

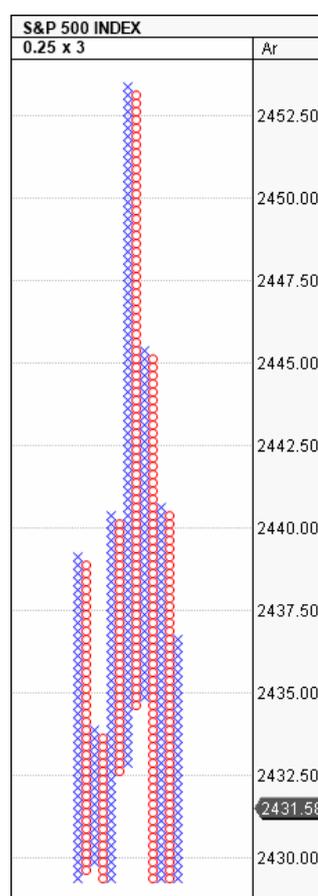
## Why the misnamed 'Traditional' method of Point and Figure box sizing has no place in the 21<sup>st</sup> Century

When Point and Figure charts were used in the late 18<sup>th</sup> and first half of the 19<sup>th</sup> century, prices were low and so box sizes of  $\frac{1}{4}$ ,  $\frac{1}{2}$  or 1 point were used. The charts were all plotted on an arithmetic scale. Each X and O had the same points value. The same vertical distance, i.e. the same number of Xs or Os, represented the same number of points. So a move of 5 Xs or Os would represent the same move in price no matter what the current price.

That was fine until prices started to rise and Point and Figure analysts realised that a box value of  $\frac{1}{4}$  or  $\frac{1}{2}$  point when the price was 10 produced a completely different looking chart when the price reached 100. A  $\frac{1}{4}$  point box size at the 10 level means the price would have to move by  $2\frac{1}{2}\%$  in order to plot another box, whereas at the 100 level, the price need only move by  $\frac{1}{4}\%$  to plot another box. So a move of 10% around the 10 level would result in 4 boxes, but 40 boxes around the 100 level. Let's take the S&P 500 for example. In the early 1950s, the price ranged between 13 and 25. To plot a useful Point and Figure, a box size of  $\frac{1}{4}$  point would have been used as shown by Chart A below. Chart B shows the S&P chart in 2017 if that same  $\frac{1}{4}$  point box size is used.



**Chart A shows S&P 500 between 1949 & 1954 with a  $\frac{1}{4}$  point box size**



**Chart B shows S&P 500 in 2017 with a  $\frac{1}{4}$  point box size**

The problem can be clearly seen. Chart A is a good, readable Point and Figure chart, but Chart B with its long columns of Xs and Os is useless for any analysis. It means you can't use the same box size for long-term analysis.

This problem came to the attention of Abe Cohen of Chartcraft in the 1950s who realised that, to make the chart readable at all levels, he would have to use larger box sizes at the higher price levels. So he decided that the box size should change at certain price levels. He decided

to use a  $\frac{1}{4}$  point box for prices under 5, then  $\frac{1}{2}$  point for prices under 20, 1 point between 20 to 100 and 2 points above 100 and so on. He never would have envisaged the S&P reaching 2400, so he made no mention of prices into the thousands.

Although he may not have realised it at the time, he was in fact making an attempt, albeit flawed, at a log scaled chart, that is to say a chart where the box size increases as the price rises, so that the same percentage move should result in the same number of Xs and Os. But it doesn't. The transition from one to the other is not smooth, but rather stepped. Although a brave attempt to address the problem of constant box sizes and rising prices, his method had all sorts of problems. The sensitivity of the chart changes between the key levels. For example, at 20, the box size of 1 point is 5% but at 100 it is 1%. Also, as a column of Xs or Os goes through a level, some of the Xs or Os are at one value and some at another making the calculation of targets difficult and most likely inaccurate, not to mention discrepancies with 45 degree trend lines. What it really needed was a better thought out method.

For long-term analysis, users of line, bar and candle charts, use a log scale. Impossible for Point and Figure chart to be log scaled everyone thought, because Point and Figure charts are on a squared grid where each box has a constant value. Some software companies, laughably, thought that plotting a log scale Point and Figure chart meant that the physical size of Xs and Os would have to be made smaller as the rise increased, turning round Os into ovals ! What it needed was a bit of lateral thinking, an understanding of the impact of different scaling on a Point and Figure chart and the means to do it. With an arithmetic chart the same vertical distance equates to the same number of points, whereas with a log chart the same vertical distance equates to the same percentage change in price. In Point and Figure terms that means 5 Xs or Os on an arithmetic chart represent the same number of points, but on a log chart it means the same percentage. So that means for a log scale Point and Figure chart the box size must be a percentage rather than a number of points. Even if Cohen and his successors had realised this, it would be been impossibly difficult to do in the days of slide rules and Log tables, but the introduction of the IBM Personal Computer changed all that. Suddenly everyone had the power to do anything. Indexia Research Ltd., one of the pioneers of technical analysis software and in particular Point and Figure, created one of, if not the first true log scaled Point and Figure charts in the early 1980s. Instead of a number of points, the box size was set to a percentage. This solved all the problems that Point and Figure chartists had endured over the years. The value of each box slowly and smoothly increased and decreased as the price increased and decreased, maintaining the same sensitivity throughout the whole chart history. The result was a pattern many years ago could be compared with a current pattern, trend lines showed the correct percentage rate of change and targets were based on columns where the value of each box varied according to a simple formula. It immediately enabled the use of long-term Point and Figure charts where the sensitivity remained constant. Chart C below is a log scale chart of the S&P 500 with a 1% box size. Notice how well the 45° trend lines define the trends.

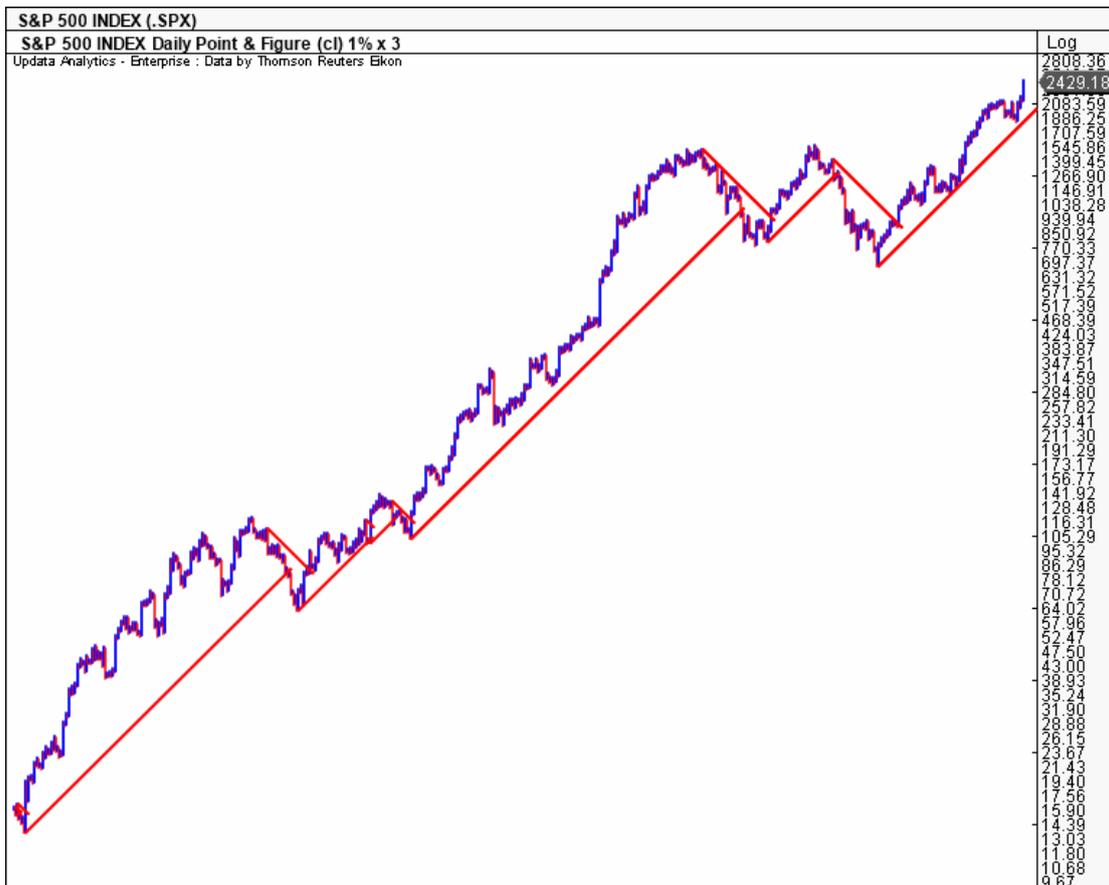


Chart C shows a 1% x 3 Point and Figure chart of the S&P 500 from 1949

To compare this with the arithmetic charts above, Chart D shows the 1949 to 1954 period with a 1% box size and chart E shows the 2016/7 period also with a 1% box size. Compare log scale chart E with arithmetic scale chart B. The long unreadable columns have gone resulting a very useful Point and Figure chart.



Chart D shows S&P 500 between 1949 and 1954 with a 1% box size



Chart E shows S&P 500 in 2017 with a 1% box size

So why would anyone use Cohen's old brave but flawed attempt at a log scaled chart with all its problems? Even more puzzling is why someone decided to elevate its status by calling it the 'Traditional' method. A better name would have been the 'Redundant' method. Traditional implies something that is old, endeared but still valid. Cohen's method is old but it is not valid, so it should be removed from any software. There is no third way. The chart is either arithmetic where the box size is a number of points, or log where the box size is a percentage. Drawing a Point and Figure chart where the box size is a constant value up to an arbitrary level and then constant at a different value above that level has no place in modern Point and Figure analysis.

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