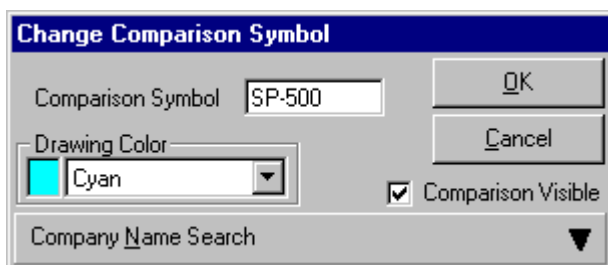
T2129 Russell 3000 Advance Decline Line

Calculation is the same as T2100.

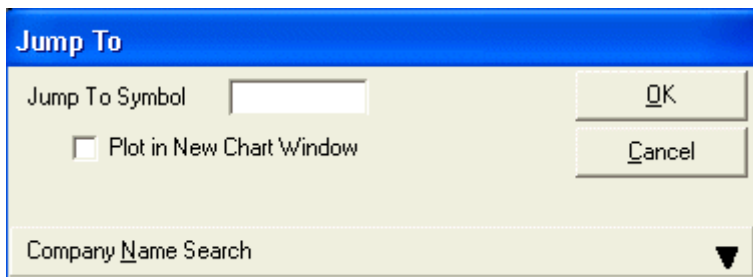
Comparison symbol

This feature allows you to superimpose one chart onto another for comparison. Many people use this feature when comparing an issue with a market index. Both graphs are plotted on the same logarithmic scale (be sure you have chart scaling set to Logarithmic), thereby achieving a mathematically valid comparison.

To plot a comparison graph, just click Comparison Symbol in the Chart Templates menu at the top of the screen or press CTRL-C.



You can also press add a new chart window with a different symbol simply by pressing the "J" key on your keyboard and selecting "Plot in New Chart Window." This will allow you to view two charts with the same settings (time frame, indicators, etc.) for two different stocks.



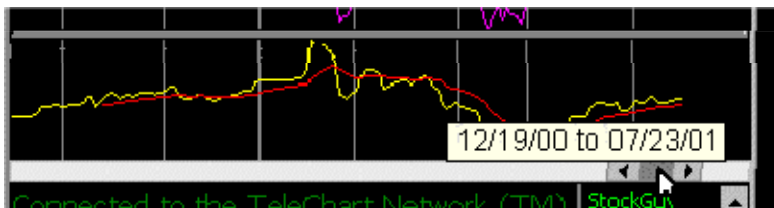
Tip: To automatically plot each stock's industry average as a comparison graph, use the symbol INDUSTRY to compare against the main industry group or SUB-IND to compare against the stock's sub-industry group.

Scroll bar and Pointer Mode

There are a couple of different ways to view past history on a symbol in TeleChart.

Using the scroll bar

Using the history scroll bar at the bottom of the chart, you can scroll back to any period in time. Just grab the scrolling block (shown below) with your mouse and drag. As you are dragging the scroll bar, the selected range of dates is displayed.



Using the pointer

Pointer Mode allows you to move a vertical line (date) and a horizontal line (price) across the chart to see the exact price for a given point on the price graph. As you move the pointer across the screen, the information for each period that the pointer crosses will be displayed in the upper left corner of the chart page, including the date, open, high, low, close, volume, and net change. The pointer will also display the value of most indicators plotted in the top window. The pointer will display information based on the period of the chart. For example, if your chart is set for daily bars, data for each market day will be displayed. If you have selected a 3-day trading bar, data will be displayed for the three-day period.

Press the period (.) key on the keyboard to toggle the pointer between its three modes: on, on w/data box, and off. Use your mouse to move the pointer on the chart. Press the backslash "\" key to cut the chart off, making it end where you placed the pointer.



You can also move backward and forward in time using the brackets [] and curly brackets { }. The brackets will move you backward [and forward] one data point at a time. The curly brackets will move you backward { and forward } 5 data points at a time.

With the data box displayed, you can see the price can indicator values for the date selected. Only the values for indicators plotted in the top window will be displayed.



Multiple Charts

You can add a new chart window by clicking the New button in the upper left corner of the screen and selecting New Chart Window. You can also click the Layout button in the upper right corner of the TeleChart screen and selecting a multiple chart layout.

New Chart Window

Click the New button in the upper left corner of the screen and select New Chart Window; the options listed are described below:

Blank - Loads a new blank chart window displaying the active symbol.

Comparison - Prompts you for a symbol to load in the new chart window (all other parameter remain the same.)

Additional Time Frame - Loads a new chart with the Active Symbol in the time frame you select.

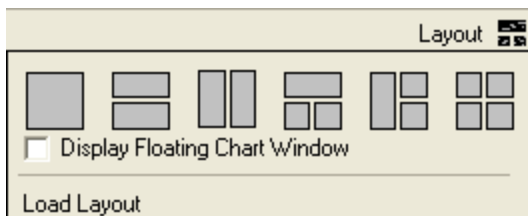
Industry Comparison - Loads a new chart displaying the Industry of the Active Symbol.

Sub-Industry Comparison - Loads a new chart displaying the sub-industry of the Active Symbol.

With multiple charts displayed, you can focus on any one chart simply by double-clicking on it with your mouse. This will enlarge the selected chart and thumbnail the remaining charts. When the Active Symbol is thumbnailled it will be outlined in red.

Chart Layouts

Click the Layout button in the upper right corner of the screen to choose from 5 preset multiple chart layouts or select a layout you have saved.



Each new chart window can be customized. It can have a ticker symbol, zoom level, chart template, and time frame independent of the primary chart, or you can sync it to the primary chart. To select which, if any of these aspects you want linked to the active symbol, simply click on the chart options button (see picture below.) If a linked aspect is changed, all linked charts are changed also. For example, if you link the ticker symbol and jump to GE, all linked charts would change to GE.



Display Floating Chart Window

There is also an option to show a second chart window which is useful if you have a dual monitor setup and want to view charts on both. Just place a check in the box and a floating chart window will come up which you can drag over to the second monitor. The layouts discussed above can also be applied to this second chart window, which gives you the ability to display eight different charts at the same time.

Saving and Loading Layouts

Saving a layout will allow you to easily access it later. To save a layout you have create simple click the layout button and choose **Save Layout**. To load a saved layout, click the layout button and click on the name of the saved layout you want to load.

Sorting and scanning to Find Stocks

The Power of Sorting

Sorting allows you to create your own stock rankings by ranking the stocks in any WatchList by any criteria you choose. Creating your own stock rankings can be a great way to bring the most attractive stocks to the top of your WatchList. Sorting allows you to answer many of the questions you have, like:

What are today's big gainers? Big losers? Most actives?

What stocks are other TeleChart users looking at right now?

Which industry group saw the heaviest trading today?

Which stocks in that industry group are showing attractive P/E Ratios?

Which of the stocks in my portfolio are exhibiting signs of being overbought?

What are the most volatile stocks in the NASDAQ 100?

These questions and countless others can be answered easily by sorting and sorting is simple. In the graphic below the stocks in the S&P 500 are being sorted by Price Percent Change 5-day. You can set the sort direction by clicking the sort direction button as shown below. A sort direction of zyx will sort the symbols in your WatchList from the highest value of the sort criterion to the lowest. A sort direction of abc will sort from the lowest value to the highest. To change the criteria you are sorting by simply click the Sorted by: pulldown and you can choose from a list of both technical and fundamental criteria. A description of each of these conditions is found in the glossary section of the help system. You can create your own sort criteria using the Personal Criteria and perform 'on the fly' sorts using the Custom Date Sort tool.

Symbol	Company Name	Sort Value
CPN	Calpine Corp	+26.54%
AMR	Amr Corporation	+23.12%
DYN	Dynegy Inc	+13.89%
LMT	Lockheed Martin Corp	+12.68%
BA	Boeing Co	+10.89%
JWN	Nordstrom Inc	+8.54%

EasyScan™

TeleChart is able to scan your entire databank for the symbols which meet the criteria you specify in about a second. This allows you to mold EasyScans on the fly to produce the exact list of symbols you are looking for. There are no clunky formulas to enter. You just select values and

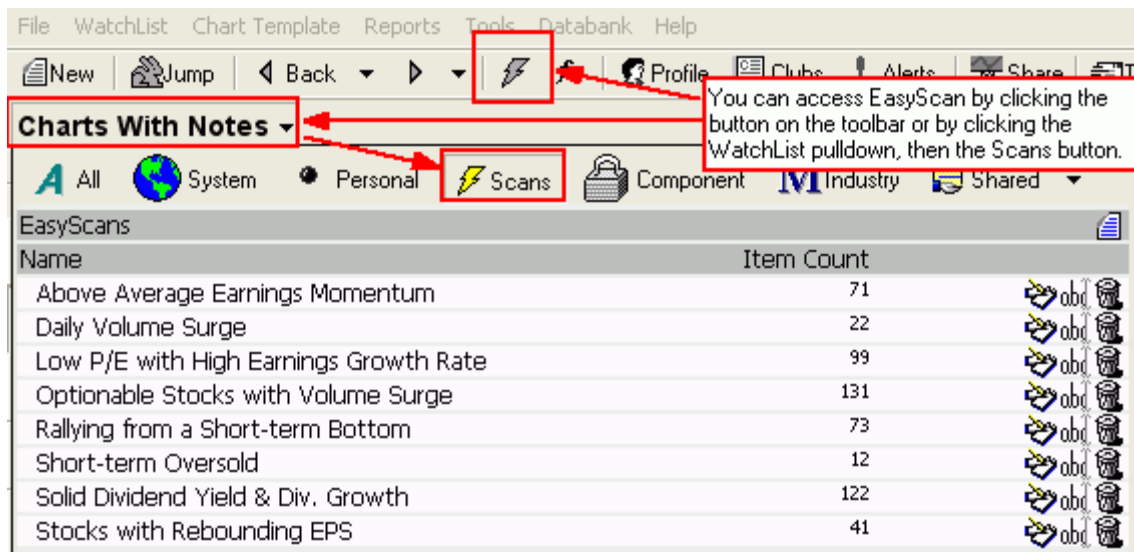
rankings from a simple range selector and you'll see how many stocks fit into your scan as you build it. When you get the count you are looking for, hit the save button and the results appear within seconds ready to be sorted, charted, researched and analyzed.

An EasyScan is a type of WatchList, so viewing the results of a scan is as simple as changing your active WatchList to the EasyScan you wish to view. You will notice the EasyScans grouped together when you change your WatchList, you can use the EasyScans that come with TeleChart, edit these by clicking the edit button to the right of the scan name, or create a new scan by clicking New in the upper left portion of the TeleChart screen and choosing New EasyScan.

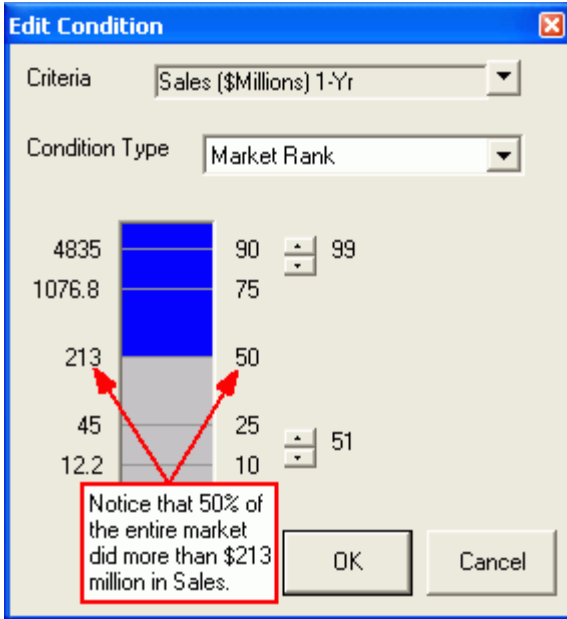
TeleChart allows you to simultaneously scan for long-term technical conditions, fundamental conditions and intra-day conditions. The example scan below shows how easy it is to mix short-term and long-term conditions. This scan took less than 2 minutes to create using a graphical range selector. Not one keystroke was used to construct this scan.

- Volume surging today
- Stochastics is below 25 as of 20 minutes ago
- Dividend yield is above 1.25%
- EPS % change last 2 quarters more than 10%
- Price growth rate last 3 years better than half the market
- Market Cap above \$135 million

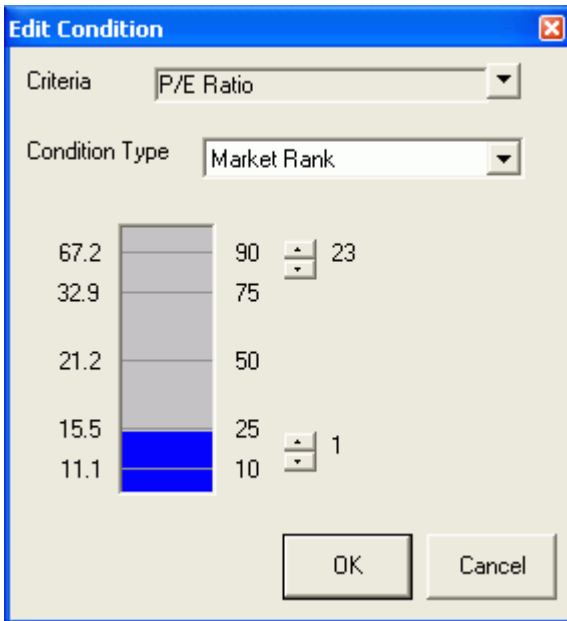
You are given a count of how many stocks fit your scan as you create your scan. This allows you to fine tune your scan until you reach a count you are satisfied with.



Designing scans in TeleChart is so easy, you'll be an expert in minutes. Each criterion has its own graphical range selector. The graphic above shows the range selector for Volume Surge Today. The power in this tool is that it gives you information before you set the condition. In the example below, before you decide what limits you are going to set for sales, you can see from the range selector that half of all companies did more than \$213 million and half did less. Twenty five percent of all companies did more than \$1.07 billion and seventy five percent did less. Ten percent did more than \$4.8 billion and ten percent did less than \$12.2 million!



Let's do one more example from a little bit of a different angle to make sure you understand the remarkable simplicity and power in these range selectors. We'll use the P/E Ratio because you probably have your own opinion as to what values you consider to be high and low P/E Ratios. Let's say you consider a low P/E ratio to be 15. Do you know what percentage of stocks have a P/E ratio of less than 15? Maybe you did a year ago. But that is different today and may be real different next month. The range selector below shows that currently about 24% of stocks have a P/E ratio of less than 15. The median P/E ratio is approximately 21.2. Ten percent of stocks have a P/E ratio of higher than 67.2. You may decide a P/E ratio of 15 is little too strict and change your limit to 20, or even higher.

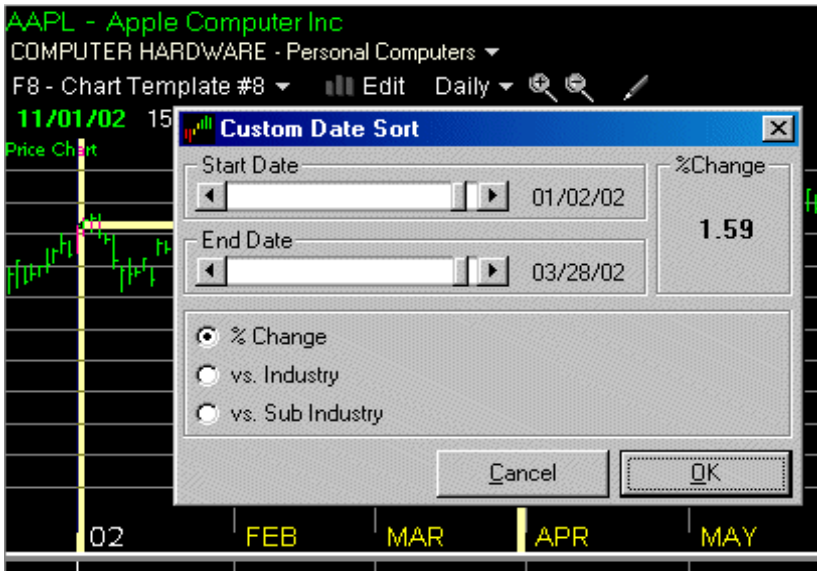


Creating scans with TeleChart is truly an interactive process. You find yourself experimenting with data you never thought you would apply in a scan because the data comes to life. You choose a criterion. The range selector tells you about the criterion. You slice a segment of the market,

narrowing your count. Choose another criterion. Study it. Slice it. Narrow the count. Modify the slice. Narrow. Modify. Narrow. When you got it just right, save your scan and begin charting and researching your results. In minutes you'll find more potential trades than you ever thought possible.

Custom Date Sort

Using the Custom Date Sort tool, you can calculate a percent change criteria for a group of symbols for any specific period of time. If you want to see how the Computer Hardware stocks performed during first quarter of 2002 just press the letter C on your keyboard, then click and drag your cursor from the beginning of 2002 to the end of March. You can then fine tune the date range to Start Date = 01/02/02 and End Date = 03/28/02. Then click OK to build the criteria. TeleChart will then begin to calculate the % change between the dates chosen for all of the stocks in your WatchList. When it is finished calculating, the stocks will be sorted by that % change. This allows you to easily measure the performance of a list of stocks over any time period.



There are three option buttons just below the sliders on the Custom Date Sort dialog that let you choose how the sorts are calculated. This option will always default to % Change.

% Change: Calculates the percentage change in price between the start date and the end date specified.

vs. Industry: Calculates the difference in percent change of price vs. the main industry. If, for example, the stock was up 20% and the industry was up 15%, the resulting value would be 5%.

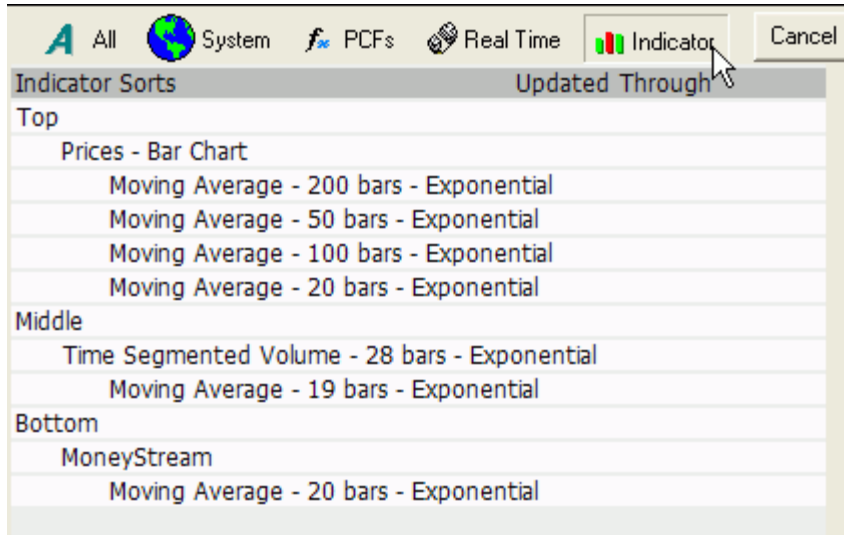
vs. Sub Industry: Same as "vs. Industry" but uses the performance of the sub-industry instead.

IMPORTANT: Keep in mind that if you are building a Custom Date Sort on a large WatchList it may take a minute or so to calculate.

Indicator Sorts

Sorting by an Indicator

In addition to Sorting by canned criteria and PCFs, you can also sort a WatchList by any indicator currently displayed on the chart. Just click the Sort pulldown and select the indicator you want to sort on. You can accomplish the same thing by right-clicking on the indicator directly on the chart and selecting SortBy.



Clicking on the indicator you want to sort by brings up the Indicator Sort Properties dialog.

Check **Compared To:** to sort by one indicator compared to another (see Compared To: sort methods).

Time Frame in the sort is the same as on a chart. If you select Daily, the sort will use Daily data in the calculation. If you choose 15 Minute it will use 15 minute data in the Sort (Platinum only).

SORT METHODS:

For most indicators you can choose between Visual Change, Value, Net Change and %Change.

Visual Change - Results show the percentage change in vertical screen real estate of the indicator for the **Visual Change Period** specified.

Visual Value - Results show the current value of the indicator in relation to its position on the screen. A Visual Value of 100% means the indicator is at a new high for the current time frame and zoom settings on your chart.

Actual Value - Results show the current value of the indicator for each symbol in the Sort.

Net Change - Results show the Net change of the indicator for the Net Change Period specified.

% Change - Results show the % Change of the indicator for the % Change Period specified.

Choose the number of symbols in the current WatchList to use in the sort.

Sort Refresh Frequency - only available when sorting using a real-time timeframe or, in the case of Daily, Weekly, etc., if you place a check in the box beside **Use Real Time Data**. You can have the sort refresh automatically from every hour down to every 30 seconds. When using real time data, you are limited to sorting the top 200 symbols in the active WatchList.

Sorting one indicator compared to another

In addition to sorting by the value or performance of an individual indicator, you can also sort by the difference between two indicators plotted on the screen. Just place a check in the **Compared To:** box then choose the comparison indicator from the list.

Select the **Time Frame** (defaulted to the time frame of your chart).

Then choose the **Sort Method:**

Comparison – Visual Difference

Results show the percentage difference in vertical screen real estate of the **Sort by:** (A in the graphic below) and **Compared To:** (B in the graphic below) indicators.

A value of 20, for example, would indicate that the difference between A and B equals 20% of available screen real estate and $A > B$. Value of -20 would indicate the same difference but $B < A$.

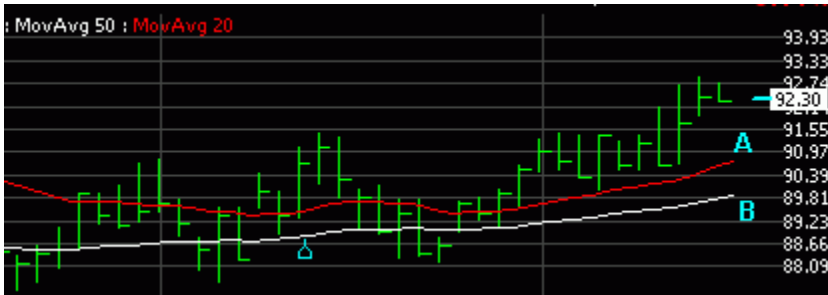
The symbol used in our example below returned a value of 16.20 in the Sort since the MovAvg20 is higher than the MovAvg50 by about 16% of the vertical screen real estate.

Comparison – Net Difference

Result shows the net difference in the current values of indicators A and B. Calculation: $A - B$.

Comparison - % Difference

Result shows the % difference in the current values of indicators A and B. Calculated as $(A - B) / B * 100$.



Price Channel sort

Enables you to sort by price relative to it's position in the channel. This sort can be run on any channel indicator including Envelopes, Bollinger Bands and Custom Price Channels. There is also a Channel sort method for Linear Regression lines.

Choose the Time Frame you want to sort on. This is defaulted to the current time frame on your chart.

Sort results represent the latest price plot relative to its position in the channel. A value of 100 would mean it's touching the top channel line and a value of -100 would be touching the bottom channel line. Values greater than 100 or less than -100 reflect plots outside the upper or lower channel.

In the example below, this symbol returned a sort value of -31.78 and, as you can see in the graphic below, the current price is in the bottom half of the channel.



Linear Regression sort

To sort by a linear regression line on the chart, right-click on the regression line, then click Sort By. You can also click the Sort pulldown at the top of the WatchList, then click the Indicators button to select the Linear Regression line.

Sort Methods:

Channel - Same as price channel sort in that the value reflects where price is relative to the channel lines. In the graphic below the sort returned a value of 101.10 and you can see that price is right at the top channel line (yellow circle)..

Visual Slope - Value represents % of vertical screen real estate the linear regression line covers.

Percent Slope - Value represents the % change in one period of the linear regression line. Calculation = $((A - B)/ABS(B)*100)/LR \text{ Period}$. The LR Period is the Period value from the linear regression line.



Indicator sorts using real-time data (Platinum Only)

When you sort by an indicator plotted on the screen, you have the option of choosing the time frame of the data used to calculate the sort. By default, this value is set to whatever time frame you have selected on the chart. If you're looking at a 15 Minute chart and elected to sort by a 20 period moving average on the chart, the Indicator Sort Properties dialog would look something like this:

The time frame is already set to 15 minute, the sort method is defaulted to Visual Change and the Visual Change Period to 1.

Notice that the "Use Real Time Data (Max 200)" is grayed out. This is because, by default, a sort based on a 15 minute time frame MUST use real time data so you have no choice.

Where this option becomes a factor is if you were to choose a time frame of Daily, 3 Day, Weekly, etc. If you leave the box unchecked, there is no limit to the number of stocks that can be calculated in the sort and the sort is calculated based on the latest available delayed data (which you get when you Update the Databank).

If you check this box when using a "daily" time frame, then the sort will use the last price available (in real time) in its calculation. This, in turn, invokes the 200 symbol maximum on real time time frames.

The reason for the 200 symbol maximum when using real time data comes down to resources...yours and ours. Anytime a real time sort is run, the data for each symbol in the sort has to be downloaded to the RT cache on your machine. Depending on your connection, the time it takes to do this will vary.

Personal Criteria Formulas

Personal Criteria - Introduction

You can create your own custom criteria to be used to sort by or in the creation of EasyScans. These criteria are stored as Personal Criteria.

There are two basic types of Personal Criteria: criteria that are evaluated to a true/false condition and criteria that are evaluated to a range of values. Criteria that are evaluated to a range of values will display these values when used as a sort criteria and produce a range selector when they are selected as EasyScan conditions.

We recommend creating criteria that produce a range selector whenever possible because they give you much more information to work with and are reusable.

For a simple illustration, let's say you wanted a criterion to find stocks that are up today from the previous day's close. You could write a formula like $C > C1$ (today's close greater than the close yesterday), but this would only be useful if you wanted to include stocks that are up from yesterday. But what if in another scan you wanted stocks that were down. If you used the formula above, you would have to create another Personal Criteria called "Stocks down today" and use the formula $C < C1$. Now, every time you update your Personal Criteria, two formulas would have to be evaluated.

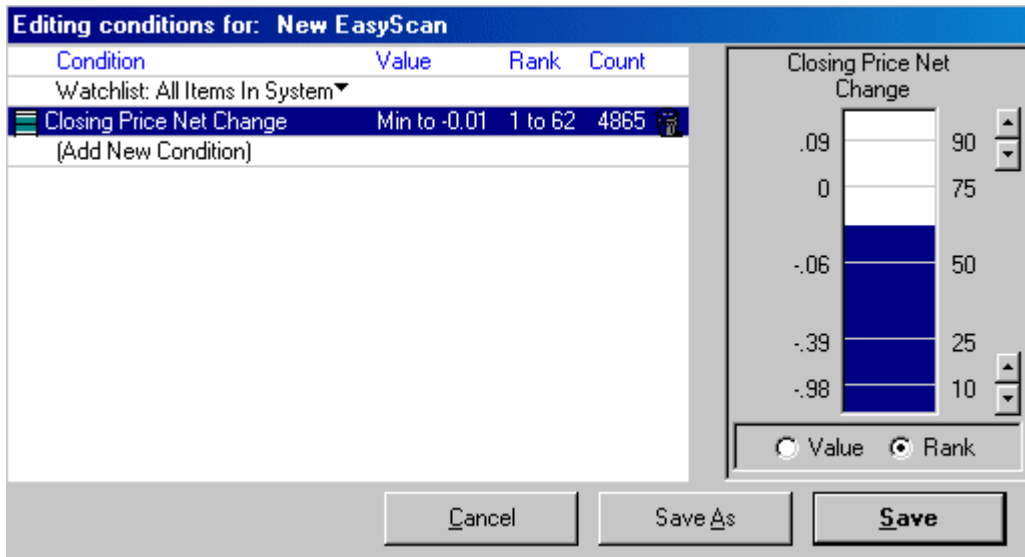
You could kill two birds with one stone by using the formula $C - C1$ (today's close minus yesterday's close). $C - C1$ will give you the value of the difference between today's close and yesterday's. If the value is positive you know it closed up today, if the value is negative you know it closed lower today, if the value is 0 it closed unchanged today. You can view these values if you sort by this Personal Criteria Formula or you can select the exact range of values you are interested in using the range selected generated when this PCF is used in an EasyScan.

The screenshot shows a dialog box titled "Editing conditions for: New EasyScan". It contains a table with the following data:

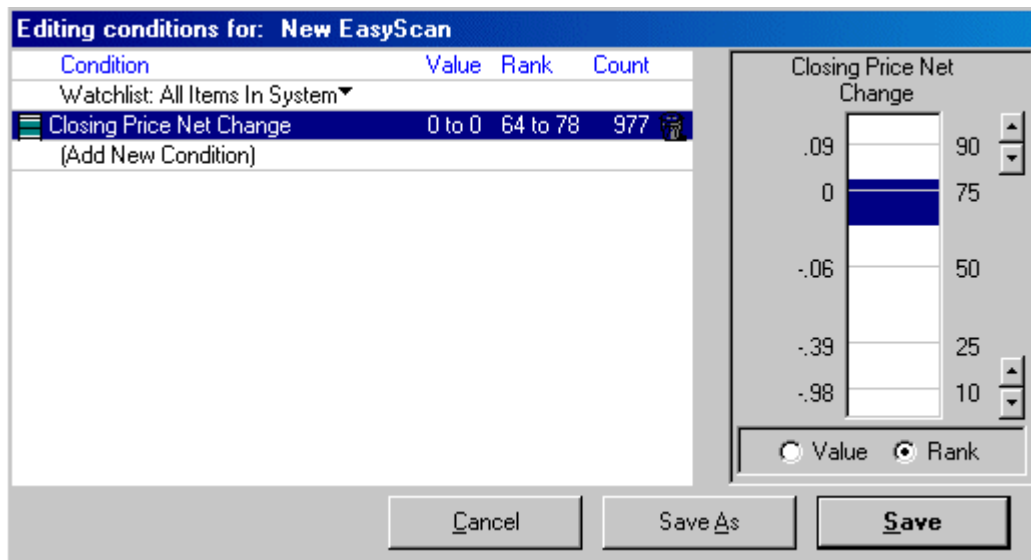
Condition	Value	Rank	Count
Watchlist: All Items In System			
Closing Price Net Change	0.01 to Max	80 to 99	1560
(Add New Condition)			

To the right of the table is a range selector for "Closing Price Net Change". It features a vertical scale with values: .09, 0, -.06, -.39, and -.98. On the right side of the scale, there are numerical values: 90, 75, 50, 25, and 10. Below the scale are two radio buttons: "Value" (unselected) and "Rank" (selected). At the bottom of the dialog are three buttons: "Cancel", "Save As", and "Save".

To find stocks that are down today, set the range selector to negative Values:

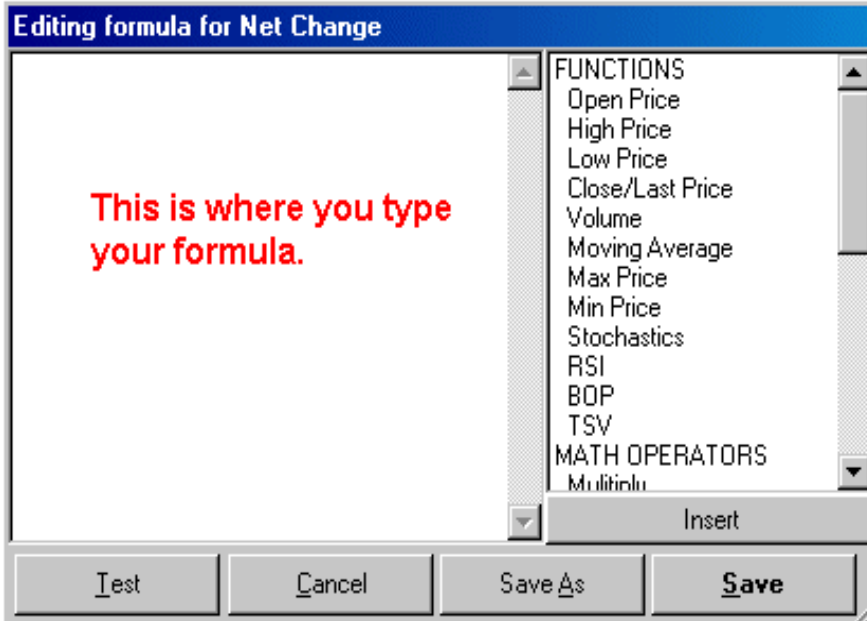


For unchanged, set the range selector to cover the range of stocks with a Value of 0:



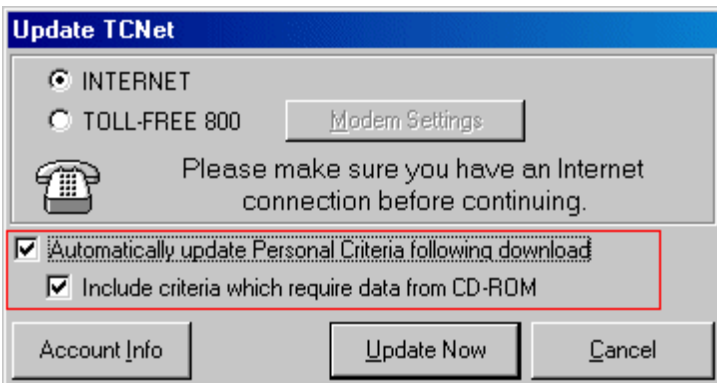
Creating Personal Criteria

To create a new Personal Criteria Formula, or PCF, click the New button in the upper left corner of the TeleChart screen and choose New Personal Criteria Formula. You'll next be asked to name your formula and then be presented with the window below.



After you have written a Personal Criteria Formula, click Test to test it for any syntax errors. Clicking Test will result in one of four different results. A result of True, False, or a numeric value are all acceptable results. (Note: a result of False does not indicate an error in your formula, it simply means the formula is not true for the symbol being tested.) A result of "Error in formula syntax" means you have mistyped something. This could be because you have too many or too few parenthesis or that you have used a character TeleChart does not recognize.

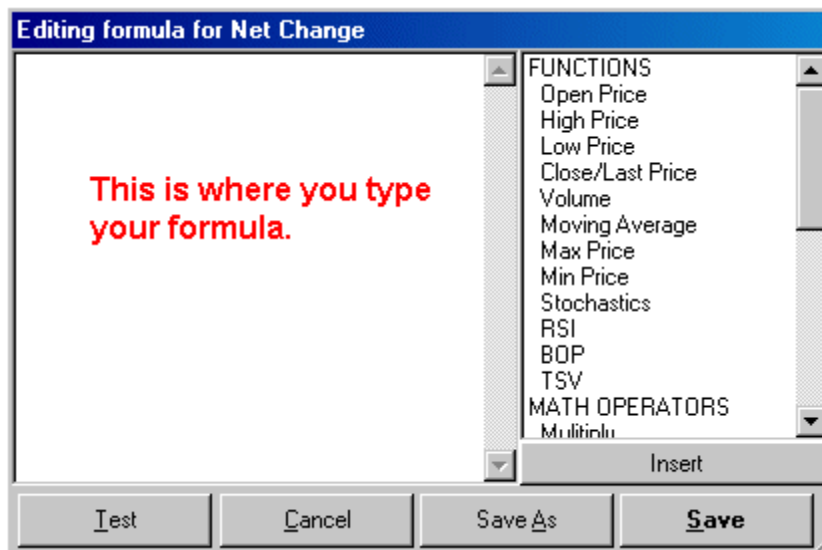
After you have tested your criterion, click save to save it. Before you can use your Personal Criteria Formulas, they must be updated. You can do this by Personal Criteria Formulas from Databank menu and choosing Update or you can have TeleChart update your Personal Criteria each automatically each time you update your databank by selecting the "Automatically update Personal Criteria following download" option after clicking Update at the top of the main TeleChart screen.



Once you have updated your Personal Criteria you are ready to use them. Keep in mind what you have just done, you have just added new criteria to your TeleChart arsenal. These new criteria now act just like any of the criteria that came with TeleChart; you can use them to sort stocks and you can use them as conditions in an EasyScan.

Personal Criteria Language

The language used to write Personal Criteria is actually very simple. The right side of the PCF window (shown below), lists the available Functions, Math Operators, and Logical Operators. Clicking one of these and clicking Insert (or just double clicking the item) will insert it into the formula window. Most of the functions in this list are described below.



Time Frames

Personal Criteria are calculated on market days. The following time values will come in handy and you write PCFs. There are 5 market days in a week, 21 in a month, and 250 in a year.

Open Price, High Price, Low Price, Close/Last Price, and Volume

O is today's opening price. **O1** is yesterday's opening price, the 1 after the O means one day ago. **O5** would be the opening price 5 days ago. This pattern is the same for High, Low, Close, and Volume. Therefore **C** is today's closing price and **C21** would be the closing price one month ago. **V** is today's volume and **V250** would be the volume one year ago.

Moving Average (simple or exponential)

You can calculate the average of other functions using the **AVG** or **XAVG** syntax. The formula for the average closing price over the last 40 days (same as the simple 40 day moving average) would be **AVGC40**. Notice how the formula is written **AVG**=average, **C**=close, **40**=time period.

For the 40 day **exponential moving average** you would use **XAVGC40**. The formula for the 10 day average of volume would be **AVGV10**, notice the same pattern applies.

Max & Min

Max and Min are used to calculate the highest or lowest value of something over a specified time frame. If you wanted to find the highest closing price of the last 5 trading days you would use the formula **MAXC5**; MAX=highest value, C=Close, 5=time period. Notice how this follows the same pattern as the AVG function. To find the lowest low over the last year you would use the formula **MINL250**.

Stochastics & RSI

The Stochastics and RSI functions allow you to use the values of these indicators in your formulas. The formula for Stochastics with a period of 7 and an SK period of 3 would be **STOC7.3**. The easiest way to begin writing formulas like this is to double click on the function in the list and use the formula wizard. Tip: If you want to write a formula that gives you the value of an indicator you have plotted on the chart be sure the parameters for the indicator plotted match the formula and they are plotted using simple average, not exponential.

[Click here for a complete function list](#)

Personal Criteria Language Function List

The Personal Criteria language contains the following functions and operators.

Functions	EasyScan language equivalent
Open	O
High	H
Low	L
Close/Last	C
Volume	V
Moving Average (see also "Average" below)	AVG
Max Price	MAXCn, MAXOn, MAXHn, MAXLn
Min Price	MINCn, MINOn, MINHn, MINLn
Stochastics	STOC
Wilder's RSI	RSI
Balance of Power	BOP Green (> 30), Red (< -30), Yellow (30 to -30)
Time Segmented Volume	TSV
MoneyStream	MS
On Balance Volume - new in v5.3	OBV
Max() and Min()	MAX(), MIN () - Not in the Function List but can be used.

Math Operators

Multiply	*
Divide	/
Add	+
Subtract	-
Absolute Value	ABS()
Average	AVG(simple) or XAVG (exponential)
Natural Log	LOG()
Exponent	EXP()
Square Root	SQR()
Sign Function - new in version 5.3	SGN() returns +1, 0, or -1 depending on the result of the formula. SGN(C-C1) if today's close is higher than yesterday it will return +1

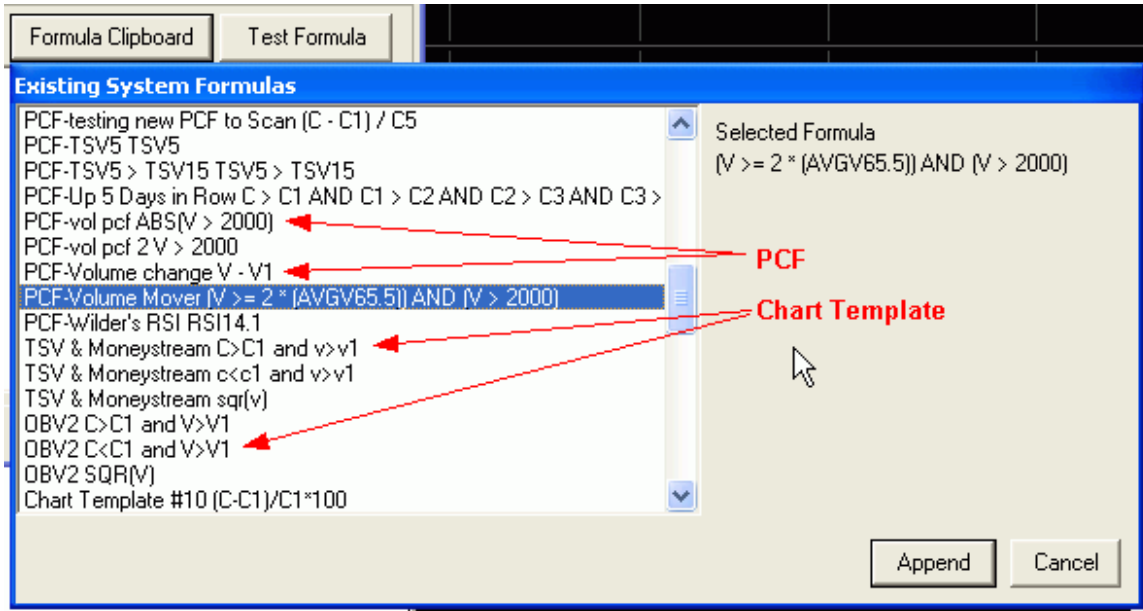
Logical Operators

Greater Than	>
Greater Than or Equal To	>=
Less Than	<
Less Than or Equal To	<=
Equal To	=
Not Equal To	<>
AND	AND
OR	OR

Formula Clipboard

The Formula Clipboard is available on the indicator dialogs for custom indicators and on the PCF editor. Clicking the Formula button on either dialog will bring up a listing of all formulas currently in your TeleChart program. This includes PCF formulas as well as formulas saved to other chart templates.

To use an existing formula in a custom indicator or new PCF, just select the formula from the list and click Append.



Formula Examples

Closing price today	(C)
Yesterday's closing price (one day ago)	(C1)
Closing price one month ago	(C21)
Closing price one week ago (5 trading days)	(C5)
Closing price one year ago (250 trading days)	(C250)
Closing price two years ago (500 trading days)	(C500)
Closing price three years ago (750 trading days)	(C750)
Closing price four years ago (1000 trading days)	(C1000)
Closing price five days ago (5 trading days)	(C5)
Closing price four days ago (4 trading days)	(C4)
Closing price three days ago (3 trading days)	(C3)
Dollar Volume today: today's closing price multiplied by today's volume	(C*V)
Today's high	(H)
Yesterday's high (one day ago)	(H1)
Highest closing price over the last six months (126 trading days)	(MAXC126)
Highest high over the last 5 trading days	(MAXH5)
Today's low price	(L)
Yesterday's low price (one day ago)	(L1)
Lowest closing price over the last six months (126 trading days)	(MinC126)
Lowest low over the last 5 trading days	(MINL5)
Net Change	(C-C1)
Net Change 1 Week	(C-C5)
Net Change 1 Month	(C-C21)
Net Change 1 Year	(C-C250)

Open price today	(O)
Yesterday's open price (one day ago)	(O1)
One week percent change	$((C-C5)/C5*100)$
One month percent change	$((C-C21)/C21*100)$
1-year percent change in closing price (250 trading days)	$((C-C250)/C250*100)$
Percentage change in closing price from yesterday to today	$((C-C1)/C1*100)$
Percentage change in closing price from two days ago to yesterday	$((C1-C2)/C2*100)$
Ten day price moving average	(AvgC10)
Value of Price 10 day moving average yesterday (one day ago)	(AvgC10.1)
Two hundred day price moving average	(AvgC200)
Price Moving Average 40 Day Yesterday: forty day price moving average which excludes today's prices	(AvgC40.1)
Spread Today: today's high minus today's low	(H-L)
Spread Yesterday: yesterday's high minus yesterday's low	(H1-L1)
Balance of Power (BOP) value 5 days ago	BOP1.5
Average BOP value over the last 30 days	AVG(BOP,30) *note use of comma
Time Segmented Volume (TSV) with a period of 18 value today	TSV18
TSV18 value 5 days ago	TSV18.5
Average TSV18 value over the last 30 days	AVG(TSV18,30) *note use of comma
Stochastic 12 & 5: Stochastics calculated using a period of 12 days and a 5 day moving average	(Stoc12.5)
Stochastic 12 & 5 Yesterday: Stochastics calculated using a period of 12 days and a 5 day moving average excluding today's prices	(Stoc12.5.1)
Stochastic 23 & 5: Stochastics calculated using a period of 23 days and a 5 day moving average	(Stoc23.5)
Stochastic 23 & 5 Yesterday: Stochastics calculated using a period of 23 days and a 5 day moving average excluding today's prices	(Stoc23.5.1)
Stochastic 45 & 7: Stochastics calculated using a period of 45 days and a 7 day moving average	(Stoc45.7)
Stochastic 45 & 7 Yesterday: Stochastics calculated using a period of 45 days and a 7 day moving average excluding today's prices	(Stoc45.7.1)
Volume today	(V)
Yesterday's volume	(V1)
Volume one week ago (5 trading days)	(V5)
Volume one month ago (21 trading days)	(V21)

Volume one year ago (250 trading days)	(V250)
5 day moving average of volume	(AvgV5)
3 month (63 day) moving average of volume	(AvgV63)
6 month (126 day) moving average of volume	(AvgV126)
Wilder's RSI – 14 day	(RSI14.1)
Wilder's RSI – 14 day with 10 day avg period	(RSI14.10)
Wilder's RSI – 14 day yesterday	(RSI14.1.1)
Wilder's RSI – 14 day with 10 day avg period yesterday	(RSI14.10.1)

Practice Exercises

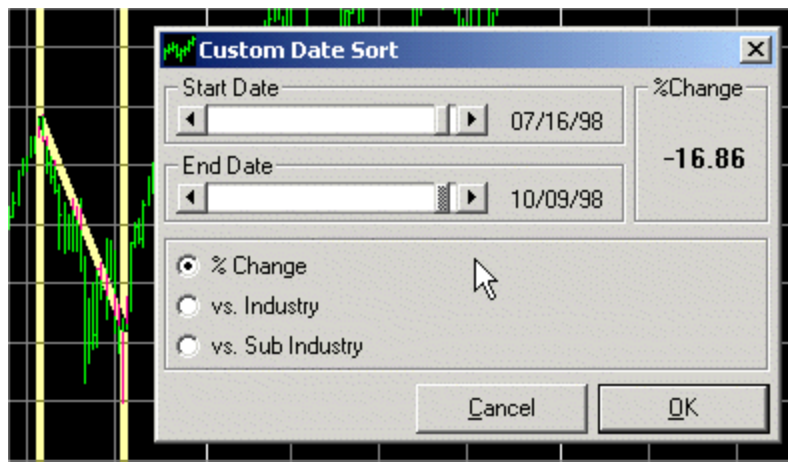
On the fly scanning using flag and unflag

Enhancements made to the flagging features in TeleChart allow you to scan a WatchList on the fly. The example below will walk you through flagging and unflagging symbols based on different criteria with a resulting list of flagged items that meet all criteria you select.

Following the steps below, we're going to flag the SP-500 component stocks that made positive gains through both a pullback in 1998 AND a pullback in 2001. The resulting list of flagged symbols will show those SP-500 stocks that remained strong through two significant pullbacks in the market.

Select the "Standard and Poors 500 Component Stocks" WatchList. Now jump to the symbol SP-500. Set the time frame to 3 Days/Bar and the Zoom to Level 3. You should be able to see the history of the SP-500 as far back as early 1998. You should be able to see two major pullbacks on the chart: one in the third quarter of 1998 and one in the first quarter of 2001.

Now press C to run a Custom Date Sort on the "Standard and Poors 500 Component Stocks" WatchList. Click and drag the mouse cursor (cross-hair) from the top of the 1998 pullback to the bottom. This brings up the Custom Date Sort dialog.



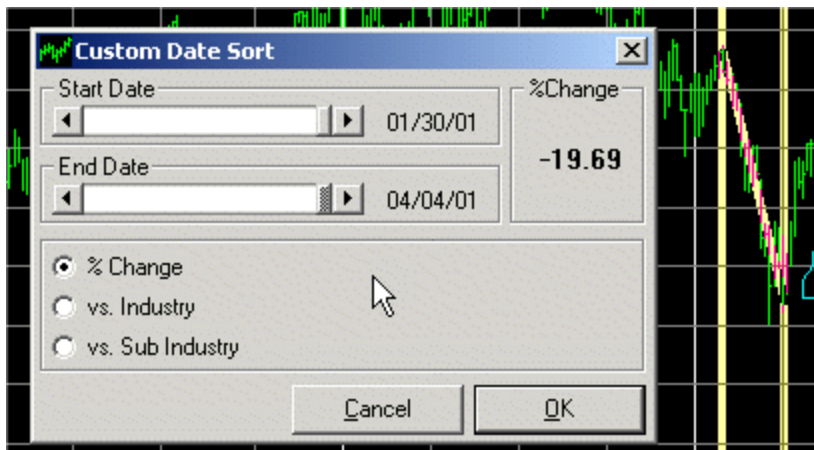
Using the slider bars we've fine tuned the date range to the absolute top and bottom of the pullback. Once you've fine tuned the date range, press OK to calculate the sort. Once it's complete, click the Descending option button under the Sort pulldown and press the Home key on your keyboard to go to the top of the list. Scroll down until you get to the first symbol that made positive ground during this pull back. In our example here it's Loews Corp (LTR). Now right-click on the flag column (outlined in red below) and click Flag | All Above This Item.

AMGN	Amgen Inc	+0.68%
AHC	Amerada Hess Corp	+0.57%
LTR	Loews Corp	+0.14%
<div style="border: 1px solid gray; padding: 2px;"> Flag ▶ All Above This Item UnFlag ▶ All Below This Item UnFlag All Between Here and Active Symbol All Symbols in WatchList </div>		
KUM	Ex	
AGN	All	
MET	Metlife Inc	-1.00%
VC	Visteon Corporation	-1.00%

You should now see a red flag next to LTR and every symbol above it to the top of the list.

Sym...	Company Name	Sort Value
✓ WEN	Wendy's Internat Inc	+1.71%
✓ ABS	Albertson's Inc	+1.68%
✓ NMK	Niagara Mohawk Holdings	+0.79%
✓ AMGN	Amgen Inc	+0.68%
✓ AHC	Amerada Hess Corp	+0.57%
✓ LTR	Loews Corp	+0.14%
FRX	Forest Laboratories Inc	0.00%
INTC	Intel Corp	-0.52%
P&YX	Panachev Inc	-0.58%

So now we have flagged every SP-500 component that showed a positive gain during the market pullback from 07/16/98 to 10/09/98. To find the stocks that also performed well during the pullback in the first quarter of 2001, we'll need to run another Custom Date Sort. Jump to the symbol SP-500. Now press C to run a Custom Date Sort again on the "Standard and Poors 500 Component Stocks" WatchList. Click and drag the mouse cursor (cross-hair) from the top of the 2001 pullback to the bottom. This brings up the Custom Date Sort dialog again.



Using the slider bars we've fine tuned the date range to the absolute top and bottom of the pullback. Once you've fine tuned the date range, press OK to calculate the sort. Once it's complete, click the Descending option button under the Sort pulldown and press the Home key on

your keyboard to go to the top of the list. Scroll down until you get to the first symbol that made positive ground during this pull back. In our example here it's TJX Companies, Inc. (TJX). Now right-click on the flag column and click UnFlag | All Below This Item.

SYT	Sysco Corp	+0.23%
✓	GAS Nicor Inc	+0.16%
	TJX Tjx Companies Inc	+0.03%
	Flag	ico Corp 0.00%
	UnFlag	All Above This Item
	UnFlag All	All Below This Item
	HI Hc	Between Here and Active Symbol
	SOTR So	All Symbols in WatchList
	JP Jeteron mico Corp	0.00%
✓	CMS Cms Energy Corp	-0.37%
	KMC K... Corp	0.55%

What we've just done is removed the flag from any stock that made a positive gain during the 1998 pullback but did NOT perform well during the 2001 pullback. So the only symbols that remain flagged are those stocks in the SP-500 that made positive gains during both pullbacks. Press the Home key to go to the top of the SP-500 component list. We can now review the flagged symbols by pressing Shift-Spacebar to move down through the list. This is just like Spacebar-ing through a WatchList except that it only stops on symbols that have been flagged. If you want to view a list of ONLY the flagged symbols, you can select "All Flagged Items" from the WatchList pulldown.

Standard and Poors 500 Component Stocks ▾			
Sorted by: Percent Change 01/30/01 to 04/04/01 (05/24/01) zyx.. ↓			
1 2 3 4 5 6 7 8 9 10			
Symbol	Company Name	Sort Value	
WIN	Winn-Dixie Stores Inc	+66.89%	
DDS	Dillard's Inc	+38.33%	
FLR	Fluor Corp (New)	+32.68%	
MIR	Mirant Corp	+25.29%	
SIAL	Sigma-Aldrich Corp	+23.71%	
REI	Reliant Energy Inc	+23.54%	⚑
SO	Southern Company The	+23.46%	✓
CPN	Calpine Corp	+20.53%	
EC	Engelhard Corp	+18.52%	

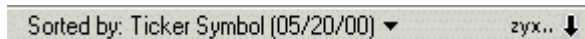
All Flagged Items ▾			
Sorted by: Percent Change 01/30/01 to 04/04/01 zyx.. ↓			
1 2 3 4 5 6 7 8 9 10			
Symbol	Company Name	Sort Value	
REI	Reliant Energy Inc	+23.54%	⚑
SO	Southern Company The	+23.46%	✓
CPN	Calpine Corp	+20.53%	✓
XEL	Xcel Energy Inc	+15.54%	✓
NI	Nisource Inc	+15.42%	✓
DTE	Dte Energy Co	+15.33%	✓

This is just one example of how you can use the enhanced flagging features. Remember, once you flag a symbol it remains flagged until you "Clear All Flagged Items".

Sorting the Stocks in a WatchList

Under the WatchList pulldown you will see the Sort pulldown. Using the Sort pulldown you can sort the WatchList any way you want. You can sort by something as simple as Ticker Symbol and your list will be displayed in alphabetical order by ticker symbol.

1. If it's not already selected, select the Dow 30 list by clicking on the WatchList pulldown, clicking Component, and choosing Dow Jones 30 Industrial Component Stocks.
2. Set the Sort to Ticker Symbol by clicking on the Sort pulldown and scrolling to the top of the list. Now click on "Ticker Symbol".
3. Take note of the ABC (Ascending) and XYZ (Descending) option buttons to the right of the Sort pulldown. These determine the order of the sort you have selected.



4. Change the sort direction to ABC to sort the Dow 30 symbols from A to Z. Change to XYZ and the symbols will be sorted from Z to A.
5. Sorts offer much more than just a convenient way to order a list. Want to know how each of the Dow 30 components performed today? Click the Sort pulldown and press the letter P to skip down to the sort criteria that begin with P. Now scroll down the list and click on "Price Percent Change Today".

Dow Jones 30 Industrial Component Stocks ▾			
Sorted by: Price Percent Change Today- H (05/20/00) ▾ zyx.. ↓			
1 2 3 4 5 6 7 8 9 10			
Symbol	Company Name	Sort Value	
T	At&T Corp	+3.42%	
HD	Home Depot Inc	+0.85%	
MCD	Mcdonalds Corp	+0.40%	
MRK	Merck & Co	+0.12%	
GM	General Motors Corp	-0.18%	

6. The Dow 30 component list is now sorted by price percent change today. Changing the sort direction to XYZ will sort the list from largest to smallest percentage change and you can see how the Dow 30 components stacked up in today's trading.
7. Press the Home key on your keyboard to go to the first symbol in the list. In the example here, AT&T is the biggest gainer of the Dow 30, followed by Home Depot.
8. You may see the letter H next to some of the sort criteria if you have updated while the market is open. This lets you know that the sort criteria are based on intraday data. So you can look at how the Dow 30 components are performing any time during the market day.

Creating a Basic, but Important Foundation for EasyScans

Published June 2, 1998 in the Daily Worden Report—

By Peter Worden

The creation of a very basic EasyScan, in itself, may not provide you with an effective means of ultimately finding individual stocks to buy and sell, but it is a necessary first step toward eliminating the real 'cats and dogs' in the marketplace. Why spend time scanning shares of tiny, low-quality companies that you would probably never consider trading to begin with? Especially when all you need to do to avoid this is employ a couple of conditions based primarily on capitalization and trading volume. Once these are in place, they will undoubtedly provide you with a solid foundation from which additional scans can be erected using a wide variety of available criteria.

TeleChart enables you to apply an EasyScan to any individual WatchList in the system. An EasyScan is created by first selecting a specific WatchList to Scan. I typically choose 'All Stocks' when I initially set-up a scan. This includes all individual common stocks on the New York, American, and NASDAQ Stock Exchanges. While I do have the ability within the program to select just one or two of these individual Exchanges, I prefer to start with the entire stock market. This is currently a universe of about 9,545 stocks. If I wanted my scan to also encompass major market indices and Worden industry groups, I would select 'All Items in System' instead of 'All Stocks'.

Since I have decided to scan the entire market of over 7000 stocks, I need to add some basic criteria to effectively reduce the number of stocks to a more manageable level. In accomplishing this, I also want to eliminate the smallest stocks in the market. In this particular case, I want to get rid of all stocks with a total market capitalization of less than \$100 million. Therefore, the first scan condition I am going to use is 'Capitalization'. Capitalization, also referred to as market valuation, is simply the price per share times the total number of common shares outstanding.

Upon adding 'Capitalization' as a condition of my scan, I utilize the 'Range Selector' to set a specific range according to either 'Value' or 'Rank'. Of course, this same procedure is followed when adding any specific condition to a scan. At a glance, the Range Selector shows the median value of all stocks, based on the specific criterion field. In this case, the median capitalization value of all stocks is approximately \$142 million. Since I have decided that I only want stocks with a minimum capitalization of \$100 million, I will set the 'Value' at '100 to Max'. This also automatically shows me that the equivalent range in terms of percentile 'Rank' is '43 to 99'. If I then click on 'Count Summary', I see that I have now narrowed my list to 5,102 stocks.


The next thing I give major consideration to is a stock's liquidity. Is the trading active enough to provide ample liquidity for participants? Looking exclusively at the actual number of shares traded each day doesn't really tell the whole story. Actual volume figures give no consideration to a stock's price per share, which means it doesn't reflect the amount of actual money changing hands. To counter this, I typically use a scan condition based on strictly dollar volume. This is simply the number of shares traded times the price per share. These specific scan conditions are 'Volume (Dollars) 1-Day', 'Volume (Dollars) 5-Day', and 'Volume (Dollars) 90-Day'. I generally use both the 1-Day and the 5-Day, but not the 90-Day. The reason being is that you'll typically find a lot of stocks with a significant amount of money changing hands today and over the past week, which were not necessarily heavily traded over the past 90-Day period. Providing I make sure to set my criteria at strict enough levels, the 1- and 5-Day fields alone are usually sufficient for accomplishing my goal of finding stocks with ample liquidity.

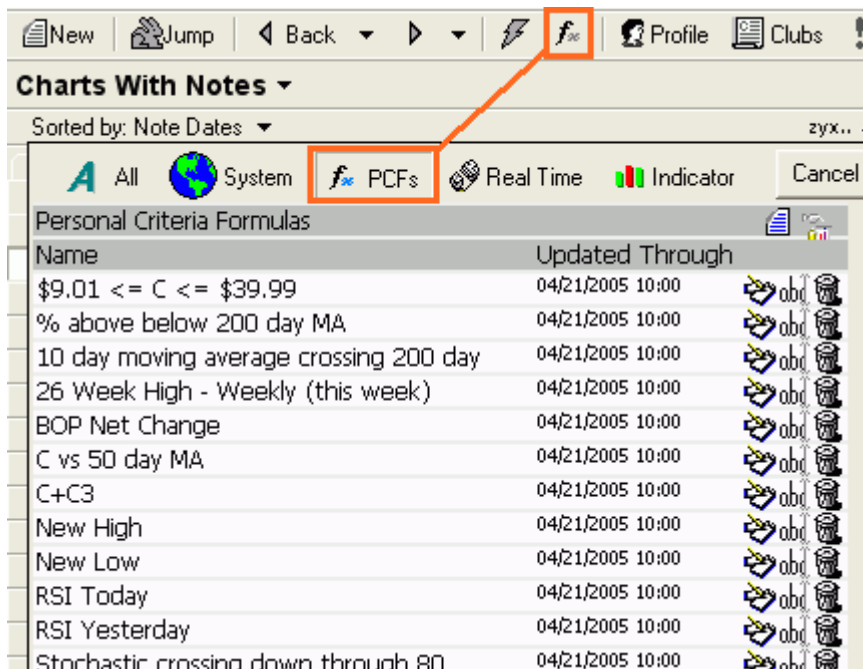
So what do I consider "strict enough"? In making this determination, I use the Range Selector to add these volume conditions based on percentile 'rank'. I am not really concerned with actual values—just a sufficient minimum 'rank' relative to all stocks in the market. I typically set both the 1-Day and 5-Day Volume (Dollars) at a percentile rank of '60 to 99'. Doing so in this particular case brings our new stock count to 3,159.


The individual conditions I have added to this point have served to eliminate most of the unwanted 'cats and dogs' in the market, thereby creating a solid foundation from which a variety of new EasyScans can be formulated. For the purpose of completing this particular scan, I am now going to add one or two final conditions in order to dramatically reduce my list of stocks to approximately 50 or 60 in number.

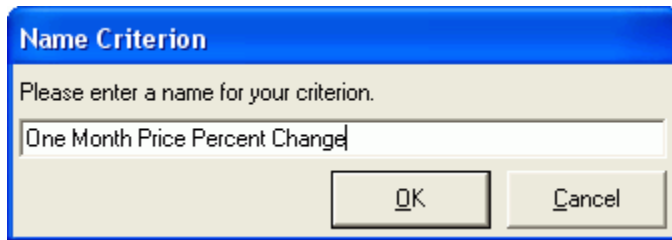
'Volume Surge Today' and 'Volume Surge 5-Day' are definitely two of the most valuable scan conditions. Their calculations are based on an individual stock's current level of trading volume (either daily or 5-Day) relative to its average trading volume. This enables you to spot significant increases in an individual stock's trading volume, thereby alerting you to the stock. When adding one or both of these 'Volume Surge' conditions to a scan, I am only concerned with the percentile 'Rank' and not the actual 'Values'. Moreover, I am also only concerned with the top-ranked individual stocks in each of these criterion fields. For instance, stocks ranking in the '90 to 99th' percentile. By adding both of these conditions to my current scan, I find that I have instantly reduced my result count to 53 stocks. A manageable number of charts that I can now scroll through with various technical indicators, in order to further narrow down my list of possible candidates.

Creating your own Personal Criteria to use in EasyScans

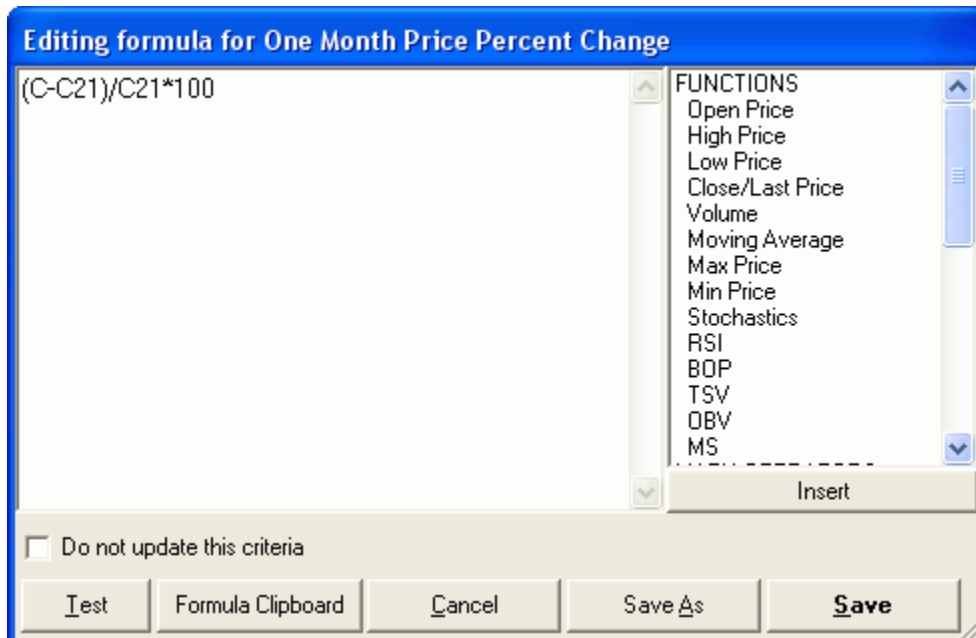
1. Open the Personal Criteria Formula (PCF) dialog by clicking the  button on the toolbar.



2. Click the Create New button  and type in a name for the criterion. Let's call it "One month price percent change".



- Click OK to open the formula editor. Enter the formula using the Function List on the right or just type it in directly into the Formula box.



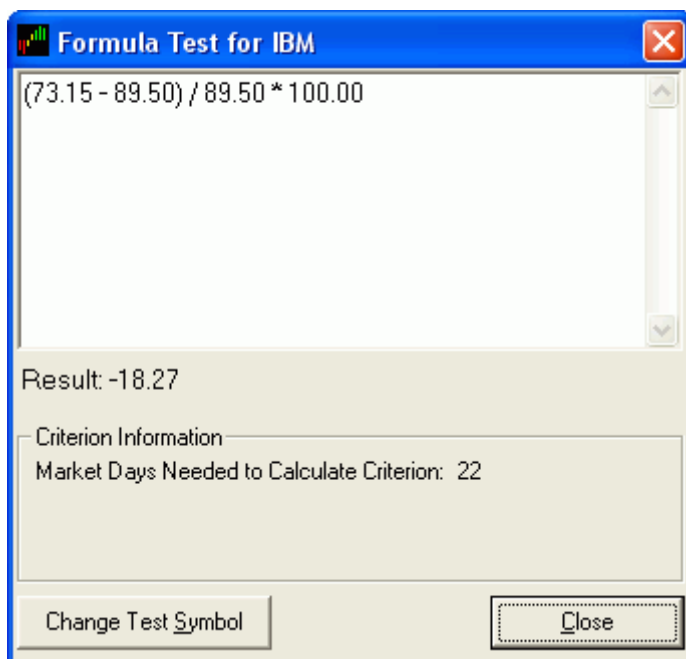
C = Last Price Today

C21 = Last Price 21 Days Ago (21 trading days in a month)

/ = Divide

* = Multiply

- Test the formula by clicking the Test button. The test will calculate the formula on the Test Symbol and return a value. The value in this example is -18.27, or -18.27%.



6. Close the Formula Test then click Save to add the new criterion to your Personal library.

Before you can use a newly created criterion in an EasyScan, it must be calculated. Depending on how much data is required, you may want to calculate it immediately so you can use it, or wait and have it calculated overnight.

Take a look at some of these Formula Examples.

Finding solid performers using Industry Averages and component lists

You can use industry averages and component lists to help find which industries continued to perform well in down markets. Take a look at which industries remained strong during the market decline from early February 2001 to early April 2001. To do this, you'll need to sort the performance of the industry averages during this specific time frame.

Select the "Hemscott Industry Averages" WatchList and then Jump to the symbol SP-500. The SP-500 index is not part of our industry average WatchList, but will give us a frame of reference for market performance. To find out how the industry averages performed from February to April 2001, you'll need to run a Custom Date Sort. Press the letter C on your keyboard and your cursor will turn into a cross-hair. Now click and drag the cursor from the top in February to the low in early April (see example below).

WatchList

Hemscott Industry Averages

Sort

Ascending Descending

1 2 3 4 5 6 7 8 9 10

Symbol	Company Name	Sort Value
MG744	Music & Video Stores	+30.09%
MG745	Auto Dealerships	+21.05%
MG134	Industrial Metals & Minerals	+16.65%
MG443	Reit-Healthcare Facilities	+13.79%
MG635	General Building Materials	+11.98%

You can use the slider bars to fine tune the start and end dates of your sort. Also notice that the "% Change" option button has been selected.

Once the custom date sort process is complete, you can see how every industry performed during the market slide. Click on the Descending option button to sort the list from the best to the worst performers, then press the Home key on your keyboard to go to the top of the list.

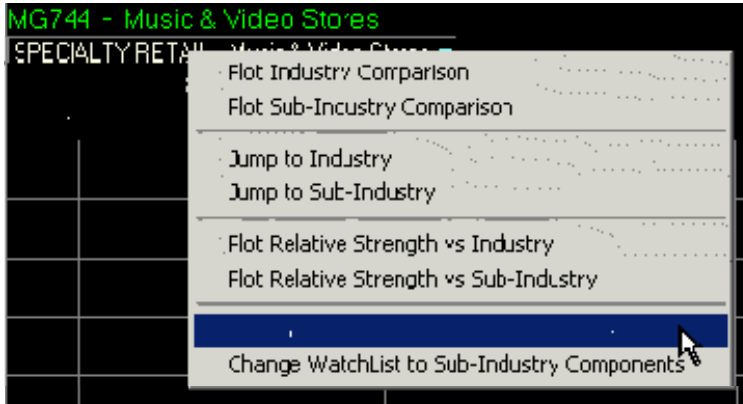
Hemscott Industry Averages

Sorted by: Percent Change 02/01/01 to 04/04/01 zyx.. ↓

1 2 3 4 5 6 7 8 9 10

Symbol	Company Name	Sort Value
MG744	Music & Video Stores	+30.09%
MG745	Auto Dealerships	+21.05%
MG134	Industrial Metals & ...	+16.65%
MG443	Reit-Healthcare Fac...	+13.79%

In the example here, you can see that the Music & Video Stores (MG744) industry was up over 30% while the market was sliding. Auto Dealerships (MG745) also performed well. Both MG744 and MG745 are part of the main industry group "Specialty Retail". Since both of these sub-industries were strong during the decline, let's see what stocks in Specialty Retail were driving the industry. If you click on MG744 it becomes the Active Symbol. Now right-click on the industry name and a menu pops up.



Click on "Change WatchList to Industry Components". This takes you to the "Specialty Retail" WatchList and asks if you want to recalculate the Percent Change Sort, click on Yes. You can now see the performance of each individual stock in the Specialty Retail industry from 02/01/01 to 04/04/01.

Symbol	Company Name	Sort Value
HLYW	Hollywood Entertain...	+81.34%
MOV1	Movie Gallery Inc	+89.20%
HBF	Hancock Fabrics Inc	+88.75%
KMK	Kmart City/Center	+67.79%

Another feature on the right-click menu, "Plot Industry Comparison", plots a comparison graph of each symbol's main industry as you spacebar through the charts. You can use the symbols INDUSTRY and SUB-IND when you plot a Comparison Graph or a Relative Strength graph so that no matter which stock you jump or spacebar to, its industry or sub-industry will always be used.

How You Can Do a BOP Scan

Published August 14, 1998 in the Daily Worden Report—

...by Don Worden

Have you noticed that BOP has been added to the list of Sort Criteria? It's called "BOP Value Today- H." You can use it as a sort or in a Chart Scan. There is, of course, no end of ways to use it. Your own ingenuity is the key factor in Scans. But let me give you a quick little example. I did this today with my data updated through 1:06 PM.

Let's say that I want to look for stocks that have been going down over the past year and have begun to show signs of turning around. I may find some immediate buys and I'll almost certainly find some that may be getting close to a satisfactory entry point. I'm going to focus on BOP as the ingredient that will tip me off that "something is brewing."

I'll bring up the Scan Condition Box and select "BOP Val. I'll set the value at 31 or higher. This is a pretty good BOP reading. 95 percent of all BOP readings are less than 100, which is why we set the charts up from -100 to +100. Of course, this is only the latest day's reading, but you'll find

that in most cases it is the latest reading of a pattern – sometimes a pattern going back for months. What you are most interested in is BOP buying going on right now.

But we don't want to look at all stocks with good BOP. We are interested in stocks that have trended down over the past year. For that we'll select "Price Growth Rate – 1 Yr." We set it at the 40th percentile or lower. All stocks in that range have gone down at least 10 percent in the past 12 months.

Next, select "Price per share" of 12.06 to 75.94. (These don't fall in whole dollar increments.) This eliminates high-priced stocks, which are often blue chips with masses of stockholders. These companies tend to do an exceptional job of keeping secrets and you're not as likely to see informed activity. On the other hand, low price stocks are more vulnerable to mechanical distortion. Not that BOP isn't useful in high and low price stocks, but we have less risk of distortion in the mid-range. And heaven knows, they aren't immune from technical distortion themselves. So let's make it as easy on ourselves as possible.

For the same reasons, let's select stocks with Capitalizations that fall between the 49th and 90th percentiles. And let's select Optionable stocks only. This assures us of some maturity and institutional interest.

My count summary tells me this scan will reduce over 9000 stocks to 74. Fine. I don't mind looking at 74 charts. I save it and name the scan "Decliners with Good BOP."

I now have a watch list of 74 stocks. I sort them alphabetically and start looking at charts. In each case I look at daily bar charts that include BOP, MoneyStream and TSV. In most cases I also check 2-day and 5-day charts. In some cases I check volume bars, especially for today. I punch F to flag each one that interests me. I run through them again and unflag a few. When I finish I have 18 still flagged. I make a separate Watch List of them and name it "BOP Picks (8-14)."

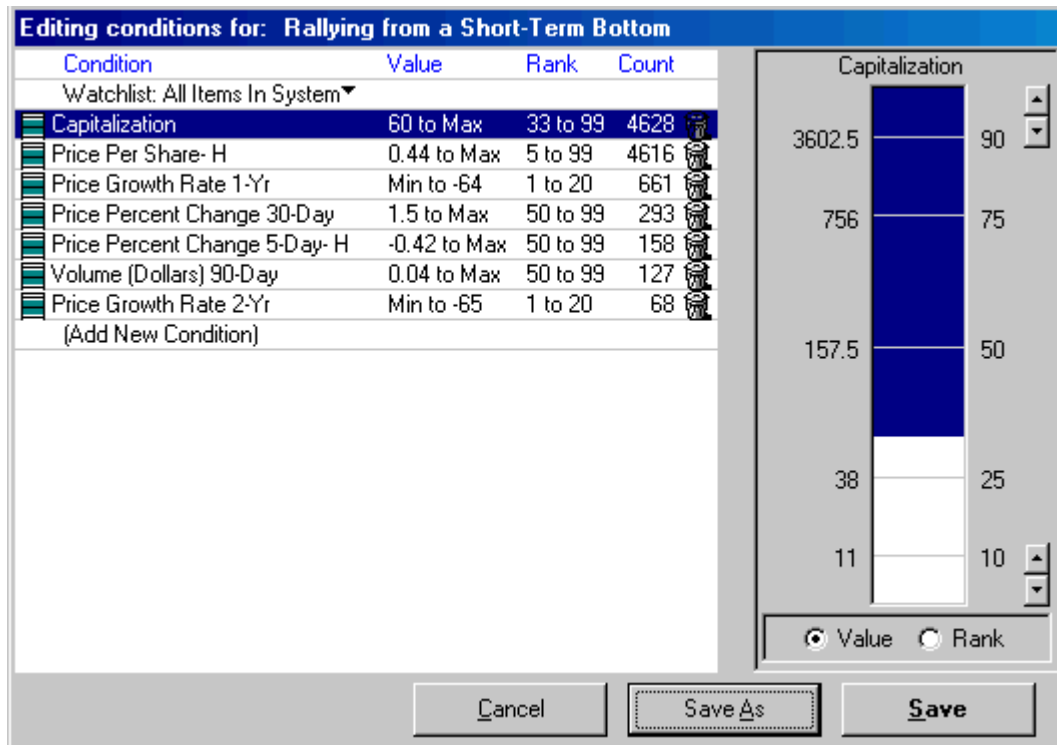
I go through them slowly now. They all have possibilities. The ones I like the best have not only good BOP but also good MoneyStream and TSV. Above all, they must have price patterns that show signs of a turnaround, a change of character. I only scanned for stocks that have gone down. I must find the ones that have started to base by looking at the charts. I come up with the following as possible buys right now. That is on their own merits only – without consideration to the market. The market may talk me into putting everything on hold. But we have to consider one thing at a time. These are the ones that look like buys: BEI, NMGC, RMBS, STLD. VECO also looks quite tempting but needs a dip.

I forgot to time myself, but I'd say the entire process took about an hour and a half. That includes looking at the charts.

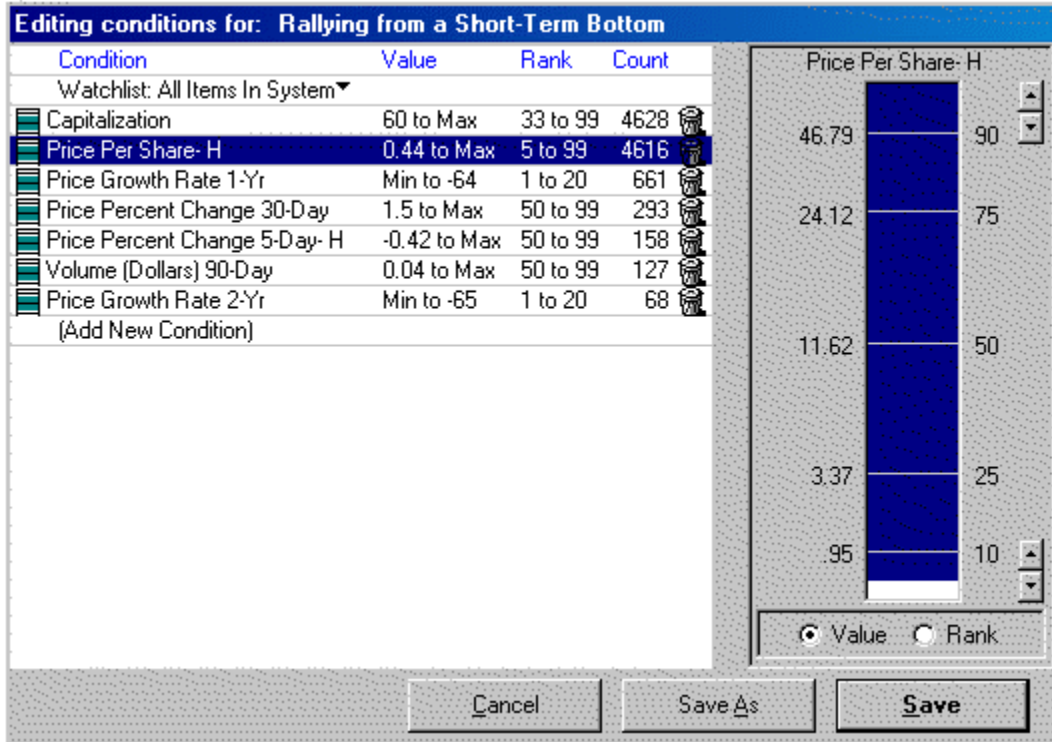
And to think, in September, at no extra charge, Worden Brothers, Inc., is introducing a greatly empowered version of EasyScan. It will embody a powerful concept called "Personal Criteria Formulas." More power than you have now, more room for individuality – and much simpler to use than the EasyScan in Version 3. It won't cost you a penny more than you're paying right now. This is a free upgrade that will be automatically sent out to paid users.

Lesson #9 - EasyScan

1. Click the EasyScan button on the toolbar to open the EasyScan dialog.
2. This dialog lists all available EasyScans in the system. To the right of each scan name is a count of the number of symbols that pass each scan based on the current data.
3. Click on the EasyScan "Rallying from a Short-Term Bottom" to highlight it, then click the Edit button to bring up the scan editor.



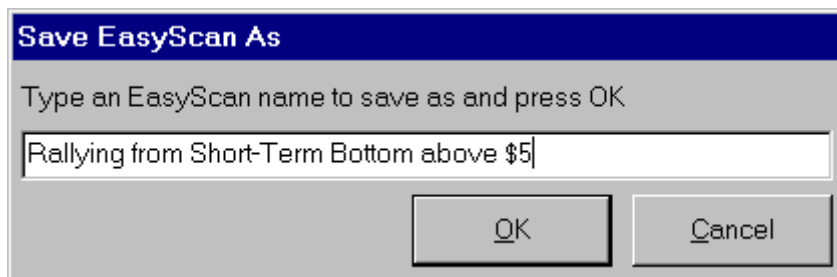
4. The editor shows you the criteria that make up the scan. Click on each scan criterion and you'll see the range selector for that criterion appears to the right. The Value and Rank option buttons at the bottom of the range selector determine whether the criterion is saved according to its Value or Rank.
 - Capitalization is set to a Value of 56 to Max
 - One and two-year Price Growth Rates are set to a Rank of 1 to 20
 - Price per Share is set to a Value of 0.66 to Max.
 - Price Percent Change 30-day is set to a Rank of 50 to 99
 - Price Percent Change 5-day is set to a Rank of 50 to 99
 - Volume (Dollars) 90-day is set to a Rank of 50 to 99
5. From the editor you can make changes to existing scan criteria as well as add and remove criteria. Let's change the Price per Share criterion to exclude stocks with a price of less than \$5.00 per share.
6. Click on the condition "Price per Share" which is currently set to a Value of 0.66 to Max.
7. The Range Selector to the right gives you information just by looking at the Value and Rank scales on either side. The Rank side has increments at 10, 25, 50, 75 and 90 percent and the Value side shows you the actual values of these percentiles based on current data.



8. Here you can see that 25% of all stocks are priced above \$3.37 per share, 50% are priced above \$11.62 per share, etc.
9. The two option buttons below the range selector you to choose whether you want the criterion to be saved as actual value or percentile rank. This is very critical when setting up your scans and here's why.

When you add a criterion and set the range using the range selector, the program will save this criterion to the EasyScan based on either Rank or Value, whichever you select. For example, let's say you choose Market Capitalization as a criterion and set the range selector to the top 25th percentile. As this is being written, the top 25th percentile represents stocks with a market cap of about \$550 million or greater. Now, if you leave the range selector option button on Value instead of Rank, the next time the scan is run this criterion will be evaluated as "stocks with a market cap of \$550 million or greater" instead of the criterion you were really after which was "stocks whose market cap is in the top 25th percentile".

10. We want to change the range of the "Price per Share" criterion to \$5.00 or greater, so click on the bottom of the Range Selector and drag it up to the 25th percentile mark on the selector. From here, you can tweak the range down to as near the \$5.00 mark as you can.
11. Since we don't really want to mess up the preloaded EasyScan "Rallying from a Short Term Bottom", let's save the scan with our changes as a new scan. Click the Save As button and type in the new scan name "Rallying from Short Term Bottom above \$5".



Note: You're limited to 40 characters when naming a WatchList or an EasyScan.

12. Click OK to save.
13. The new scan now appears in the list of available EasyScans. Click Scan Charts to see the result list of the new scan.
14. The scan result list is now the active WatchList.
15. Let's sort the List by Price per Share. Click the Sort pulldown, scroll up or down the list until you find the "Price per Share" criterion and click on it.
16. Now click the Descending option button below the Sort pulldown to sort the symbols by price from highest to lowest.

The Evolution of BOP and MoneyStream

Introduction

The stock market is a lot different now than it was in the 1950s. The most pervasive changes derive from five dominant realities, none of which played meaningful roles in the market only three decades ago.

The computer: Has revolutionized virtually every aspect of how markets operate and how they are analyzed. The effect on technical analysis is no exception.

Institutional Dominance: In the fifties, the public accounted for well over half of market volume. Now institutions account for over ninety percent. Institutional managers are generally employees who trade with other people's money. Their motives are entirely different. They trade with larger amounts of money. The nature of trading is therefore very different than in a public-dominated market.

Strict and restrictive insider laws: in the past, "leaked" information was often visible on "the tape," which is also to say on stock charts. The existence of inside information in good part provided the rationale for technical analysis. Today, since information is not nearly so likely to be released in an (illegal) pecking order, there are many more surprises. Consequently, stocks are much more subject to huge gaps without warning. The old corrupt way of disseminating information embodied a certain order to the way prices unfolded.

Programmed buying and selling: A phenomenon by which the market is used and abused by the privileged. Takes more money out of the public's pocket in a year than all of the "insider selling" in history. Skimming (which this is a form of) is even illegal in gambling casinos.

Derivative products: Various kinds of futures and options divert capital away from the basic function of the market, which is to provide capital to industry. When you bet on your favorite football team, the team doesn't benefit in any way. When you bet on a company instead of investing in it, the company doesn't benefit either. Direct trading in stocks (even though it is usually in the "secondary" or "after market") makes the primary market possible. Some day these products may come back to haunt us in way we can only guess at.

Other developments that have contributed to the changing nature of the market, though, not as forcefully as the above, are globalization, index funds and possibly hedge funds.

Continue →

The Old and New Naivete

Market tools were simpler and cruder thirty years ago than they are today. The justification for many of the tools in use was often rooted in the simplicity of their computation. For the times, this was sensible. Point-&-figure charts, for example, were much easier to keep up than bar charts. This was their principal virtue, although they were inevitably thought to be endowed with magic powers.

The advance-decline line was a simple way of getting a feel for the "breadth" of market strength or weakness. It too was sanctified. The advance-decline line is here to stay because many technicians feel it IS market breadth and an indispensable key to defining the market.

These same people no longer insist on driving cars with 3-speed manual transmissions. But they won't give up their advance-decline line. There are many better ways to measure market breadth.

But this is not about market breadth. This is about the attitudes of market technicians.

There have always been brilliant traders and investors, who set themselves apart by their ability to think about the unthinkable. But for the hoi polloi, attitudes and techniques didn't change much for decades.

It was in the sixties, with the depression and World War II fading into ghosts of the past that a kind of intellectual awakening occurred. It wasn't all good to be sure. It was a turbulent decade, wrought with social problems and a youth culture revolving around drugs and something they thought of as music.

But it was a time in which people lost their fear of the status quo. It affected every nick and corner of the land--- including, what do you know, Wall Street.

Today, instead of becoming a slave to techniques developed to suit an age of primitive technology, the wise technician will look for change and welcome it. Changes will take place whether or not he is paying attention. Nothing he learns will be permanent, all tools and approaches will become obsolete. The survivors will be those willing not only to accept the future but also to discard the champions of the past.

Continue→

Tape Reading in the Sleep Fifties

The really big changes in technical analysis came with the computer, though a change of attitude for some reason began to stir before its use became commonplace in market analysis. Joseph Granvilles' book Fifty-five Daily Indicators for Stock Market Timing was an immense success. Looking back, I see the wide acceptance of the new ideas in this book as a milestone in breaking away from the doctrinaire edicts of Edwards and Magee (The Technical Analysis of Stock Trends).

I personally served as a catalyst in the development of a totally new and ambitious tool. At the time it was called Tick Volume. It is now known as Money Flow.

In the late 1950s I began tallying individual transactions on the New York and American Stock Exchanges. Nobody before had ever embarked on a systematic analysis of individual transactions or attempted to devise indicators based on the flow of individual transactions. Why, I don't know. The idea seemed rather obvious to me.

I had become fascinated with tape reading. Tape readers paid a lot of attention to the size of transactions and whether they were occurring on "upticks" or "downticks."

I learned from a book by the late Humphrey Neill, Tape Reading and Market Tactics, that a company in New York, Francis Emory Fitch, published daily lists of all transactions on the New

York and American Stock Exchanges. These were used by brokerage firms to verify disputed prices of transactions.

So I started marking these sheets each day. At first, since there are only 24 hours in a day, I marked only transactions of \$100,000 or more. I used a red pencil and put a mark to the left of the volume on an uptick, to the right on a downtick. I then counted the upticks and the downticks, found the difference, calculated some moving averages, and plotted the results on charts.

Fitch had several years of back sheets and I bought them all. Soon I found that I had a really useful timing indicator for the overall market, which I called The Worden \$100,000 Indexes. I plotted the results as oscillators. I found that, unlike any indicators I was aware of, the \$100,000 Indexes showed great bursts of "big money" buying pressures early in intermediate or cyclical bull markets. This buying pressure diminished as the bull move progressed, rather than rising to an overbought climax.

Above all, I notice that the profiles of my indicator lines often diverged markedly from the direction of price itself.

About that time (1960), I began publishing my results in a market letter, The Worden Tape Reading Studies. I must say that it was clearly the right product at the right time. I doubt if any market letter ever made a more promising debut. For many years it was one of America's leading stock market newsletters.

Soon after I developed the \$100,000 Indexes I began working with individual stocks. This was a lot more work. I wasn't yet at the point where I could afford to hire a room full of people to "mark the Fitch sheets." To start with we tallied only transaction of 1000 shares or more. I arrived at a number of ways of calculating individual stock indexes. The results were promising to say the least.

The work I was doing had great appeal to market technicians of the time. It seemed like a gigantic step forward. There had been nothing like this before. The essence of the approach was that my various indexes seemed to be separating "big money" activity from "small money" activity. Implied here was "insider activity". It was available instantly, not a couple of months later in bureaucratic reports.

It was amazing how word of these new "magic indicators" spread like wild fire. At one point the New York Stock Exchange called me for information on certain individual transactions. I referred them to Francis Emory Fitch. On a number of occasions the SEC called me for advice on how to detect manipulation.

At that time, institutional activity accounted for only about a third of the volume. Most of the trading volume came from the "little guy"—the public.

Soon I started a small staff tallying every single transaction every day. And we went back and did it all retrospectively. This is what we needed for Tick Volume. This indicator was calculated by adding the volume on upticks and subtracting on downticks, much like OBV (On Balance Volume). (Incidentally, OBV and Tick Volume were developed completely independently of one another. Joe Granville's book on OBV came out just a few months after we introduced Tick Volume. His book had obviously gone to press well before we came out with our new indicator.)

About this time Scantlin Electronics came out with the Quotron desk quotation device. This meant a new source of stock market data, this time on magnetic tape. We hired computer service bureaus to do the tallying for us.

This was astoundingly expensive when I look back. In fact, even ten years later in the 70s, when I had my own computer, I remember paying \$1.00 per day per stock merely for price and volume quotes.

Exorbitant as it was, we became computerized just in the nick of time. Volume on the NYSE was expanding so rapidly that we could never have handled the job by hand.

When I began tallying the Fitch Sheets, volume on the NYSE ran about 2.5 million shares a day. When we switched to the computer in 1966, volume was averaging over 6 million shares and climbing fast. Volume had so overtaxed the equipment of the time that they closed the New York Stock Exchange at two o'clock every day for about a year to hold volume down and to provide more time for the back offices to keep up.

Continue →

One Great Leap to the Seventies

By the early 1970s things had changed a lot and they were still changing fast. Adam Smith's book *The Money Game* proved the definitive word of the times. Smith, among others, was able to foresee that institutions were taking over the market in entirety. There was talk that the public would not even be allowed to trade directly in stocks.

I had been able to see for a long time that Tick Volume was losing its effectiveness. From the very beginning I had noticed a slight negative bias in my indicators. This was because a greater number of large transactions occurred on downticks than on upticks. The larger the transaction the more likely it would be on a downtick. (You can observe this yourself. As a direct result of my work, Barron's has been publishing tallies of large blocks in the Market Laboratory section.)

And there were other uncontrollable aberrations as well. With over 90 percent of trading coming from institutions, the entire rationale of Tick Volume was lost. The original idea was that it could ferret out "big money" trading, the implication being that "big money" was apt to be "smarter money" than "little money."

Now what we were having was "big money" trading with "big money." One indicator that we kept, called the Power Index, a gigantic Tick Volume tally for the entire NYSE, had totally lost the power to turn positive. It had been fluctuating below the zero line for years.

Well before that, I had started experimenting with other price/volume indicators --- some of which worked very well. However, I had to admit that none of them ever seemed to work quite as well as the "original" Tick Volume in its early days.

In what way were they inferior? They did not have that incredible power to contradict price direction. At its best Tick Volume could "show you" buying pressures in the form of positive numbers, while the price was falling. The effect was sensational. Other indicators, to various degrees, have the power to diverge, which is a form of contradiction, of course. But Tick Volume could literally stand up and shout at the price, "Hey, you're going the wrong way!"

Tick Volume's strongest point was also perhaps its weakest. It was often too early. This was true at both tops and bottoms. This is precisely what contradiction is.

Further, there are many reasons to either buy or sell a stock. Not all of these involve the expectation of a specific move in price. Even if the expectation is there, the buyers or sellers could be wrong. Not everybody who trades in big quantities is smart.

And on it goes. A price advance is not the inevitable outcome of systematic "big money" buying. And vice versa.

But when it comes to probabilities? All other things being equal, I'd rather be in the stock that the "big money" is buying every time. A stock revealing signs of "sponsorship," signs of systematic "accumulation," that's for me. Perfection? In its best days, Tick Volume was never perfect. Democracy isn't perfect either. But what is it they say? It's just that it works better than any other form of government.

Continue →

Tick Volume is Now a Zombie Named Money Flow

Ironically, as I discarded Tick Volume, a number of brokerage firms had become very interested in it. In fact, I had an arrangement with one New York firm that allowed them to use it for their institutional clients. Others had started doing the same thing.

Some people have asked me why I never sued any of these firms. Two reasons. First, mathematical formulas weren't patentable at that time (today certain software decisions suggest this is no longer completely true). Second, by the time they started horning in, Tick Volume wasn't working right anyway and they weren't damaging me. I was losing interest in it.

I can't deny that some of those guys irritated me, though. Particularly the one who named it Money Flow and pretended it was something new he had invented. That brings to mind a funny incident. Years later I happened to be talking to a salesman for an institutional data distributor. He had no idea who I was other than what he assumed to be a prospect. He was pitching Money Flow. He told me that Money Flow was thought to be responsible for the success of Salomon Brothers. I told him I would think it over.

Didn't any of these firms run into the same horrendous aberrations that I had? Sure. They just don't care. In one case, they noticed that the largest transactions were causing an unmanageable negative bias. So they deleted all transactions of 10,000 or more shares. Just threw them out, compounding the chances for aberrations. I suggested to them that it would make more sense statistically to truncate these large transactions to a less dominating size. They suggested that what they had done seemed to work well enough. That operation was later sold to a well-known bank.

To this day, that bank still sells Money Flow to institutions with and without 10,000 share transactions. Like hot-dogs, with or without mustard.

I doubt that anybody actually makes investment decisions using Money Flow. Every now and then I check it out for one stock or another. It just doesn't work anymore. I suspect it is used as sort of a "sales prop" by some money managers: good for show but not for dough.

I do hope this does nothing to erode your confidence in the institutional money manager looking after your money.

Continue →

One More Attempt at Not One -- But Two -- Holy Grails

A few years ago I entered into a joint venture with a regional brokerage firm to develop a price/volume indicator designed for institutional use. Brokerage firms like to sell special products for what they call "soft dollars" –that is, for commissions instead of hard money. It's very profitable, since institutions don't mind paying big with what they probably think of as something like "funny money."

I developed an indicator based on the flow of individual transactions. But since I knew Tick Volume didn't work, I based it on another concept I had been toying with for a number of years. Instead of using upticks and downticks, I tallied price and volume changes at specific times of the day.

For reasons not worth going into, in writing computer programs, I found it useful to improvise a formula that could temporarily mimic the indexes I was building based on individual transactions. The mimic-index was based on day-end data. As I progressed, I found that the "temporary" mimic-index worked better than the other. This was because I was never able to completely eliminate the aberrations inherent in the flow of individual transactions in an institutionally dominated market.

Although Worden Brothers doesn't want me to reveal how this indicator is calculated, I will tell you something about it. About thirty years ago a young man walked into my office and showed me an indicator he had developed that had a "a power to contradict" – much like Tick Volume. I had popularized this concept of contradiction through my work and writing at the time. His method was not based upon individual transactions.

Hundreds of people had brought me ideas (usually the valuable secret they whispered to me was an idea to calculate OBV by multiplying price times volume instead of adding). Nobody had ever brought me a really good idea, not even a decent one.

But he had a very good idea. Since Tick Volume was working very well and I had a small research and publishing organization of about only twenty people in total, I didn't see that I could do justice to his abilities. I suggested he take his ideas to New York, which he did. He became very successful and well known. His name is David Bostion. His idea was to take the difference between close and high, and subtract it from the difference between close and low. A very ingenious idea!

I tinkered with it from time to time, but I was always troubled by what seemed to me excessive spikes at extremes of buying or selling. Later Larry Williams, whom I've never met, came up with something similar for commodities. I heard something about some litigation's between Bostion and Williams. I don't know who won. Mark Chaikin later came up with a similar idea that combines price and volume.

The MoneyStream has certain similarities to Chaikin's indicator. However, I discovered what I consider a logical error common to all three of those approaches. Which is all I have to say about how the MoneyStream is calculated.

The MoneyStream embodies both price and volume, although if volume is not available, an automatic adjustment takes place in the formula and the indicator is calculated and displayed. The pure price version has less power to contradict than that embodying both price and volume. But it is quite useful nonetheless.

I find that the Cumulative MoneyStream (CMS) moves much like OBV, but it has a bit more power to contradict. The way to interpret it is simple and direct. Normally, the MoneyStream will form a pattern exactly like the pattern of the price. This tells you nothing, except that "nothing is broke." Which let me add, is well worth knowing.

If the MoneyStream is stronger than the price pattern, this is a forecast of strength to come. This is bullish. If the MoneyStream is weaker than the price pattern, it is bearish.

To help investors see these relationships easily and consistently; I developed a technique using linear regression lines. Here is how it works:

The price profile and The MoneyStream are set up in windows and on scales that make them directly comparable.

A short-term and long-term regression line are put in each window simultaneously and automatically. (The shorter-term line is 30 bars, the longer-term line 100 bars.)

The analyst can then eyeball the "slopes" of these regression lines for an easy-to-assess comparison of price performance versus the performance of the MoneyStream. Remember when the slopes differ, it is the MoneyStream that is considered to be the more valid interpreter of the strength of the trend.

Some really impressive divergences develop in The MoneyStream profile when compared to the profile of the price. As you will learn, I have developed another indicator with a greater power to contradict, but The MoneyStream has unique virtues of its own. It embodies an ability to detect changes in momentum and is often serves as an invaluable timing aid.

I use the MoneyStream in tandem with another indicator, an indicator with a unique power to contradict and to bring out underlying patterns of systematic accumulation or distribution that would otherwise lie hidden beneath the surface. I call this indicator BOP (for Balance of Power).

Continue →

BOPping Around TeleChart

I developed BOP about five years ago. I have been using it privately together with CMS to make investment decisions for more than four years. I rely on these indicators heavily. Neither of these indicators has ever been published or described in print or in any public forum before.

BOP AND CMS ARE OFFERED EXCLUSIVELY AS FEATURES OF TeleChart AND TC2000. Their formulation is the intellectual property of Worden Brothers, Inc. who has purchased all rights. (Since the three Worden brothers are my sons, I made them a good deal.)

Continue →

Finally, a Holy Grail (but with fewer holes than most holy grails)

Necessity is usually the mother of invention. In the case of BOP it was not. I wasn't trying to develop anything. I thought CMS was the best I could do in a price-volume indicator, and I was content to hope it would keep working.

The truth is, I am willing to admit, I developed BOP playing with my computer. By playing, I mean that I like to write programs. I don't enjoy learning software written by other people.

Just for the fun of it, I've written application programs in such diverse fields as handicapping football and teaching foreign languages.

I generally use a chart program I wrote myself because I can tinker with it and make endless changes. I know darn well my son Chris, who is a far better programmer than I am, would never let me tinker with the source code of his TeleChart. (Good as he is, I taught him his first algorithm, and I have a pretty good idea of how Arnold Palmer's father felt.)

BOP was based on a concept I hit upon many years before. For some reason I could never get an indicator based on that concept to act the way I thought it should. Each time I tried, I wound up abandoning the project.

As I said, I was just tinkering. I don't know what set me off on that old concept again. I do remember that, once I started on it, I knew that I could make it work. I think this was just a matter of long experience, with the computer as well as with market indicators. (I started writing computer programs about 1970.)

Anyway, this time it fell together without a hitch and worked exactly the way I expected it to.

Let me give a word of advice here to anybody who would like to develop some of his own indicators. I never shotgun an indicator. That is, I don't say to myself: "Hey, that OBV of Granville's is great. But he adds the volume each day according to the sign of the net change. I wonder what would happen if I multiplied the net change times the volume instead of simply adding."

I would never use such an approach. I always know exactly what I am looking for and how I expect it to work. If I hadn't used this approach, I would never have dreamed up a workable indicator. You see, there are thousands of combinations of parameters and mathematical operations I could try using the shotgun approach. How many would have any value? One in a thousand? One in ten thousand?

Before I put together an indicator, I know what it will solve for me, how and why?

An indicator is merely a manifestation of a concept I already understand. The indicator is a way of communicating that concept.

Take OBV, for example. I didn't invent it, but I can assure you I know exactly how Granville's thought process worked. It went something like this. "I am tired of laboring over these charts, meticulously comparing day by day price movement with expansions and contractions of volume. It's hard to see and hard to keep track of the positive and negative events in my head. What am I looking for? Why, I guess I'm just looking for sort of a running tally of the total volume on advancing days versus the total volume on declining days. Let's see, there must be a more systematic way of doing that and saving myself some time. In fact, if I tally these comparisons systematically, I will probably see some things in the pattern I would otherwise have missed. I think I'll give it a try."

You see, the indicator is a statistical interpretation of the facts in a raw form. But unless you know how to interpret the facts in a raw form, you can't think of an indicator. You can try until you're blue in the face. The indicator is a statistical depiction of the way you have already learned to interpret raw data.

Generally, a useful indicator solves a specific problem you have been having in interpretation and, especially, in consistency.

Continue →

What Mr. BOP Has to Say

BOP is a marvelous indicator. But it doesn't tell you whether a stock will go up or down. By itself, it can hardly be described as a pinpoint timing indicator. What it tells you is whether the underlying action is characterized by systematic buying (accumulation) or systematic selling (distribution). This is exactly what I designed it to be. BOP is a statistical interpretation of a concept that ferrets out subtle evidence of systematic buying or selling. The process of development, like any of my indicators, developed in a similar fashion to the fantasy of how Joe Granville thought up OBV (described above).

BOP fits into a category of devices that I call "trend quality" indicators. It tells you about the quality of the underlying action. From this you can infer the various tactical judgments you must make to arrive at an effective decision. BOP, for example, can help you formulate a judgment as to the vital risk-reward ratio of a prospective trade. It can help you determine whether the supply-demand balance will be in your favor. It will help you spot changes in the character of a stock's action.

Just the other day a friend called me and asked for some input on a stock he was thinking of buying. His interest was based on the prospects for a hot new product coming on the market. I checked the chart. BOP displayed a mildly negative, partly ambiguous pattern. The important thing was there had been absolutely no change in the general character of BOP following the announcement of the new product. If the product could genuinely impact the company's profit picture, there would be plenty of people in the industry that would recognize it. It would very likely show in some kind of a change in BOP. In this case there was nothing on the chart suggested the stock was about to change its languorous descent.

So you see, before I actually begin to show you examples of BOP in action, I want to caution you that there are no magic bullets, no way of sparing you the necessity of thinking.

One of the first things to understand about chart reading is that most charts are ambiguous most of the time. You can't expect to pick up a chart at random and demand: "What is BOP saying here? What is CMS saying? What is OBV saying? Most of the time a randomly picked chart has only one thing to say: "No comment!"

But you see, the amateurs are constantly trying to force opinions out of their charts. They are sure there is a message in every chart if someone will just, please, show them how to read it. Consequently, think of the time they waste chasing those windmills. Think of the bad decisions they make.

Look at a thousand charts. If only one gives you a clear message, isn't that enough? It is, yes, providing that you recognize that the other 999 did not have anything to say.

But remember you know more about a chart than just what you see. You know such things as whether there have been earnings surprises, litigation, fierce competition, changes in management, what other stocks in the industry look like, how the market in general is doing.

Interpreting a stock chart is like reading the expression on somebody's face. You will see far more in the expression of somebody you know. The mere absence of expression when he should be glowing with joy would tell you much.

The examples I choose to show you will all be selected because they demonstrate BOP and/or CMS performing at their best. Keep in mind that in real life there are always more ambiguous charts than anything else. Learn to hold out for the best ones.

One more thing to remember about any chart. No matter how perfect it is, no matter how classic, there are few situations that cannot be torn asunder by the action of the overall market itself. The most bullish patterns, the strongest support – it will all snap like straws in a hurricane if the overall market goes on the rampage.

Continue →

Using The MoneyStream and BOP Together

Not only are BOP and The MoneyStream excellent indicators in their own right, but they complement one another nicely as well as acting as checks on one another. They are based on entirely different concepts.

You will find, not uncommonly, that BOP and The MoneyStream disagree. Most of the time, you will probably restrict yourself to trades in which both indicators are in gear.

Both indicators represent significant steps forward in the way they are presented for ease of interpretation. The MoneyStream is very convenient with its automatic display of linear regression lines for ready comparison of the respective strength of trends in CMS and the price.

The BOP scale runs from +100 to –100. The indicator itself can rise above or below these extremes, but it is relatively rare. When it happens, we just truncate the profile at the top or bottom of the chart. We believe it is more important to keep all the charts on the exact same scale than it is to include the "outliers" on the chart.

Some will ask whether the direction of the BOP profile is more important than whether BOP is above or below the zero line. The answer is that above or below the zero line is most important, especially when it represents a change in relation to the price.

But whether BOP is getting stronger or weaker is also important. How do you know where to place the greatest emphasis in an individual situation? That is the art of it my friend. If it were so cut and dried that it was mechanical, it wouldn't work for anybody.

BOP, which has incredible power to contradict price movement, is shown in color: Green for buying pressure, red for selling pressure, yellow for a more neutral area of lighter buying or selling.

These colors are repeated in the price bars as well as the bars in the indicator itself. This is a very effective way to spot changes in buying or selling as it reflects in the price pattern. For example, you will often find that the price bars have turned red well before a top is reached.

Actually, it would be possible to interpret BOP based only on the colors in the price bars, without even seeing the indicator itself. I know this to be true, because for a while that's the way I did it. In my own program I can't display indicators simultaneously the way Chris has it set up in TeleChart. Therefore, I used to get the price bar set up with BOP colors, then put CMS in the indicator window.

The TeleChart setup is much more convenient without being cluttered. A panel with three windows pops up and overlays the basic bar chart. You can still see the right portion of the underlying chart.

This is very powerful, not only because you can see CMS and BOP on the same panel, but also because you can, if you wish, view them in a different time frame than that on your underlying chart.

The way is opened for very convenient and powerful comparisons, limited mainly by your own ingenuity and imagination.

Continue →

A Tip about Large Company Stocks

The predictive value of BOP and CMS tends to diminish with the size of the company. This is because the market action in large, blue-chip type stocks is more efficient. Such stocks are held heavily by institutions. They are analyzed carefully by dozens of analysts. Virtually everything there is to know about them is known. Further, the management and boards of such companies tend to be more concerned about personal liabilities under the insider laws. Great care is taken to prevent leaks.

Patterns of informed accumulation or distribution are less likely to occur in the big blue chips. When interesting patterns do appear, they may be less trustworthy.

Also, many large companies are included in the S&P 500. These companies are included in large index funds (not to mention in "baskets" of stocks used in "programmed trading" and arbitrage schemes). Index funds buy and sell them under the automatic guidance "programmed trading" and arbitrage schemes. Index funds buy and sell them under the automatic guidance of computers in order to mimic the S&P 500 average. These forces can result in unpredictable and sometime unexplainable behavior patterns.

Particularly susceptible to these various aberrations is BOP, which is an indicator almost purely of buying and selling. BOP cannot tell you the why or the who of the buying and selling evidence it detects. The MoneyStream, while also an indicator of buying and selling, embodies significant momentum elements.

I should point out that this kind of phenomena is true of technical analysis in general (which shouldn't be surprising since all technical analysis is more or less trying to accomplish the same thing).

Having warned you about big stocks, let me carry it full circle and say that technical indicators often do work with big stocks. A "change of character" in trading usually means something no matter what kind of a stock it is. Just be aware of the potential difficulties.

Not only must the stocks of larger companies be analyzed with caution and perhaps greater imagination, the same can be said of market averages.

Continue →

Example - Home Depot Inc. (HD)

IMPORTANT NOTE – Since the original printing of this document, Home Depot, Inc. posted a 3 for 2 split on July 7, 1997, a 2 for 1 split on July 2, 1998, and a 3 for 2 split on December 31, 1999. This accounts for the discrepancy in the prices listed in the text and those on the charts.

Home Depot: This is an excellent example for a number of reasons. First, we have a company that is widely appreciated and admired. Second, not only did BOP show the ability to ignore the exalted image the company eventually developed but also the ability to show systematic selling while the price was rising to repeated new highs. Third, it shows how well CMS and BOP work together.

To start with, let's pick the stock up at the end of the year, 1991. You may well have been one of many enjoying huge profits.



At the outset of 1986, waves of buying pressure began to be evident in the BOP pattern. The price was well below 2. The price climbed steadily throughout that year, carrying almost to 5, with unrelenting buying underlying the rise.

Came the 1987 crash and Home Depot was cut in half along with just about everything else. But there was very little selling pressure. The brave or the wise or whatever had the opportunity to pick it up under 2.

Buying was restrained as it returned to its old high in 1988. As it moved above that high and above 5, really heavy buying pressures set in again. That continued without significant interruption for the next three years –as the stock rose and rose and rose.

I think it is fair to say that anyone watching it would have had ample opportunity to buy it somewhere between 1 and 10. Even had you paid 10, you would have made a killing.

As we pick it up on CHART 2 , the first signs of selling worth worrying about have begun to appear. We detect signs of a "change of character." As the stock continues to rise into the 30's, BOP has dropped perceptively, spending much of the time below the zero line (in direct contradiction of the price trend).



We know that we don't need selling pressure as intense as the buying pressure previously enjoyed in order to break the uptrend. As buying dries up, a stock tends to drop of its own weight.

As the stock moved above 30, we had a decision to make. We might well have decided to sell at about 35. As the old saying goes, "You can't go broke taking a profit." And there was a lot of profit to protect. To sell would not have been a mistake.

On the other hand, you would have come out better had you stayed with it. What might have kept you in? In this case, it would have been The MoneyStream. The regression lines stayed in lock step with the price lines. This was enough to justify holding out until CMS itself began to show some cracks.

With this possibility in mind, refer to CHART 3. Here, as we near the end of 1992, BOP continues to show comparatively light but steady selling. The shorter-term regression line for The MoneyStream is slowing down distinctly. The longer-trend line is okay.



The price is into the 40s now and continues to rise. This is happening during the year that Home Depot's image of invincibility rose to its zenith. It was compared to a young Wal-Mart (all of which, incidentally, may still be perfectly true).

There's definitely trouble ahead. Sell now? Probably.

There are those who would have stayed longer. They would have been one of two types. First, is the guy who just can't believe that "everybody else" could be wrong. He reads that Home Depot can't be stopped, and he believes it no matter what his charts say.

Then there is another type, far more rare, that wants to hold out for the top. He knows the stock has been under distribution for a year. He sees that The MoneyStream is losing some momentum as well, but he notices that it is nevertheless attaining new highs. He decides to stay until CMS fails to attain a new high along with the price of the stock, or until some kind of a trailing stop is violated – whichever comes first.

As the top was reached (above 50), CMS had turned down a couple of weeks before. Somewhere around 50, the great trader might have sold. But this would be perfection.

The final Home Depot chart shows the resolution. This chart shows a broad sweep of five years, during which Home Depot rose from below 5 to above 50 – a tenfold increase. Following this was a protracted correction of about a year, amounting to over a 30% retracement. During the rise, the company's earnings rose spectacularly, the story of its extraordinary management and success at blowing the competition away became widely known. Going by price alone, there was no significant change of character discernible throughout the entire rise to its high above 50.

Notice, though, that it was during the last year of the spectacular rise that BOP changed from positive to negative. The selling remained steady all the way to the top and, of course, beyond.

This shows what I mean by the power to contradict. Relentlessly heavy buying characterized the rise from below 5 to about 30. Then a clear pattern of "distribution" set in.

You could have sold for a large profit well ahead of and below the high above 50. Better, of course, to hold for the higher price (if possible). Various techniques might have achieved this.

As I have said or implied before, CMS also has the power to predict, but not to the degree that BOP has. And as you can see, after BOP began to reveal underlying selling pressures, CMS continued to rise. There was a negligible slowing down, a slight change of character, but enough strength remained to suggest it was not yet quite the time to sell.

As this is written (at the end of March 1994), BOP has begun to show signs of renewed buying interest. CMS is not confirming (far from it) and this is happening against a dangerous market background. Chances are, as I see it now, that sometime in the next year, Home Depot will again be an attractive buy. But many things could happen along the way that would change my mind. ON the other hand, it may be a buy sooner than I think.

TeleChart Hot Keys

Many of the features and functions of TeleChart can be accessed using one or two keystrokes.

Program function or feature: Hot Key:

Adding, editing and removing indicators

- Open Indicator Editor I
- Erase Indicators dialog X
- Delete last indicator plotted Delete
- Comparison symbol CTRL-C
- \$100 Scale CTRL-H
- Flip-flop active and comparison symbols CTRL-F
- Moving average A
- Balance of Power (BOP) B
- Envelope channels E
- Bollinger Bands G
- Rate of change H
- Linear regression L
- MACD M
- On Balance Volume O
- Wilder's RSI R
- Relative strength graph CTRL-R
- Stochastics S
- Time Segmented Volume (TSV) T
- Volume V
- MoneyStream Y

Charting functions

- Move chart backward or forward one bar [or]
- Move chart backward or forward five bars { or }
- Toggle between large chart and regular chart CTRL-L
- Draw trendline D (hold down Shift while drawing for a horizontal trendline or Ctrl for a linear regression trendline)
- Erase last trendline plotted CTRL-D
- Trendline toggle: Show, Show w/ extensions, Don't show CTRL-T
- Pointer mode toggle on/off (.) Period key, then use right and left arrow keys to move pointer backward or forward in time.

TeleChart User Guide

- Move pointer to far right of chart End
- Slash chart \
- Price graph toggle: bar, line, candlestick CTRL-B
- Chart scaling CTRL-G
- Spread price data toggle on/off CTRL-Z
- Compress/decompress chart scaling: useful for viewing envelope channels that run off the chart Minus (-) and plus (+) keys
- Zoom level Shift-1 thru Shift-9
- Time Frame (days per bar) Number keys 1 thru 9
- Intraday timeframes CTRL-1 thru CTRL-6 (1 minute, 5 min, 10 min, 15 min, 30 min, hourly)
- Toggle split display between Show Adjusted for Splits and Show Unadjusted for Splits CTRL-\
- View technical and fundamental Data Sheet CTRL-V (toggles between Data Sheet and the price chart)

EasyScan functions

- Open EasyScan dialog CTRL-S
- Edit conditions for active scan result list CTRL-E

WatchList operations

- Select WatchList ALT-L
- Select sort criteria for WatchList ALT-S
- Jump to top of WatchList Home
- Next symbol in list Spacebar
- Previous symbol in list CTRL-Spacebar
- Next flagged symbol Shift-Spacebar
- Next WatchList CTRL-W
- Previous symbol in navigation history Backspace
- Previous WatchList in navigation history CTRL-Backspace
- Add symbols to Active WatchList CTRL-A
- Remove highlighted symbol from WatchList CTRL-Delete
- Active symbol memberships CTRL-M (twice)
- Flag/Unflag active symbol F
- Add note to active symbol N

- Scroll through notes on the active symbol Up and down arrow keys
- Jump to a symbol J
- Custom Date Sort C

Other

- Worden Report W
- Scroll through recently sent chat messages Shift+Up/Dn arrow

Frequently Asked Questions

Do I have to stay connected to the Internet?

No. You can use an Internet connection to update your TeleChart databank. The entire procedure takes between 2 and 10 minutes depending on the speed of your computer. Once your TeleChart databank is updated, you can disconnect from the Internet (although you do not have to disconnect) and work off-line. You can use TeleChart in your car, on the train, on a plane ... or on your living room couch.

Who writes the Worden Notes?

Peter and Don Worden are the authors of the Worden Notes. You already have hundreds of Worden Notes right now that you can begin browsing. There is no better way to learn charting techniques & strategies than small doses of real-life daily lessons.

How often are Charts with Worden Notes published?

Peter and Don Worden write notes whenever they run TeleChart. Before the market opens ... during the market day ... after the market closes. Any time they write a note, it is made available to you within five minutes. You can also copy the charts attached to their notes right into your system and build on their ideas!

How long does it take to sort or scan every chart (over 9,000)?

It takes between 1 and 10 seconds depending on the speed of your machine. No other system is easier ... no other system is faster.

Can I customize scans myself?

Yes. TeleChart uses a graphical range selector that makes it easy for anybody to create sophisticated scans in minutes. Many canned scans are included that you can build on or you can check the web site www.worden.com for scan development ideas.

Will I miss data if I go too long between downloads?

Absolutely not. You always get everything every time you access the database.

Does TeleChart adjust for splits and symbol changes?

Yes. It maintains everything for you. Splits, symbol & name changes, exchanges, index & industry group component lists, historical-price data corrections, new issues, defunct issues, fundamentals ... everything. If you are wondering if you have time to maintain everything on your own using another data service ... plan on over 1,000 maintenance items per week!

If I use other investment software programs that read TeleChart data, are they maintained as well?

Yes. Software that reads the TeleChart data has access to all maintenance items. Imagine having your entire investment software library working off one, clean, efficient data source.

Can I view full-screen charts like I did in version 3.x?

Absolutely. You can toggle between the regular view and large view by clicking the icon in the top right corner of the chart or by pressing CTRL-L.

How Don Worden Uses Scans & Sorts

Published June 1, 1998 in the Daily Worden Report—

Have you ever noticed that frequently, when you get something new, you wind up putting it to a different use than you had intended? For example, I bought an L. L. Bean "cargo vest" for walking my dogs in the woods. It has twelve large pockets that I can use to hold all of the paraphernalia that I carry around in my admittedly eccentric way – like two dog leashes, a Walkman with ear phones, a few spare audio book cassettes, a camera, a notebook, a checkbook, and, of all things, my computer glasses. Since I acquired this air-cooled khaki miracle, I find that I wear it not just on my morning walk but all day long. It's part of my weekday uniform.

Of all the pockets at my disposal, I have one favorite. It is the one I thought I would never use. The top, right breast pocket is a special, softly lined pocket for sunglasses. I never wear sunglasses. But I found computer glasses fit into this pocket every bit as well as sunglasses. Since this discovery, I have never misplaced either my computer glasses or my regular glasses. Not even once. This has given me an inner peace of mind I never before enjoyed.

As you use TeleChart, you may find yourself experiencing similar revelations of spirit and mind. It actually converts your computer into a technician's workstation. If you give it half a chance, you'll find yourself becoming more organized. I have previously written about the organizational power of keeping notes. Now let's consider the scans.

Don't make the mistake of believing that the scans will do your thinking for you. They can't do that any more than the charts themselves can. What they can do is help you organize yourself and pave the way for better decisions. I think of scans this way. They cut down the necessity of looking at so many charts. For example, if I click on "All Stocks," my WatchList is going to consist of 9551 items. That, I'm sure you will agree, is one heck of a lot of charts to look at. My thumb would get sore punching the space bar 9551 times.

Of course, there are other ready made lists to select – like the Standard & Poor's 500, or the Dow Jones Industrials. Nobody needs to worry about blistering his thumb just to look at 30 stocks. And sometimes, that solves your problem. You may wish to look at those 30 blue chips and only them.

More often, though, you'll want a broader selection, comprising a more diverse array, or perhaps a more specific array of stocks. I personally prefer working with stocks priced above \$10. I could start there.

I click on the lightning bolt icon on the tool bar, then on the "Create New" button. This brings up a box called "Editing Conditions for New Scan." I still haven't pressed a key! On the drop-down menu at the bottom, "WatchList to Scan," I click on "All Stocks."

I click (Add New Condition) and scan down the list until I find "Price per Share-H." I highlight it and click. I select "Value" as the Condition Type, then nudge the blue ribbon in the "Range Selector" upward until I get something close to \$10. The closest I can come is \$10.13. Good enough. That will rank at the 38th percentile, meaning 62 percent of all stocks will fall into my chosen category of \$10.13 or above. I click OK and find that this will bring the list I am building down to 5923 stocks.

I want to narrow my "working list" still further. 5923 is too many charts to look at. What next?

I'm interested in good-sized companies. Should I now add a condition limiting capitalization to, say, the larger half. That is, those stocks ranking above the 50th percentile in market value. I could. But I reject it on the grounds that there are many stocks of highly capitalized companies I don't want to waste my time looking at. Utilities, for example, tend to have large capitalizations. Of course, I could probably eliminate most of them by limiting "Volatility" or "Beta."

But I think I know a simpler way. It's good enough to satisfy me, though not necessarily you. Your scans must reflect your own ideas about what is most important. But I decide that stocks that trade a lot of shares will accomplish what I'm looking for. I scan my criteria list for "Volume 90-Day." I could choose "Volume (dollars) 90-Day" and get almost the same results, but that would tend to emphasize higher priced stocks, and my \$10.13 minimum takes care of eliminating very low priced stocks. It's probably six of one and half a dozen of the other, and I'm not by temperament a hair splitter.

I double click on "Volume 90-day" and it appears above as the second condition. This time I click on "Market Rank" and nudge the blue ribbon up to the 50th percentile. I find I'm now down to a little over 3000 stocks. A bit too many? Not necessarily, but I decide to cut it down even more. I close the count box and turn my attention once again to the blue ribbon. I nudge it all the way up to 75. This means I will be accepting only those stocks that rank in the top 25 percent for volume of trading. Now I'm down to 1673.

Voila! So much for that. I now have a list of 1673 stocks that fit the general structure I'm interested in. Active stocks over \$10. This doesn't mean that there aren't other stocks that could interest me, stocks that didn't make it through the cracks of my conditions. Who cares? I should be able to find plenty of stocks in my list of 1673.

But who wants to look at 1673 stocks, you are probably saying. Shouldn't we narrow the list still further? We could, but I choose not to. You see, I'm not going to look at all of these charts. I still have something left in my bag of tricks. I click on the "Save As" button and name my list "Price 10+ & 75 percentile vol." I close the "EasyScan" box.

My new WatchList, "Price 10+ & 75 percentile vol," can now be found among the WatchLists. It will have a yellow lightning bolt beside it. I find it and click on it. The list will appear left of my charts.

Here's my last trick. I now get to select a "Sort." I decide to click on "Gappers-H." Although my list consists of 1622 stocks, I find that only 45 of them gapped to the upside today. I don't mind going through 45 charts. After all, that's what I am – a chart reader. And what's this? The very first chart I'm looking at is interesting. It's gapping off a bottom that was formed in the face of a positive TSV divergence.

I browse through all 45 charts, flagging interesting patterns by pressing the "F" key. This takes only a few minutes. I then click on the drop-down menu, "WatchList." I highlight "Copy to Other List" and click on "Flagged Symbols." I create a new list of just those charts I flagged, name it "Gappers – " add the date to the name. I now have another list, this one with a black bullet in front of it. I click on this and find that I have harvested 19 interesting stocks. I will now go through these 19 charts slowly, looking at them in varying time frames and with a variety of indicators. I'll check some fundamentals. Maybe look at some news items. The only thing I know is that I'm not interested in buying 19 stocks today. One or two – maybe.

Tomorrow I may sort my 1673 stocks differently. Maybe I'll sort them by their 5-year earnings growth rates and list them in descending order. Maybe I'll look only at those that rank in the 90th percentile or better in rate of growth for the past five years. If I do that, I just happen to know, I'll

have only 77 charts to look at. And I'll bet there'll be some goodies in there. I guess I can find the time for that.

- Don Worden

What's New in Version 5.3 Summer Release

- Exponential averaging now available in PCFs.
- Wilder's smoothing added to Wilder's RSI.
- Moving linear regression - This indicator plots the path of the endpoint of a linear regression line back through the chart.
- Average Directional Movement (ADX) indicator has been added.
- Mouse scroll wheel functionality added to WatchLists, Data Sheet, chat, news/notes window, clubs pages, and charts. You can now customize your scroll wheel functionality.
- Customized chart scaling by timeframe.

New features in the initial release of version 5.3 - January 2004:

- Custom Indicator - enter your own formula and plot it on the chart.
- Custom % True - plots the percentage of time a formula (Boolean) returns true over the preceding x days.
- Custom Cumulative - you can now create your own custom cumulative (OBV, for example) indicators
- Custom Price Channel - customize price channels using your own custom formulas for the indicator line and channel width.
- Linear regression – added extensions and channels.
- Sorting by indicator - sort your WatchList by the values of any indicator on the chart. Platinum users can sort using real-time data.
- Sorting by indicator vs. another indicator - sort your WatchList by the visual, net, %, etc. differences between two indicators. In TCNet you can sort using real-time data.
- Sorting by Linear Regression - sort your WatchList by the slope of a linear regression line plotted on the chart.
- Average Directional Movement (ADX) indicator has been added.
- Color palette for indicators expanded from 16 to 42 colors.
- Shared WatchLists (Platinum only) - have a favorite list of stocks you want to share with a friend on TeleChart? Just click the Share button on the WatchList pulldown and share it to any one of your clubs.
- Formula clipboard
- "Plot in Window" option added to parent Indicator dialogs. You can now move an indicator to a different window after you plot it.

- Two new zoom levels added - 1+ and 1++. Zoom level 1 displays 500 bars of data. Zoom levels 1+ and 1++ display 750 bars and 1100 bars respectively. View over four years of Daily data at once.
- Message boards added to Clubs to better organize Discussions (Platinum only)
- “Search” tool added to Boards. You can Search all Boards or search within a particular board (Platinum only)
- OBV and SGN function added to EasyScan language for use in PCFs and indicator formulas.
- Indicator scale toggle button - scales are now displayed in the middle and bottom indicator windows. If you have more than one indicator in the window, the toggle button allows you to view the scale for each indicator.

Glossary

#

Users Viewing Chart: This is the number of TCNet users currently viewing a stock. This conditions update every minute.

10 day movavg crossing 200 day: Returns a value of TRUE if the 10 day simple moving average crossed above or below the 200 day simple moving average any time between the previous day's close and the current price.

A

Asset Turnover: Equals revenue divided by the average of total assets from the most recent two balance sheets. It measures the ratio at which each dollar of assets will generate a dollar of revenues.

B

Beta: The coefficient which measures the volatility of a stock's returns relative to the market (S&P 500). It is based on a 36/60-month historical regression of the return on the stock onto the return on the S&P 500: $R_i = a + (R_m) + e$ where R_i is the monthly total returns on the stock, a is the stock's Alpha, R_m is the monthly total returns on the market (S&P 500), and e is a random error term. A minimum of 12 monthly returns are required for this calculation. A beta of 1 means that the market and the stock move up or down together, at the same rate. That is, a 5% up or down move in the market should theoretically result in a 5% up or down move in the stock. A beta coefficient of 2 suggests that the stock will tend to fluctuate twice as much as the market. That is, if the market moves up 5%, then the stock should move up 10%. A beta coefficient of 0.5 indicates that the stock will move one-half as much as the market, either up or down. A negative beta indicates the stock tends to move in the opposite direction from the general market. That is, the stock price declines when the overall market is rising, or rises when the overall market is declining. Negative beta stocks are rare.

BOP Net Change: Returns the difference between the value of BOP yesterday and the current value of BOP.

BOP Value Today-H: Current value of Balance of Power indicator

C

Capitalization: This is the latest closing price of a share times the number of shares outstanding as indicated in the latest quarterly report. Sometimes called Market Valuation. This is useful for controlling the size of the company you are scanning for. You can also sort by this value if you wish to rank the companies by size. The units are in millions of dollars.

D

Debt to Equity Ratio: From the most recent fiscal quarter, it is the Long Term Debt divided by Common Stock Equity.

Dividend Growth Rate 5-Yr: This is the compound (shows accrued interest/dividend re-invested) annual dividend 5 year growth rate. The units are in percentages.

Dividend Yield: This is the latest dividend divided by the share price. It reads in percentage.

E

Earnings (\$Millions) 1-Yr: This is the sum of the trailing 4 quarters of net income (profit) as taken from the quarterly report. This is not the earnings per share. This value will also provide some insight into company size. It reads in millions of dollars.

Earnings as a percent of Sales 1-Yr: This is an indication of profit margin. Weak profit margins are often a sign of hidden vulnerability in a stock that appears to have high earnings. Be careful of companies that pay high dividends while having low profit margins. Within industries, the companies with the highest profit margins are usually the leaders. It is a sign of good management. This reads in percentage.

Earnings Growth Rate 5-Yr: The compound annual earnings per share 5-year growth rate. In looking for quality companies, well established companies of good size, this criterion is indispensable. The units are in percentages.

EPS Latest Qtr: Fully Diluted earnings per share from Total Operations, as taken from the latest 3-month ending period.

EPS Percent Change (2nd Q back): The percentage change in earnings per share from the comparable quarter a year before.

EPS Percent Change (3rd Q back): The percentage change in earnings per share from the comparable quarter a year before.

EPS Percent Change (4th Q back): The percentage change in earnings per share from the comparable quarter a year before.

EPS Percent Change (Latest Q): The percentage change in earnings per share from the comparable quarter a year before. Timely stocks will usually have strong recent quarterly earnings to validate the annual earnings strength. This reads in percentage.

EPS Percent Change (Latest Yr): The percentage change in earnings for the latest 4 quarters compared to the preceding 4 quarters. An appropriate criterion to include in many types of screens. Also a common criterion to sort by, with the best earners on top.

G

Gap Down-H: Stocks whose current high is lower than the previous day's low

Gap Up-H: Stocks whose current low is higher than the previous day's high

L

Latest Float: Latest shares outstanding minus shares held by insiders. Reported in 1000's.

Latest Net Profit Margin: The after-tax Net Income from Total Operations of the latest 4 quarters, divided by the latest 4 quarters Operating Revenues.

Latest Short Interest Ratio: The short interest shares divided by average daily volume, representing the number of days of average trading needed to cover the shorts.

Long Term Debt to Equity Ratio: The fiscal year Long-term debt divided by the Total Common Equity.

M

MoneyStream 1-Year Range: This is MoneyStream as a % of its one year range. Values of 100 would display MoneyStream at a one year high. Values of 0 would display MoneyStream at a one year low.

MoneyStream 3-Month Range: This is MoneyStream as a % of its three month range. Values of 100 would display MoneyStream at a three month high. Values of 0 would display MoneyStream at a three month low.

MoneyStream 3-Year Range: This is MoneyStream as a % of its three year range. Values of 100 would display MoneyStream at a three year high. Values of 0 would display MoneyStream at a three year low.

MoneyStream Surge 1 Week: This is the range of MoneyStream over the past week as a % of the range of MoneyStream over the past six months. A value of 90 would mean that 90% of the MoneyStream movement over the past six months happened over the past week.

MoneyStream versus Price 1-Yr. Period: This is the difference between MoneyStream as a % of its one-year range and price as a % of its one-year range.

MoneyStream versus Price 3-Mo. Period: This is the difference between MoneyStream as a % of its three-month range and price as a % of its three-month range.

MoneyStream versus Price 3-Yr Period: This is the difference between MoneyStream as a % of its three-year range and price as a % of its three-year range.

N

Net Profit Margin (post tax): The after-tax Net Income from continuing operations of the latest 4 quarters, divided by the latest 4 quarters Operating Revenues.

New High: Returns a value of TRUE if the current day's high is the highest high over the last 250 trading days (1 year).

New Low: Returns a value of TRUE if the current day's low is the lowest low over the last 250 trading days (1 year).

News Dates: This is the date and time of the most recent news article. This condition updates dynamically as news is posted.

Note Dates: This is the date and time of the most recent note published by any author you have chosen in the note selector. This condition updates dynamically as notes are published.

O

Operating Cash Flow 1-Yr: The sum of net profit, depreciation, change in accruals, and change in accounts payable, minus change in accounts receivable, minus change in inventories.

Optionable: The results True or False for this condition tell you whether the ticker symbol is optionable or not.

P

P/E Ratio: The price per share divided by the trailing 12 month's earnings per share. Companies with negative earnings are designated N/A. This well known criterion is a quick and dirty way of evaluating whether a stock is richly priced or reasonably priced. The P/E ratio must, however, always be evaluated in conjunction with growth rate. A high growth rate deserves a high P/E. Generally a low P/E would merit a long position.

P/E Ratio vs. 5-Yr-Average P/E: This is the latest P/E ratio of the company divided by its 5 Year Average P/E, expressed as a percentage.

Percent Change Revenue Last Qtr.: The difference between the latest quarter revenue and the revenue for the same quarter one year ago, expressed as a percentage.

Percent Shares Held by Insiders: The percentage of the latest shares outstanding held by insiders of the company.

Percent Shares Held by Institutions: The total number of shares held by institutions divided by the total number of shares outstanding.

Price 1-Year Range: This is price as a % of its one year range. A value of 100 would display price at a one year high. A value of 0 would display price at a one year low.

Price 3-Month Range: This is price as a % of its three month range. A value of 100 would display price at a three month high. A value of 0 would display price at a three month low.

Price 3-Year Range: This is price as a % of its three year range. A value of 100 would display price at a three year high. A value of 0 would display price at a three year low.

Price as Percent of 30-Day High: This is the current price divided by the most recent 30-day high. The highest possible value is 100%. Stocks with a value of 100% are at their 30-day high.

Price as Percent of 30-Day Low: This is the current price divided by the most recent 30-day low. The lowest possible value is 100%. Stocks with a value of 100% are at their 30-day low.

Price as Percent of 52 Week High: This is the current price divided by the most recent 52 week high. The highest possible value is 100%. Stocks with a value of 100% are at their 52 week high.

Price as Percent of 52 Week Low: This is the current price divided by the most recent 52 week low. The lowest possible value is 100%. Stocks with a value of 100% are at their 52 week low.

Price as Percent of 90-Day High: This is the current price divided by the most recent 90-day high. The highest possible value is 100%. Stocks with a value of 100% are at their 90-day high.

Price as Percent of 90-Day Low: This is the current price divided by the most recent 90-day low. The lowest possible value is 100%. Stocks with a value of 100% are at their 90-day low.

Price Growth Rate 1-Yr: This is the compound annual growth rate of price over the last year, derived using the least squares method.

Price Per Share-H: This is the current price per share (quotes are 20 minute delayed).

Price Percent Change 1 Month: This is the difference in the current price per share and the price per share 1 month ago expressed as a percentage.

Price Percent Change 26-Week: This is the difference in the current price per share and the price per share 26 weeks expressed as a percentage..

Price Percent Change 30-Day: This is the difference in the current price per share and the price per share 30 days ago expressed as a percentage.

Price Percent Change 5-Day-H: This is the difference in the current price per share and the price per share 5 days ago expressed as a percentage. This value is updated every 20 minutes.

Price Percent Change Today-H: This is the difference in the price today and the price yesterday expressed as a percentage.

Price to Sales Ratio: Determined by dividing current stock price by revenue per share (adjusted for stock splits). Revenue per share for the P/S ratio is determined by dividing revenue for past 12 months by number of shares outstanding.

Price Volatility: (Relative Volatility) - This is a measure of the propensity of a stock's share price to fluctuate widely. This indicator is calculated as follows: The stock's calendar weekly percentage magnitude change over the last 13 calendar weeks is averaged. The stock's final volatility is found by multiplying its average by 10.

Price vs. 200 Day Moving Average: For scanning purposes, the Value of this criterion is expressed as a percentage of the moving average. For example, stocks with a Value greater than 100 are trading above their 200-day moving average.

Price vs. 40 Day Moving Average: For scanning purposes, the Value of this criterion is expressed as a percentage of the moving average. For example, stocks with a Value greater than 100 are trading above their 40-day moving average.

R

Relative Strength 1-Yr (vs SP-500): The relative change in price of a stock over the past year compared to the change in the SP-500 over the same time. The calculation is : (Latest Close Price of Stock/ Latest Close Price of SP-500) / (Close Price of Stock 1 year ago / Close Price of SP-500 1 year ago) * 100.

Revenue Growth Rate Last 4 Qtrs: The difference between the latest fiscal year revenue and the previous fiscal year revenue, expressed as a percentage.

RSI Today: Returns the current value of RSI 14.

RSI Yesterday: Returns yesterday's value of RSI 14.

S

Sales 1-Yr: This is the sum of revenues for the last 4 quarterly reports. This is an excellent gauge of company size.

Sales Growth Rate 5-Yr: This is the compound annual revenue per share growth over the last 5 years. This is an indication of growing market share (especially in issues with over 15.93% since the average compound inflation rate for five years in the USA is 15.93%). Never forget, it takes revenue to produce earnings.

Short Term Trade Index (TRIN): The TRIN is the advance/decline ratio divided by the advance volume/decline volume ratio: ((Adv issues/Decl issues) / (Adv volume/Decl volume))
TeleChart provides TRIN values for the NYSE (\$TRIN), Amex (\$TRINA) and Nasdaq (\$TRINQ).

Stochastic crossing down thru 80: Returns a value of TRUE if Stochastic 12,5 crossed below 80 any time between the previous day's close and the current price.

Stochastic crossing up thru 20: Returns a value of TRUE if Stochastic 12,5 crossed above 20 any time between the previous day's close and the current price.

Stochastic Short Term-H: This is 12 day stochastic smoothed by a 5 day moving average. Stochastic is a measure of where the stock is within a price range for a specific time period. A stochastic of 100% would mean the stock price is at the high of the range, while a stochastic of zero would mean the price is at the low. As a general rule, stocks above 80% in this indicator are considered over bought and values below 20% are considered over sold.

T

TICK: Represents the number of stocks ticking up minus the number of stocks ticking down. For example, if the Tick reads +200, then 200 more stocks are ticking up than are ticking

down. If the Tick should read -354, then we understand that 354 more stocks are ticking down than are ticking up. TeleChart provides tick values for NYSE (\$TICK), Amex (\$TICKA) and Nasdaq (\$TICKQ).

Today's range crossing 40 day movavg: Returns a value of TRUE if the current value of the 40 day simple moving average is between the current day's high and low.

Trending/Consolidating (25 day): Compares the average trading range to the trading range over the past 25 days. Lower values reveal consolidation while higher values reveal trending.

U

Up 5 days in a row: Returns a value of TRUE if each close over the last 5 days was higher than the previous.

V

Volume (Dollars) 1-Day-H: Today's volume multiplied by latest closing price. Value displayed in 10000s.

Volume (Dollars) 5-Day-H: This the average daily number of shares traded over the last week times the average closing price over the last week. Value displayed in 10000s.

Volume (Dollars) 90-Day: This is the average daily number of shares traded over the last 90 days times the average closing price over the last 90 days. Value displayed in 10000s.

Volume 1-Day-H: Number of shares traded for the most recent market day. Value given in 100s.

Volume 5-Day-H: Average number of shares traded over the last five market days. Value given in 100s.

Volume 90-Day: Average number of shares traded over the last 90 market days. Value given in 100s.

Volume Surge 5-Day-H: 5-day moving average of volume divided by 200-day moving average of volume

Volume Surge Today-H: Today's Volume divided by the 100-day moving average of volume

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