

**January 19, 2009**

## **Using this Beta Version of FastBreak Pro**

First, this beta version (Version 6.X) will only work with users who have version 5.X of FastBreak Pro. We recommend you read this entire addendum before trying to run the new version.

We highly recommend you keep version 5.X on your computer. You can have multiple versions on your computer, but you will need to practice good housekeeping to keep the versions and files organized. The new version consists only of a single new file, but you need to have installed version 5 on the computer.

Here are the recommended steps:

- Create a new folder on your computer (ftbreakp6) for example.
- Unzip the version 6 executable into this new folder. The file name is ftbreakp.exe
- Rename the file to ftbreakp6.exe to avoid confusion with your version 5 executable.
- Drag a shortcut to this file to your desktop and rename the shortcut to FB Pro V6
- Double click on the shortcut to launch the new version

The advantage to putting the new version in its own folder is that the restart files and strategy files created by Version 6 will not run in Version 5. However, Version 5 strategy (DFT) files will load and run in Version 6

If you need to reinstall FastBreak Pro you will need to do a complete reinstallation with your original CD and then install the update.

## **What is new in V6.1?**

### **Delay Activation of Stops in Optimizer**

FastBreak Pro Version 6.1 has only one new feature added to the version 6.0 release. The V6.1 adds an option to the optimization process to suspend all Stops for a user defined period of days after a fund is purchased. We added this feature for a couple of reasons. One, we have users who use fund families that absolutely prevent exiting a fund for a fixed number of days, e.g., 7 and 30 days are quite common, after a fund is purchased. The second reason is that some companies will allow you make short term trades, but limit you on the number of short term trades. Fidelity for example, will only allow a limited number of short term (less than 30 days) trades during a 12 month period. If a users wants to build a trading strategy to either prevent or limit the number of short term trades this new feature will prevent any of the stops from being effective. The option is at the top of the screen where Stop optimization ranges are set.

Stop Begin Day:	30
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There is a single value in the text box. In the above example using 30 would deactivate ALL stops until 30 days after a fund is purchased.

***Note: A user needs to set the minimum value in the User Min Hold period range to a similar value. The User Min Hold controls the minimum holding period before a fund can be sold due to ranking. It should also be noted that MMKT Min Hold controls the minimum holding period for the money market fund. Most fund companies don't have restrictions on money market minimum holding periods. Finally, this feature will not override a market timing signal sell signal. In other words, a market timing signal will always executed.***

After running the optimizer and saving one or more DFT files, load the DFT file into FastBreak. Go to the Stop Tab and you will see that the start day of all activated Stops is set to the user defined value set in the Stop Begin Day box.

## **What is new in V6.0?**

### **Trendline Stop and Buy Filters**

Trendlines are one of the oldest and still most useful technical analysis tools. Trendlines can be used to determine when a stock or mutual fund has broken down in an upward move, i.e., used as a sell Stop, or trendlines can be used to determine if a downward move has ended and it is safe to buy, i.e., Buy filter. The vast majority of trendline users use a manual method to draw the trendline on a paper chart or a computer screen. Programming a computer to calculate a trendline that a human brain can draw in a few seconds is a daunting task; however, there is a tendency when manually drawing trendlines to “force” the line to other expectations. A mathematical algorithm is not subject to such expectations, but at the same time cannot “see” other potential complications and complexities.

***NOTE: The algorithm to determine trendlines is very computer time intensive. This will not be a major factor when running a single strategy with a reasonable family size. It will affect the FastBreak Pro optimizer. More will be said about this later.***

Although the basic idea of trendlines is rather simple, implementation and especially automated implementation, can be come rather complex. Analysts don't agree on methods to draw trendlines (Note: Analysts don't even agree on how to spell trendline, i.e., “trendline” or “trend line.”) For upward trendlines, FastBreak uses a method that draws a trendline between ***significant*** low price points and at no time is the price of the stock or fund allowed to penetrate the trendline. In the chart below the trendline is drawn between the 1<sup>st</sup> and 2<sup>nd</sup> significant price low points. For the trendline to be valid the equity curve cannot penetrate below the trendline anywhere between those two points.



For downward sloping trendlines two significant high price points are used to draw the trendline.

It has been a standing joke that trendlines are very easy to draw after the fact; however, in real time it can be quite difficult to determine which point to choose on the equity curve to anchor the trendline. For example, using the above chart it may have seemed reasonable to draw the trendline shown below at an earlier decision point. However, it is clear that this trendline would have forced you out of a very profitable upward trend too early. This is to say, that the rules of trendline technical analysis forces a sell when the equity curve violates the trendline until a new trendline can be drawn.



The trendline algorithm in FastBreak makes a determination if the low price point dip (in an upward trend) is significant and should be considered as a trendline anchor point. The exact method used to make this determination is proprietary. It is also quite technical and the vast majority of users would not be interested in a multiple page explanation filled with equations.

Another aspect of trendlines is that they can be drawn for the short term or the long term. This is driven by the degree or significance of the dips that form the low points used to anchor the trendline. See the two examples in the following chart. In one case the trendline is capturing a very long term move, in the other case the trendline is anchored with less significant low points.



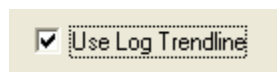
Investment objectives will help define how trendlines are drawn. For example, if a primary objective is to avoid large equity draw-downs then trendlines that capture smaller price moves and avoid significant sell offs will be a reasonable choice. However, it is often the case that to maximize return at the expense of large draw-downs requires trendlines that capture larger price moves and are drawn using more significant price low points. The algorithm used in FastBreak allows either choice to be made.

Finally, trendlines can be drawn using linear price data or using logarithmic price data. There are advantages and disadvantages to both methods. FastBreak will allow either method to be used.

### Using Trendlines in FastBreak

*Note: Adding trendlines to the Stop screens in FastBreak required changing the layout of the screen to fit the additional options onto the page. The new layout should be clear with a little study.*

A new option has been added to the Strategy Tab to force use of a logarithmic trendline.



If the Use Log Trendline option is checked, then logarithmic trendlines will be used for both the Trendline Stop and Trendline Buy Filter.

### Trendline Stop

The above boxes have been added to the Stop Tab to activate the trendline Stop. The option is used just like the other Stop options. That is to say, check the box to activate the trendline Stop as either a single period Stop or a two period Stop.

The Size text box is used to control the significance of the price dips used to draw the trendline. If a small value is used then smaller price dips will be considered significant and shorter term trendlines will be drawn. If larger values are used then larger price dips are required before they are determined to be significant enough to anchor the trendline and the trendlines will capture longer term trends.

In the above example a value of 9 is used to control the trendline for the first 30 days. Starting on day 31 a value of 5 is used which will tend to use small price dips, and therefore, shorter trends. Reasonable values are 0 to 10.

If a position is stopped out due to a trendline being violated then a “T” is placed in the WHY column of the output Detail Tab.

### Trendline Buy Filter

To activate the trendline Buy filter the above option is on the Buy Filter Tab. Activation of this option will prevent purchase of any issue that is trading below its trendline. As with the Trendline Stop, the Size box controls the type of trendline used. Reasonable values to use are 0 to 10.

### Trendlines in the FastBreak Pro Optimizer

The FastBreak Pro optimizer can be used to optimize the nature of trendlines. It can also be used to determine whether Linear or Logarithmic trendlines are best.

On the FastBreak Pro Strategy optimizer screen the following option is available to control logarithmic vs. linear trendlines.

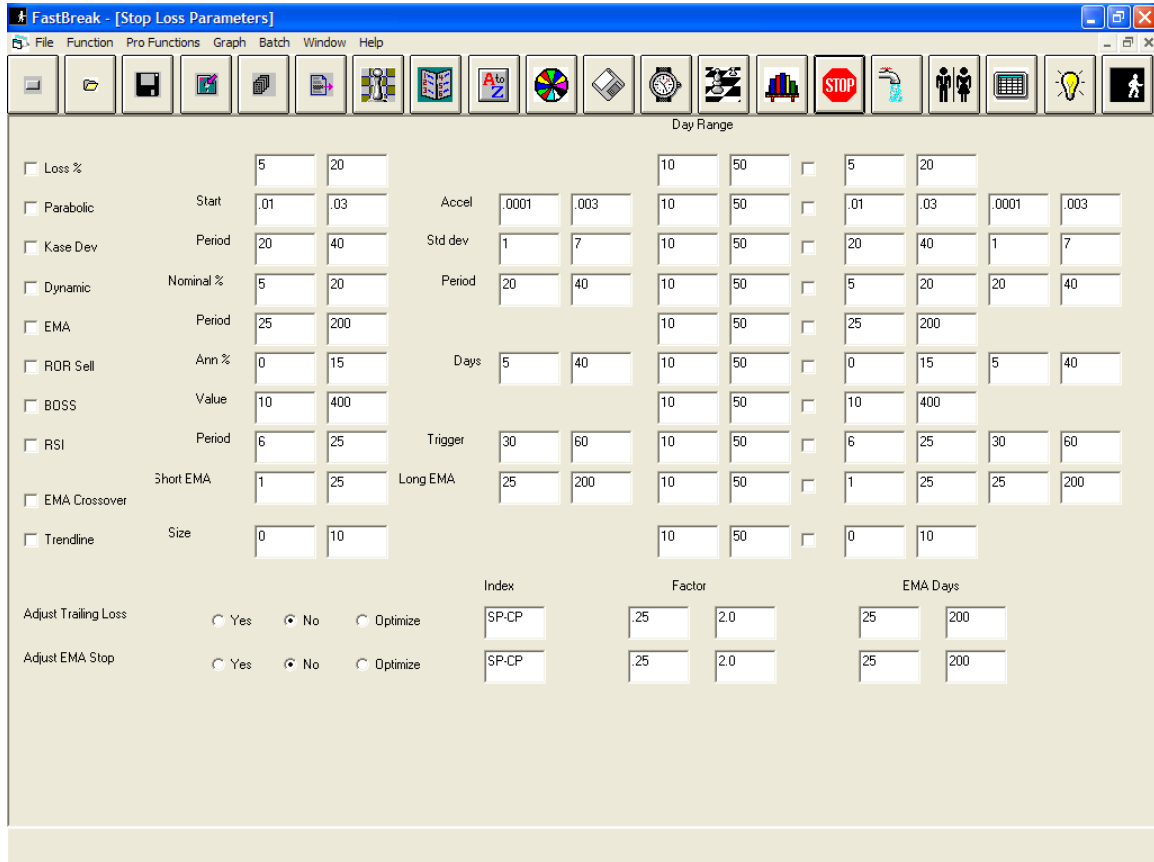
If the Yes option is chosen then only logarithmic trendlines will be used. This option controls both the Stop and Buy Filter trendlines. In other words, you can't mix

logarithmic and linear trendline options for Buy filters and sell Stops. If the No radio button is chosen then only linear trendlines will be used.

If the Optimize option is selected then the optimizer will try both logarithmic and linear trendlines to determine which works best.

### Optimizing Trendline Stops

The Optimizer Stop screen has a new look. This was required to open up space to insert the new trendline Stop.



The following example tells the optimizer to try a two period Trendline Stop. The range for the size of the trendline is 0 to 10 for both the first and second periods. The switch over between the first and second period is given a range for 10 to 50 days, this is to say, that the optimizer will decide a point between the 10<sup>th</sup> and 50<sup>th</sup> day of the trade to determine when to switch from the first trendline period to the second. Of course the optimizer may find that the size value is exactly the same for both periods.



When the optimizer is running the Best Results screen will show if the trendline Stop or Buy filter is being used by the top systems evaluated. However, rather than just a simple “Y” or “N” in the trendline columns there can be an “L” in the column to provide additional information. The key is as follows:

N= trendline not used for this strategy  
Y= Logarithmic trendline used  
L=Linear trendline used.



### Optimizing Trendline Buy Filter

The above option has been added to the FastBreak Pro Buy Filter optimizer screen. By checking the option the optimizer will evaluate the trendline Buy filter. A reasonable size range is 0 to 10.

## Issues to Consider when using the Trendline Options

### Minimizing Runtime when using the Trendline Options

As noted earlier, the trendline algorithm is very computer time intensive. Because it takes so much time to calculate each trendline for each member of the trading family FastBreak Pro will calculate all the versions of the trendline for each fund just once. This is to say that if you give trendline Buy Filter a “Size” range from 0 to 10 there are 11 trendlines that need to be calculated for each member of the trading family. If your trading family has 100 members that requires calculating and storing 1100 trendlines. FastBreak stores these different versions in an array and uses them over and over as the genetic algorithm chooses them.

The FastBreak Pro optimizer builds this array at the start of the optimization process. It can take an hour or more to build all these trendlines for a large family. The good news is that once all the trendlines are built and stored the remainder of the optimization process will run at normal speed.

***NOTE: When you start the optimization process you will think the program is locked up. We highly recommend that when you first experiment with the trendline option to use very modest family sizes.***

The time it takes to build the trendlines is dependent on the following:

- Number of family members
- Size range for trendlines to be built. If you use 1 to 20 vs. 1 to 10 it will take twice as long because twice as many trendlines need to be built.
- Selecting the Optimized logarithmic vs. linear option will double the set up time because both versions of trendlines will need to be calculated. If after



experimenting you always find that the Log version is being chosen then using only the Log version in the optimizer will reduce the run time by half.

- Your computer speed

It doesn't matter if you choose only the trendline Stop rather than both the trendline Stop and the trendline Buy Filter. The same trendlines calculated are used for both options.

*Note: The trendlines are not saved when you save a FastBreak Restart file. If you load a FastBreak Pro Restart file the trendlines will all recalculated. Therefore, if you think there is a reasonable possibility you want to use the optimum strategies found during an optimization run then it is best to save the best generation strategies at the end of an optimization run rather than loading the Restart file at a later date.*

### **Data Required to Determine a Trendline**

It can take a considerable amount of historical data to determine the first trendline. This is because it requires two meaningful dips (in the case of an upward trendline) to create the first trendline section. If the stock or fund is in a significant upward movement at the beginning of its historical data, then no trendline can be drawn. Until a trendline can be drawn, FastBreak will assume that the stock or fund is BELOW its trendline. Therefore, this stock or fund can't be purchased if either the trendline Stop or Buy Filter is used by the strategy.

You need to be aware of this issue because you may see situations where a stock or fund is highly ranked and clearly in an uptrend but a strategy will not purchase the equity. **Repeat, until a stock or fund has two meaningful dips in the equity curve a trendline cannot be constructed, and therefore FastBreak will assume the issue is below the trendline and unavailable for purchase.**

### **Will not work with Optimize Family Option**

Because the trendline option builds a series of trendlines for each member of a trading family this makes it impractical to use with the Optimize Family option.

### **Summary**

Is the trendline algorithm perfect? The answer is no, there are no perfect technical indicators. Sometimes the algorithm makes an excellent determination, but other times it fails. The question for an investor is does the indicator succeed more often than it fails. The FastBreak Pro optimizer will help you explore this question.