



The Trading Calculators (TTC) is a program designed to help you solve for price support and resistance. This program was originally sold as a retail product in the last 1990's, but today is being offered for FREE without warranty or guarantee.

ProfitMax Trading Inc. provides this program AS-IS, and puts the responsibility of using this program solely on the user.

This document is a rough draft of how to setup and use TTC. The information found within this document is believed to be accurate. ProfitMax Trading Inc. does not, however, certify accuracy. Anyone using this program does so AT YOUR OWN RISK.

ProfitMax Trading Inc. is not liable for any gains/losses that may arise from trading using the information calculated using this program. Traders are responsible for their own trading results regardless of the tools they choose to use, including this program.

Setting Up TTC

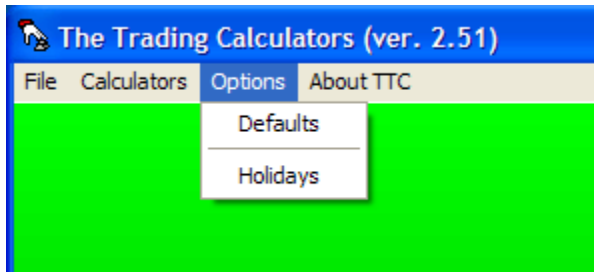
When you first install TTC, you will want to set-up your programs options. Before you do that, take a few moments and create the following directories (folders in Win95/NT) on your hard drive.

Create a directory for your .VAL files. These files are created when you save your Formation Calculator data for future use. One suggestion may be a directory called C:\VAL.

Create another directory for your .TXT files. These files are created when you print your calculator data to a file rather than to a printer. Many like to do this so they can then cut and paste from the file onto an email message. One suggestion may be to call the directory C:\PRTFILES.

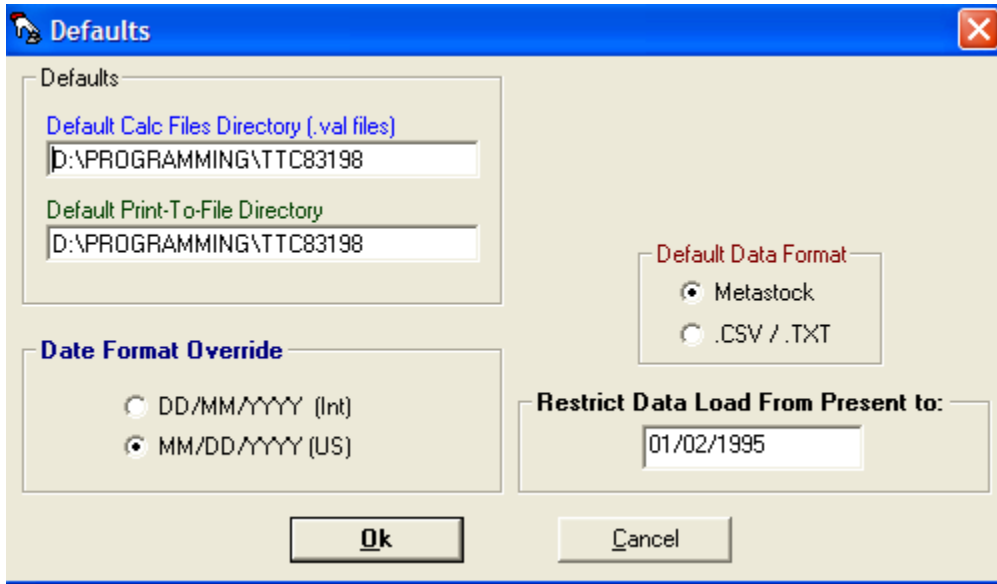
Of course, you can call your directories anything you want, and place them on any drive you want as well. Those are merely suggestions and examples.

Now, from the TTC main desktop if no other TTC windows are open, you should see the menu look like this:



Select the OPTIONS menu item.

You will note 2 choices. Select 'Defaults'.



Defaults Option

You will be presented with this window. In the upper left is where you want to tell TTC the drive and directory locations of your VAL and PRFILES directories. Make sure to enter the full path.

These are files that you create when you opt to SAVE your work. The application directory is normally used, but you can change the directories they are saved to here.

Next, if your Windows system is set-up for International time for which you use dates in the format of 'DD/MM/YY', you will want to select the appropriate box here.

Many traders don't want to load ALL their data into TTC. Takes too long and is not needed. Usually the last year or two is plenty. If you want to restrict the amount of data TTC loads, enter the date for the oldest data you will allow to be loaded in the appropriate box.

Select the type of data you wish to use with TTC. You can use CSV or Metastock format. If you use CSV, make sure the files are in this format shown below:

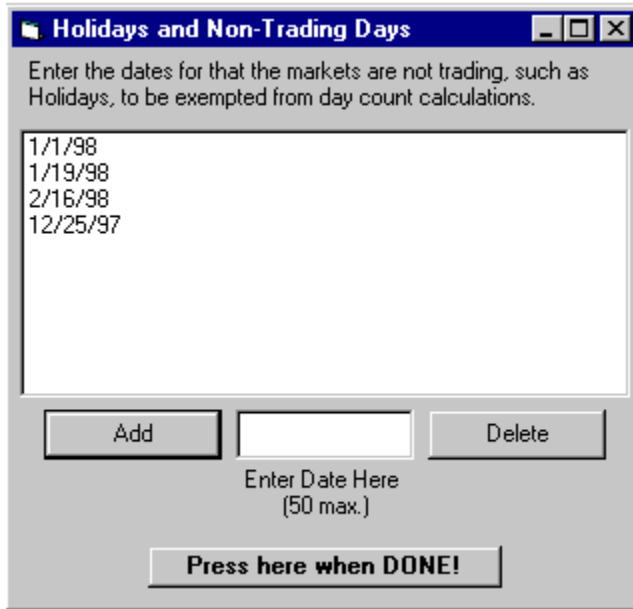
DATE, OPEN, HIGH, LOW, LAST
mm/dd/yy, nnnn,nnnn,nnnn,nnnn

Note: The date must match the date format of your Windows system. The date and prices must be separated only by commas. Go to Control Panel and Regional Settings to verify.

The SAFEST way to load data into TTC is using Metastock.

Holidays

Also under OPTIONS is 'Holidays'. Selecting this option brings up the Holiday window.

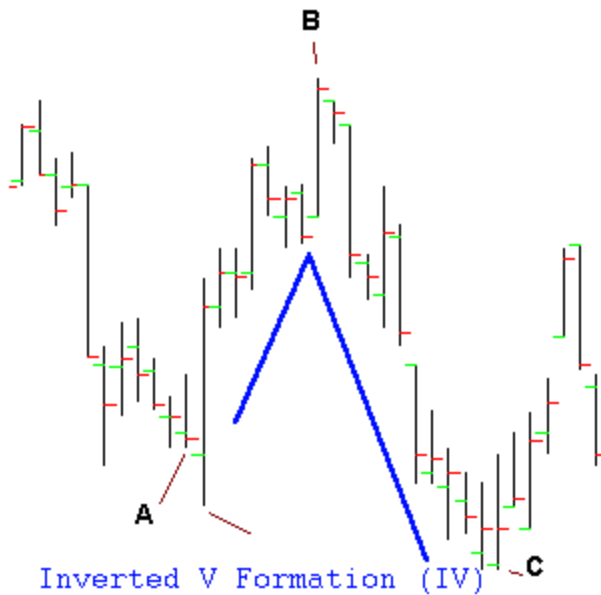


Holidays Option

TTC requires that Holidays not be counted when calculating for prices using the Formation calculator. Enter any Holidays for which the markets will not be opened that occur anytime between the formations you will be using to enter into TTC (more on formations later). After entering each Holiday (up to 50 max., but you usually don't need more than a dozen usually), you **MUST** press the 'DONE!' button to save to disk. To delete any Holidays, merely select it with your mouse and hit the 'Delete' button.

Solving For Price

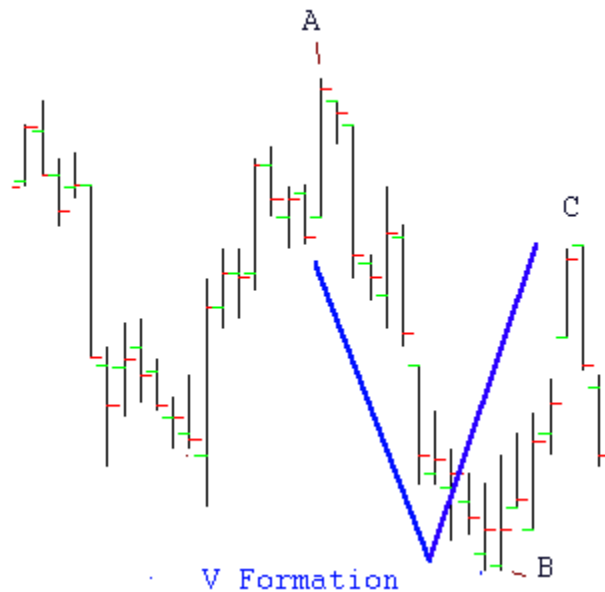
Once you have your Time Days, it is time to solve for price. It is important to understand a few important concepts before we continue here. One of these concepts is the type of formations you will be mainly concerned about. Note the graphs below:



Here is what we call an 'Inverted V formation'. It is called this because it looks like an upside-down (inverted) 'V'. Note how it is labeled as A, B and C.

'A' can be either the lowest CLOSE of the IV formation, or the lowest LOW. It is highly recommended that you use the lowest CLOSE for your price work, and only use the lowest low when you feel it may help you find an 'area' of resistance for a particular Time Day. You will note here that the lowest CLOSE was not made on the LOWEST day. Whenever the lowest low day for 'A' does not have a lower low than the bar to either side of it, use the bar next to the lowest low bar that does have the lowest low.

B is then the highest HIGH, and C is the lowest LOW.



This is what the 'V' formation looks like. Here 'A' is the highest CLOSE or highest HIGH. It is again recommended that you use the highest CLOSE for 'A' for your price work.

'B' is the lowest LOW, and 'C' is the highest HIGH.

When you notice on your charts as you get within a couple of days to one of your Time Days that prices are going up and it appears as if you will be getting a top on your Time Day, you will want to solve for RESISTANCE (see Support and Resistance - Pressure Areas). The BEST formation to use for resistance is the Inverted V formation (IV). If you notice that it is likely you will get a bottom on your Time Day, you will want to solve for SUPPORT. The BEST formation to use for support is the V formation (V).

EXAMPLE: Say that you were working with the April 98 Live Cattle chart. You enter the dates for some tops and bottoms and found a couple of Time Days that came up more than once, from different tops and bottoms with the Time Day Calculator. Say the Time Day is 2/13/98. Today is 2/11/98.

Prices have been going up until today. You believe that the probability is really high that you will have a top in one or two days (remember that a time day can be a day off, either before or after). So you decide to solve for RESISTANCE for both 2/12 (TD-1) and 2/13 (TD). You also note that this market is in a downtrend. Good.

You look on your chart and locate the NEAREST IV formation. You locate the lowest closing price of the formation for 'A', the highest top for 'B', and the lowest low for 'C'. Here is the information you extracted from your charts.

(A) - 1/12/98 66.55 (lowest close)

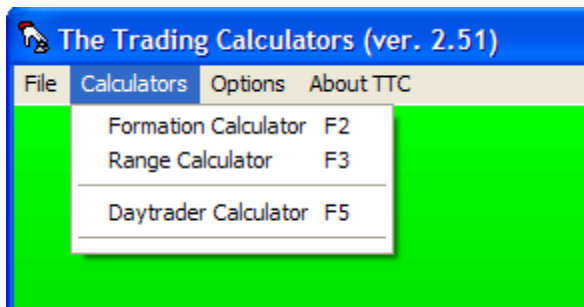
(B) - 1/23/98 69.70 (highest high)

(C) - 2/9/98 65.40 (lowest low)

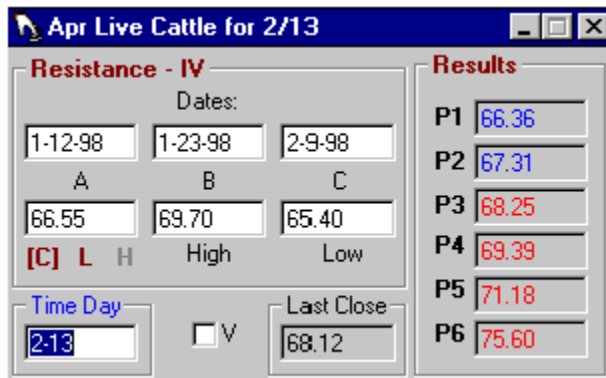
Having this information at hand, you will then enter it into the 'Formation Calculator'. You do so first for 2/12, then for 2/13. Come 2/12 you note that prices did not quite meet any of your resistance prices. You then wait for 2/13. Here is what you did: (see Formation Calculator)

Formation Calculator

From the Main Menu (when no other windows are open), select 'Calculators'.



Next, select 'Formation Calculator' or press F2. The calculator looks like this:



Now solving for 2/13, you manually enter each date of the IV formation and their associated prices. You leave the 'V' checkbox unchecked since you are using an IV formation. You also leave the [C] as it is for the Closing price. If you wanted to use the lowest low for 'A', you just click your mouse on 'L' and it will then appear as [L] which tells you it is selected (close is recommended).

You enter your Time Day of 2/13 into the 'Time Day' text box. Once done, you can either press the Enter key on your keyboard or select the 'Recalc' menu item on the main menu (appears when this calculator is showing on the desktop).

NOTE: If you wish to add a title to the calc, double-click your left mouse button

anywhere in the empty space around the 'V' checkbox (not the checkbox itself!).

Notice the values that appear under 'Results'. These are your support and resistance values for 2/13. If you entered your values manually, these may not show up in color as illustrated. That is because the calc must know what the Last Close price is to do this. I manually typed in 68.12 as the Last Close price and clicked my mouse on the 'Recalc' menu selection. If you load data into TTC (discussed later), you don't have to enter the prices here or the Last Close price. Just enter the 4 dates and TTC will take care of the rest.

The RED prices quickly tell you that they are HIGHER than your Last Close price. The prices in BLUE quickly tell you that they are LOWER than your Last Close price. Since we are interested only in RESISTANCE, we are concerned only of those prices in RED.

On 2/13, the actual price was 68.20! Notice on the Formation calculator next to P3 (means Price 3). It shows resistance at 68.25. Only 5 points difference which is well within our allowable tolerance (since hitting the exact price does not happen normally, depending on the market you may wish to give it a little play). In Live Cattle, this is just \$20. Once it is clear to our satisfaction that prices will not go higher on this day, we can then consider shorting it. Remember, it must be within the rules. Here, we have a down trending market, that hits our resistance price on our Time Day. We can enter this trade with a stop-loss order at the same time.

Yet, how might we want to determine where to place our stop-loss order?

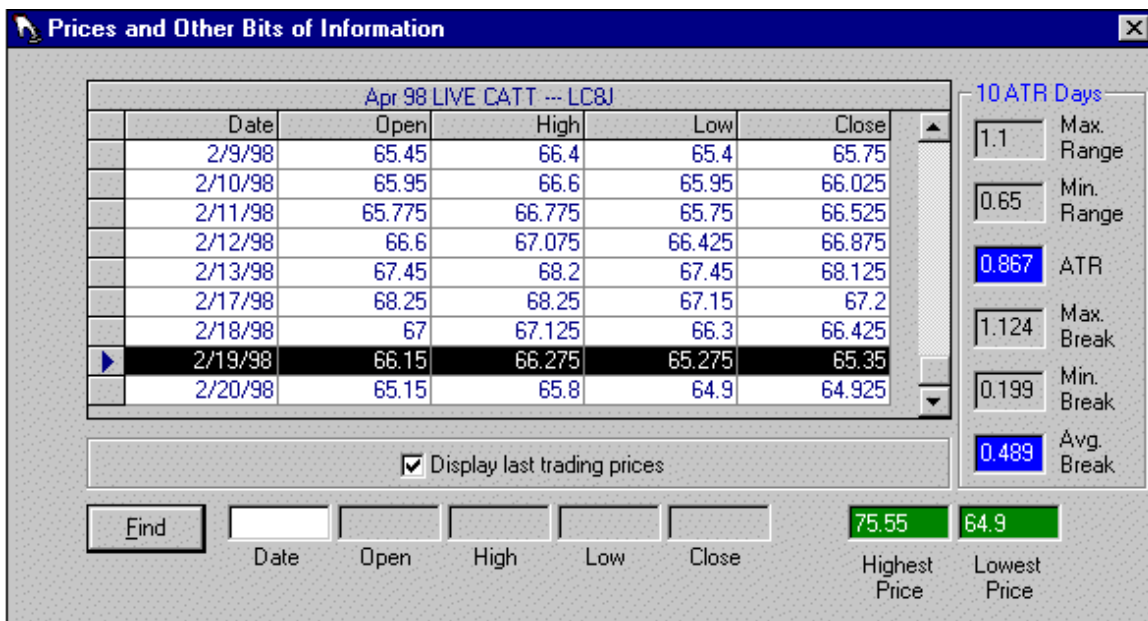
The following section under “Breakout Values and Stops” should help.

Breakout Values and Stops

It has been said many times that it is much easier to enter a trade than it is to exit one. I have to agree, especially when we are using a tool like TTC to enter the trade in the first place. But still, we need to find a way to decide on how to place a stop-loss order that will give us the best chance of staying in a trade until it moves in our direction without risking more than we have to.

One very useful tool I like to use is the Breakout Values found under the Prices window. Like the Fib/Gann calc which we haven't covered yet, the Prices window requires that we already have prices loaded. So, let's load some April Live Cattle prices from my Metastock data files. (see Loading Data into TTC)

Now that we have our data loaded, we notice the PRICES menu option appear on the main menu. By selecting this menu item, we get the window below:



Here we can see all the prices loaded into TTC, and also some other useful information. If we wanted to do a price search, we can enter the date in the Date box and press the 'Find' button. Also, when a date is entered, we can use the right or left arrow keys on our keyboard to cycle through each date one at a time. Note the values to the right. We have the Max. range of a single day within the last 10 days (this can be changed in Options|Defaults page), Min. range, and the Average Trading Range (ATR). Also, we have the Min., Max. and Avg. Breakout values (MinBV, MaxBV, ABV). Highest and Lowest Price of the complete loaded data series is also shown.

As mentioned in the Rules of Trading section, one suggestion is to initially use the

MinBV times 1.1 beyond the pivot. Here we see it is .199. (.199 x 1.1 = .22), so we can add that to our pivot of 68.20 and we get 68.42. So our initial stop would be 68.42. With a maximum allowable risk of \$200-250, I can enter my short order before or after the open at \$200-250 below my stop of 68.42. This means I can enter as low as (68.42 - 62 points) = 67.80. However, since it closed at 68.12, I estimated that I can place my order before the open at 68.00 or better with my stop at 68.42 for a total risk of \$168 or less (if it opens higher). The market opened at 68.20, moved up to 68.25 (5 pts higher than our Time Day), then for 3 days moved down nearly 300 points! (actual trade).

There are various ways in which you may wish to use the Breakout values. What they are is the least or most prices of any given day that has exceeded the previous days high or low for the last 10 days (can be changed in Options|Defaults window). In other words, starting with the 10th day ago, note how much it made a higher high or lower low than the day before it. If it went higher and lower than the previous day, then take the greatest of the two for solving the Max BV, and the lowest of the two when solving for the Min BV. This is checked up to the present with just the Max. and Min. listed. Also, the Average amount is figured by adding up the breakout amounts of the last 10 days and divided by 10. This gives a good idea of how much each day is likely to move past the previous day, and can help you plan where to move your stops, or to estimate how long to reach a certain price in a day or so, etc. Very useful!

MORE ON BREAKOUT VALUES and RISKS:

Say for example that you are going to enter a trade. You may be wondering where to place your initial stop-loss. The solution to this problem really lies with the actual market situation, so there are not hard and fast rules here. It is also dependant on a traders ability to handle risk, the size of the trading account, etc.

It is first off recommend that you never risk more than 10% or your account on any given trade. If your account size is greater than \$2000, you may be able to lower this percentage accordingly since you never want to risk more than \$250 on any one contract on any given trade/market. What this means is that if you are going to risk \$200 per contract on a trade, you should not trade more than one contract unless your account is at least \$4000 in size. Again, less is better, but never risk more than 10% of your account.

Knowing your risk amount is important as it helps you determine where you can enter a trade. Let's say that you are expecting April Live Cattle to make a bottom today on a time day. The support price for today (our time day) is P3 = 65.10, P4 = 64.22. Yesterday the low in this market was 65.65. Prior to today's open, you want to get an idea where to place your order and stop. So you load into TTC a Metastock file on April Live Cattle, and open the PRICES window (shown above). Now the prices I'm quoting here are NOT on the PRICES picture above, but are being used as an example only. Let's say the ABV (Average Break Value) is .57 points. Let's also assume the Max BV is .87 points. So by subtracting these from yesterday's low price, we could reasonably expect prices on the average to go down to around 65.07 (Low of yesterday 65.65 - ABV .57). Notice that our P3 support price on the Formation calculator is 65.10. Very high probability then it will

be reached. We also subtract the Max BV from yesterday's low to see if maybe the next support level could be reached as well. Yesterday's low 65.65 - Max. BV .87 points = 64.78. Since our next support for this time day is expected at 64.22, it is very unlikely we will be able to reach this price today since even the maximum move is likely 64.78, quite some distance away.

So, you might place your order at 65.20 or better, for example, and place your stop loss order about 50 points lower (\$200 risk) at 64.70. Notice that your stop loss order is a few points beyond even the Max. BV price of 64.78. This is a relatively good place to place the stop.

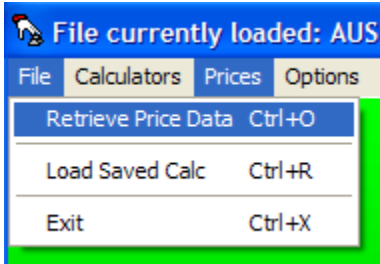
Some may want to actually see if prices stop around 65.10 before committing to a trade. This can be an advantage as well as a disadvantage. The advantage is that you will know exactly where to place your stop (usually a few points below the pivot bottom) and can then enter as high up from the bottom price by 50 points (\$200). The disadvantage is that you can also miss the beginning of the move thus the possibility of not being able to enter the trade (because the price is now well beyond 50 points from the bottom). Note that Live Cattle trades at \$4/pt, thus the 50 point figure I am using here.

Some like to use the lower of the two figures for the initial stop, either the Max BV, or the ABV x 1.5, whichever is less. In the TTC group, there are various suggestions offered, and you should use that which fits your personality well. No hard and fast rules for stops, as there are for the actual entry (must be within on day of a time day, off support or resistance in the direction of the trend).

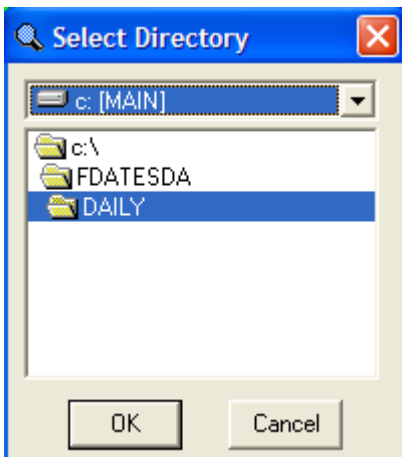
As with the example above, I like to use the ABV and Max BV to anticipate which support/resistance prices the market is likely to be able to reach come my time day. When I note that two (2) or more support prices can be reached, I will then either wait and confirm, or place my initial order at the one at Max BV away, and then adjust later if my order is not reached if possible.

Loading Data into TTC

From the FILE menu, select 'Retrieve Price Data' or press Ctrl + O.



If you have Metastock selected as your data format in the OPTIONS section, you will get a window like this:



Use this dialog box to locate the directory that contains your Metastock data.



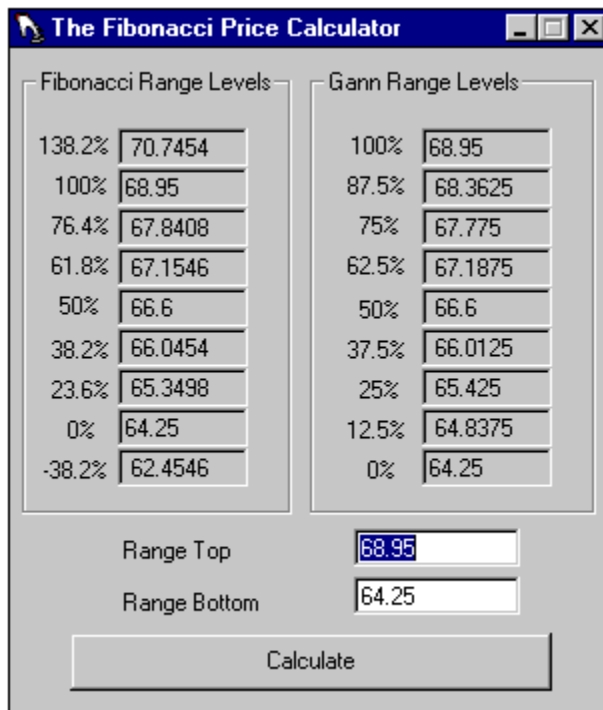
Double-click on the Metastock data file you wish to load. (NOTE: If it hasn't been said up to this point, these are EOD (End-of-Day) data files, not real time data. TTC does not read real-time data.)

When you double-click the file name, you should see the dates of the records flashing across the top of the dialog box's title bar. This lets you know its loading.

Range Calculator

Here is a very handy calculator that should be used along with the Formation calculator in solving for possible support/resistance prices. The difference with this calculator from the Formation calc is that it is static and does not require a Time Day.

The Formation calculator requires the Time Day because it produces 'Dynamic' support/resistance values that change each day. But the Fib Range Calculator support/resistance values will NOT change day by day. Yet, although the Formation calc produces much more reliable sup/res values, many times prices will go to those static values produced by the Fib Range Calc. To open this calc, select 'Calculators\Fib Range Calculator' from the main menu.



The screenshot shows a window titled "The Fibonacci Price Calculator". It contains two columns of percentage levels with corresponding price values in input boxes. The "Fibonacci Range Levels" column includes percentages from 138.2% down to -38.2%. The "Gann Range Levels" column includes percentages from 100% down to 0%. Below these columns are two input fields: "Range Top" with the value 68.95 and "Range Bottom" with the value 64.25. A "Calculate" button is located at the bottom of the window.

Fibonacci Range Levels		Gann Range Levels	
138.2%	70.7454	100%	68.95
100%	68.95	87.5%	68.3625
76.4%	67.8408	75%	67.775
61.8%	67.1546	62.5%	67.1875
50%	66.6	50%	66.6
38.2%	66.0454	37.5%	66.0125
23.6%	65.3498	25%	65.425
0%	64.25	12.5%	64.8375
-38.2%	62.4546	0%	64.25

Range Top: 68.95
Range Bottom: 64.25
Calculate

Take the top and bottom of any range and enter it in Range Top and Bottom. Press the Calculate button and the sup/res prices appear in the boxes above. These are areas of price pressure which market prices will many times react to. It is recommended that you use the most current range which has a top higher than the current market price and a bottom lower than the current market price. You can even try several ranges and see if some prices appear more than once. If so, those are usually very strong sup/res pressure areas to prices.

Daytraders Calculator

If you like to trade intraday and would like to find the likely areas where price is likely to pivot, TTC comes with a handy calculator to handle this. Select this calculator by going to Calculators|Daytrader Calculator on the main menu.

The screenshot shows a software window titled "Fibonacci Daytrader" with a close button (X) in the top right corner. The window is divided into several sections:

- Formation Prices:** Contains three input boxes labeled "Price: (close)", "Price", and "Price". Below these are three boxes labeled "A", "B", and "C".
- Number of bars from C to forecast out to:** A single input box.
- Decimals:** A spin box showing the value "0" and a "Decimals" label.
- Sup/Res Price Levels:** A section with six input boxes labeled "P1", "P2", "P3", "P4", "P5", and "P6".
- Set Calc Title:** A button.
- Number of bars from:** A label with two input boxes below it labeled "A to B" and "B to C".
- Fib Time Bars - Count From C to Future:** Two input boxes.
- Fib Range Levels Between B to C:** Two input boxes.

To use this calculator is somewhat similar to the Formation calculator. You locate the V or IV formations on your intraday charts (i.e. 1min, 5min, 60min, etc.) and note the prices of the 'A', 'B', and 'C' of the formation. Enter those prices in the appropriate boxes on the calc. Also, count how many bars from 'A' to 'B' and enter that in the 'A to B' box, and also count the bars from 'B' to 'C' and enter that in the 'B to C' box. Since you do not yet have a time bar, enter any value into the box labeled 'Number of bars from C ...' and press Enter on the keyboard. You will quickly notice two 'Fib Time Bars' values on the bottom left. Now enter any one of them in the 'Number of bars from C...' box to find what the sup/res prices are likely to be when that many bars from 'C' appears on your intraday charting software. If price hits on the Time Bar or very close to it, you then can get ready for a possible intraday trend change.