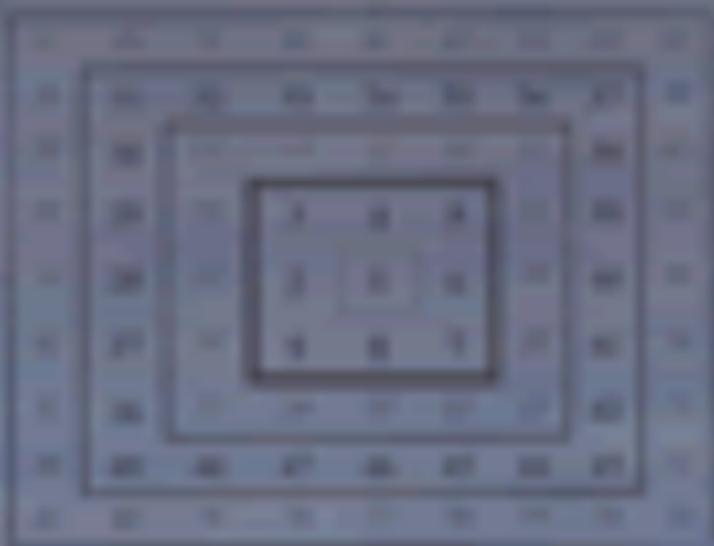


# *Complete Stock Market Trading And Forecasting Course*



*Michael S. Jenkins*

## ***Introduction***

For the past several years many people who have read my two previous books, *Geometry of the Stock Market: A Guide to Professional Trading for a Living* and *Chart Reading for Professional Traders*, have written urging me to either write a course of instructions, or to put on more seminars to teach my methods of trading and stock market forecasting. This course of instruction is written to fulfill that need. By the time you finish reading this material, I expect you to have learned how to determine the true trend of any market, stock, or commodity on any world market, to forecast approximately how long a trend will persist and what the ultimate price targets are, and also to be able to successfully day trade the market. In short, this is a course of instruction on how to professionally take money out of the market and make a living doing so.

What this course is not designed to do is to teach you the basics of what a stock is, or how to open a brokerage account, or any other such rudimentary, basic endeavors. There are books available in any library on those subjects. This material is for the person who wishes to make a career of professionally trading the market, and has put in sufficient time and effort to begin serious study.

My perspective in this material is that of a technician and not a fundamentalist. Technical analysis is the study of the market with the underlying assumption that everything there is to know about the market or a stock is already reflected in the price and volume of the individual stock. No matter what the fundamentals are, or how they are changing, it takes buying and selling to move stock prices and without that, no investment will make money. Even if a company has a hidden gold mine on its property, the stock won't go up until the insiders secretly start buying. The price action will inform the astute technician that a purchase is suitable, and the fundamentalist will often not get wind of the real news for months, or until the stock has had a tremendous rise.

This course, and my whole trading experience, has been developed around the principles of technical analysis, which forecasts price trends and probabilities so that you

can anticipate the big moves long before the fundamentals really develop. Of course, investing this way doesn't exclude using fundamental research, but I only use it after the fact to better understand the true dynamics of the move. The price itself is the only real truth. If it goes up I want to buy; if it goes down I want to sell.

The art of speculation has often been likened to gambling, but there is a major difference between the two. In gambling, the house sets the rules and those rules favor the house. In speculation, like trading stocks, *you* set the rules. You decide *when* to buy or sell, *how much* to buy or sell, how much leverage to use and what your stop out point will be. You also have technical tools at your disposal, which will be covered in this course, and which can increase the odds of your being right in the trade by as much as 80 – 90%. This applies to both directions of the move and also the extent of the move. Speculation, then, is clearly different from gambling. Unlike gambling, speculation can be a profitable profession, and as with any business, you can professionally trade to make a living.

Fundamentalists are those who invest by looking at the economic facts and profit and loss statements of investment issues. Ninety percent of all the players in the market are fundamentalists – bank trust departments, mutual funds, pensions funds, and wealthy individuals. Wall Street caters exclusively to this crowd because of the huge commissions involved and as a result technical analysis is often derided as not being worthwhile. “Market Timers” are frequently criticized, but in fact, the fundamentalists simply don’t know how to forecast the market and would rather say it’s impossible to do than give business away. There are many wealthy individual investors who have had books written about their successes in the market, and they frequently say that they bought a good stock and held on without market timing. While this is true, these books do not mention the millions of investors who bought and held onto the wrong stock and broke even, lost money, or were wiped out. In short, it sounds good to see that Coca-Cola always went up, but I can

show you chart books from 10 – 20 years ago where 10% of the big winners have disappeared and are simply no longer mentioned. In 1966 the big name stocks were General Motors and AT&T. If you held onto these names you did not regain 1966 levels until the mid 1980's. You would have been much better off selling and going to the bank or buying something else. For me, the long term buy and hold idea only works if your stock is perpetually going up. It makes no sense to hold onto an asset that is in a long-term downtrend, no matter how good the name is. This course will inform you, with 100% certainty, what the trend is and what you should do. Whether you are disciplined enough to do what the charts tell you to is another matter. Some long-term investors made out very well because they held on through thick and thin, while some traders jumped out and were afraid to jump back in even though the trend was up. In theory, the trader who follows the rules or uses a mechanical system will always do better than the fundamental buy and hold investor.

I'm constantly asked the question as to whether someone can master day trading and make a business out of it. I always answer in two ways. First, I can teach you how. That's simple. The information for determining the trend and forecasting is readily available and not terribly difficult to learn. Second, I always say that trading is like dieting. Information on diets is plentiful and is a billion dollar business. But how many people go on a diet and keep the weight off? If you are disciplined enough to maintain a diet then you can easily become a successful stock trader.

In the final analysis there are four main driving factors in the human condition. These are Money, Sex, Power, Religion, and perhaps a fifth, Art. These are what motivate people. To some extent all of these motivators can be found in the U. S. Congress, but in the area of money, the brightest minds in the world are either on Wall Street or Las Vegas. Note however, that all these bright-minded individuals aren't all rich. Wall Street routinely pays millions of dollars a year in salaries to individuals, but most of that is for sales, not

trading skills. You see the market is fueled by the *emotions* of greed and fear. People who are attracted to the market are attracted out of an emotional base of greed, and they use their rational mind to justify what they do. Since it's an emotional basis, however, they will always respond in an emotional way at precisely the wrong time and therefore lose money. This is why trading is like dieting. The principles in this course have been developed to strengthen your rational mind and teach you to control your emotions. You will be taught how to wait at emotional times to counter-trade the market against the emotional public and how to know when the trend is reversing, even though it looks emotionally scary. Technical analysis tools are objective measures that tell us without emotional involvement just what is to be expected. It has nothing to do with reading the newspaper or watching TV, thinking that news will make our stock go up or down. Perhaps for one day it might, but most of the time it's just random noise. In the cycle business we say "the news breaks with the cycle," which means it is the cycle that causes the news and not the other way around. This is simple enough to prove by just looking at the three or four big cycles that repeat all the time. These are 10 years, 20 years, 60 years and 100 years. The Kennedy-Lincoln 100-year cycle is well known, as is the decennial pattern. The 60-year cycle however, is critical. When the days of the week were named for the seven visible planets, astronomers discovered that they returned to these positions each 60 years. For example, today we are replaying the late 1930's as to currencies, dictators, threats of world war and the rise of conservative governments and dictators (in a sense Churchill and Roosevelt *were* dictators relatively speaking). I'll discuss cycles more in detail in the following chapters, but for now bear in mind that if cyclic influences exist, and the evidence is overwhelming that they do, then fundamental cycles will return and will be reflected in the prices. Technical analysis of historical patterns will be of great value to the professional trader.

## ***Who Was W. D. Gann?***

Much of my perspective in this material comes from the great master W. D. Gann, who died in the mid 1950's, but continues to be a major influence in forecasting and trading. Perhaps no one before or since has been able to forecast as accurately or trade as well. While there are many Gann courses around, most are incomplete, as Gann wrote only a few that were not deliberately encrypted. Gann was a Mason and studied numerology, the planets, the Bible and other esoterica, and believed that the student must put in the time and effort to prove himself worthy before he could obtain the key. His thinking was similar to the Pythagorean school, which made new initiates prove themselves by taking a vow of absolute silence, for a period of three years. In the Gann material there are deliberate smoke screens set up to distract the casual reader, but after years of study the more advanced student will find esoteric and astrological truths hidden in his papers. I teach some of his methods in this course but most are too advanced for the general public. Gann basically used angles, numbers and astrology to forecast and he developed dozens of number squares that were used for trading individual stocks and commodities. The Square of Nine is the most famous, and is used by as much as 20% of the pit in Chicago every day, so Gann still does exert a great influence. Most computer programs now routinely include Gann angles and cardinal cross numbers for the Square of Nine. I will mention these in the following chapters. You should at some point study Gann independently from my works, but be advised that most of the available courses and books in print tell only half the story. I have been privileged to have spent nearly thirty years working in the market, with over twenty years studying Gann, and I have come to know well perhaps a dozen of the world's finest practitioner's of Gann's methods. I mention this only to warn you about the charlatans in the Gann business these days (and it is a real business!). The truth is subtler and is not yet in print to my knowledge, although several recent books point in the right direction. My advice is to first master the basic principles of angles, cycles, numerology, chart-

ing, and then spend a good ten years on basic astrology. Then you can attempt some of the Gann Bible interpretations as they relate to stock trading. Conversion of planetary longitudes into stock prices, and Biblical stories and age longevities converted into longitudes on the globe for commodity conditions are part of the key. There is much more, but none of that is needed to trade effectively and to make a living doing so. It's more of a spiritual discipline for later life. Suffice it to say Gann was an eccentric genius that went to the grave with his secrets, but his writings offer clues as to how precise forecasting can actually be. Much of my perspective in this work is the same as Gann's and I will try to explain it as we go along. One final interesting note is perhaps in order. Gann became famous in the 1920's and 1930's when he accurately forecasted the 1929 top almost to the day and the ensuing Great Depression. Looking back with what we know about his methods utilizing astrology, numbers and cycles, it's easy to replicate that forecast, but Gann said he did it by another means. He said he read about it in the Bible. He often remarked that the Bible was the greatest book ever written and he read it over and over again and urged others to do the same. Perhaps this was his religion speaking, but a recent N. Y. Time's bestseller *The Bible Code* perhaps provides an answer that shows Gann's true genius. *The Bible Code* is based on a fantastic and ingenious idea that God encrypted all knowledge and future events in the Bible. The original Hebrew version of the Old Testament that has been hand copied down through the ages, with not one letter altered, has been tested in a high-speed, super computer, with regards to trying to identify letter sequences that might spell out words or sentences. Every letter in the Bible was strung out in a long sequence of hundreds of thousands of letters and then the computer compared every 2<sup>nd</sup>, every 3<sup>rd</sup>, every 4<sup>th</sup>, every 5<sup>th</sup>, etc. letter combination until it found crossword puzzle-like sequences of phrases and names. Now, any big book will sooner or later come up with random sequences of famous names like J. F. Kennedy or the like. However, significant, non-

random sequences would prove that the Bible contains an encrypted code with an infinite amount of data, if these sequences were laid out in multi-directions and different dimensions. Indeed, the Bible, when comparing every nth letter, is large enough to include the names and relevant events of every person on the earth today. To crack the Bible code, huge military computers were used because of the enormity of the task. It was found that when 100 names and birthplaces of famous religious figures that were born after the Bible was written, were entered into the computer, all 100 came out in sequences that made complete reading sense as to their names and places of birth. Other names like Einstein being "brainy" or the Kennedy assassination and the names of Ruby and Oswald were also discovered. The purpose of this paragraph, however, concerns the computer discovery of a phrase similar to "1929 stock market crash and Great Depression." That's a paraphrase since I read the book briefly, long ago, but it stuck in my mind because of some study I was doing on Gann at the time. The essence of the Bible Code book is that it is only now, in the current generation, with high-speed, super computers that we can "crack" this Bible code and find the key to the coming purported, final millennium conflagration before it's too late. This was not available in prior ages since the technology wasn't developed. Only by having preserved the original Bible for four thousand years has this project been possible. Anyway, getting back to Gann, he didn't have access to a high-speed computer, but he was a master numerologist and Mason. He also said he liked Isaiah the most of all the Bible chapters and religious scholars have told me that Isaiah is a miniature Bible in and of itself, mirroring each chapter in the Bible in its structure. My guess is that Gann found a master key in Isaiah that allowed him to interpret portions of text and come up with many of his prophetic forecasts. Perhaps a little Bible study could help us all.

## ***Basics***

Trading, as opposed to investing, consists of buying and selling the same stock many times in an effort to capture more price fluctuations than just holding on for the long term. Many stocks appreciate 20 to 50% or more each year, but these same stocks can often swing through these ranges several times over the year. Just catching one or two complete swings will usually double the return of the trader over the simple buy and hold investor. Technical analysis tools like charts and trendlines combined with timing methods are what allow us to exploit these daily and weekly fluctuations to our advantage. But before we start using charts to examine price action, let's review the typical investment cycle and discover the players that make the market move.

The big money in the market comes from institutional investors like pension funds and mutual funds, or bank trust departments. Some wealthy individuals affect some stock prices, but it usually takes the 10-million share institutional buyers to make stocks move. Without institutional support most stocks languish in long-term flats with little significant price movement. In the past, economic cycle swings in the economy greatly affected companies' earnings and the price of these issues was quite volatile. Over the past ten to fifteen years however, the massive amounts of money going into institutional coffers has created an environment where there are consistent buyers almost every day, regardless of fundamentals. Price earnings ratios have climbed from 12 – 14 times to over 30 times. Some "go-go" stocks have P. E. ratios of 70 or more. This is more a sign of popularity and anticipated growth than actual economic prowess. Just before the Japanese bubble imploded in 1990, typical stocks had P. E. ratios of 70 or as much as 125! Even today with that market still down 50% for the past eight years, the P. E.'s remain near 30 times. In these times of somewhat irrational fundamental valuations, technical analysis of price movement is even more important than ever before. One day these P. E.'s will start to shrink for years and years and people will buy into such declines believing that they are

bargains. Only an objective analysis of the price action at that time will save investors and traders. Because the money flows into the large institutions have been so big, the mutual funds industry has grown from some 700 funds in 1980 to over 8,000 at present. Keeping in mind that the entire N.Y.S.E. has only 3,000 listed issues you can see the effect on stock prices of the growth of these investing behemoths. Their strategy has simply been to buy and keep buying the fastest growing companies and never sell. Because they have perpetual cash inflows, they have bought dips each year as the market had corrections, and as a result always showed performance figures twice that of the general market appreciation during the year. If the Dow Jones went up 10% during the year, but had three dips of 5% along the way, and they added on every dip, their average cost would be such that if the market closed at the high of the year (and it always did) their return would usually be 20-30% or more. This is not due to any great investment philosophy or method, but simply the fact that if a market goes straight up and closes at the high each year and you add money, you will out-perform that average. The shock will be great the first year that the market closes at the low and the funds have added all year long.

Another “strategy” the funds have used is the diversified portfolio idea of buying at least 200 individual issues that were growing at great rates and to just keep buying. That way no one issue would account for more than  $\frac{1}{2}$  of a percent of the portfolio and even if that stock went to zero, the hit to the fund would only be  $\frac{1}{2}\%$ . The result of this strategy is that when earning expectations disappoint, there is the wholesale dumping of entire investment positions of millions of shares and individual issues can and do drop 50% or more in a single day! This is insanity from an investment point of view, since no earnings fluctuation should have that kind of effect, but nevertheless that is the current strategy and one must adapt a trading plan around such outcomes, like avoiding stocks about to release earnings, or “piling on” once the break starts.

Institutional investors sell in an eye blink on bad news, but they often buy quietly at limit prices over very great periods of time. To accumulate a 10-million share position or more in a stock that trades 300,000 shares a day might take six months. The rule of thumb has been that for every institutional order on the floor, that order will generate 3 times that volume by others “front running” the order and trying to jump in first. This is illegal, but it is a fact of life, and most day traders make much of their income by jumping in front of big orders and making the institution pay up. The beauty of charts, however, is that these big orders show up in chart patterns as higher bottom patterns, where a level is held for several days and the volume increases, and then the stock moves up to another level slightly higher. The fund will often wait there for a few weeks and then if not satisfied will move up yet again. This is a sign of accumulation and is a sure sign of higher prices. As long as the price is creeping higher week after week, and each correction only goes back to a prior support level without breaking, then this indicates the big money is not finished buying and is still there to catch the stock. A good strategy for day traders is to identify such long-term uptrending patterns and buy into dips back to those known support levels. This can only be done through the use of a chart or log of stock prices over time, to record the various levels of price and volume transactions.

A declining phase will show a similar pattern only in reverse. The funds will start selling a few thousand shares every day using a limit order, and after a few hours to days of not being able to sell, they lower the price to another slightly lower limit for a few days. These walk down stair steps show downtrends and are used to sell short and only cover if the stock regains a prior high. Individual institutional positions can usually affect a stock’s price for months at a time. At the end of an economic cycle, as the economy turns down into a recession, numerous institutions need money as investors pull out, and the massive liquidations create a bear market that can last for two to five years at a time. Individual

stocks often go down for five years and can frequently stay out of favor for ten years before coming back. Only charts will help you decide at what point in the cycle a given stock finds itself and whether it should be bought or sold. So we begin our course in trading stocks with the study of price patterns, as seen on charts, in order to quickly identify trends to decide whether the stock in question should be bought or sold.

## Chapter 1

# CHARTS

There are many types of charts that traders have used over the years, such as *line charts* which connect the dots of hourly or daily closes, *bar charts* which show a vertical line to represent the open, high, low, and close for each time period, and *point and figure charts*, which only record reversals in trends, such as every \$3 movement in a direction. These point and figure charts are very good at showing long term swings and trend but they do not have a time element, so they can often show potential, but it may lie dormant for months or years. *Japanese candlesticks* are more visual and attempt to show reversals and volume by visually changing the size and shape of the daily bar. Thicker bars can show more volume, reversal bars have “tails” pointing in up or down directions, and colored bars (black or white) show the current trend compared with the prior bar. These visual bars are probably the best ones to use, but require much study and most chart services in this country don’t always support them. *Logarithmic* bar charts show percentage moves on the vertical price scale, while the standard bar chart shows unadjusted time and price scales. Each of the various chart styles have something to say and can be used, but to start in a simple manner and demonstrate the beauty of price and volume patterns, we will start with the standard bar chart in this course. Later you may want to switch to other charts, but the principles will always remain the same no matter what chart we use. Basically, we just need a price history that easily shows us whether or not the price is going up, and enables us to overlay some trendlines and time cycle counts.

## *Charts*

Chart #1 is a typical bar chart on a daily basis (one bar for each day) for an individual stock. The price is shown on the vertical scale and along the bottom are bars representing volume for each day and the time axis in days. We clearly see that this is an uptrend, with few breaks to the downside that lasted more than a couple of days. Volume has been relatively consistent and low, so that nothing appears to be happening here to change the present forces in play. If we were bullish on the outlook for the market we would make up a list of such issues and buy them on pullbacks to past support levels.

*Chart 1*

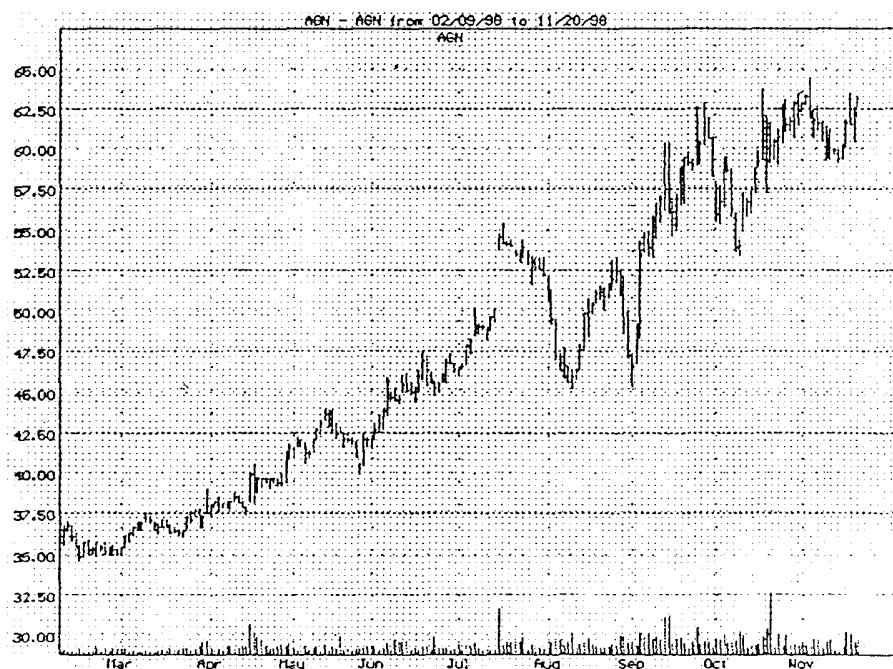


Chart 2

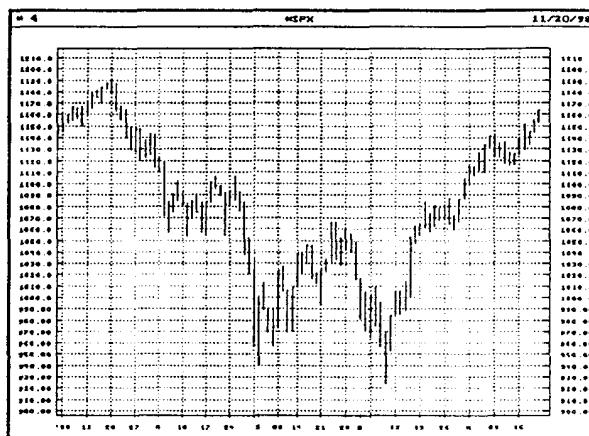
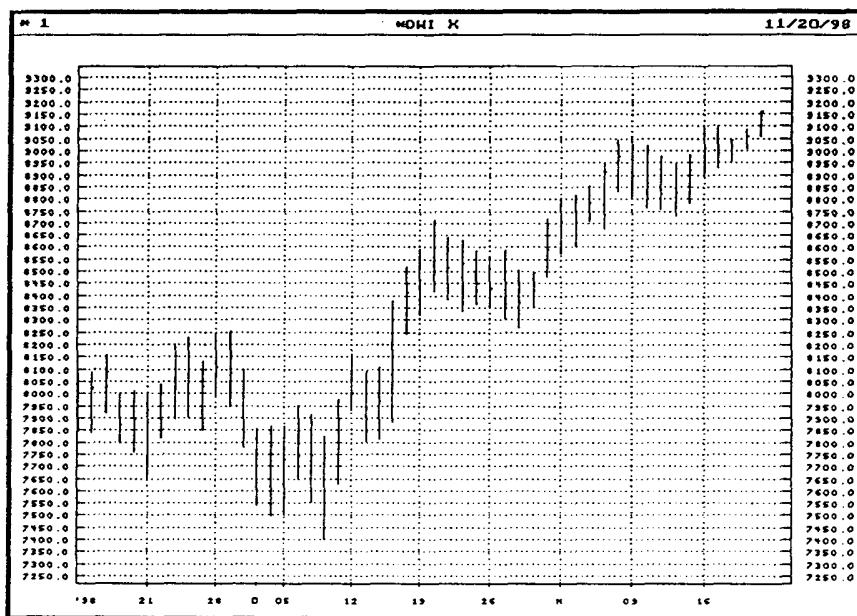


Chart #2 is a daily chart of the S&P 500 Index showing a downtrend into the October '98 low and an uptrend coming out. If you were to draw parallel channels around the highs and lows you could clearly see the directions of the trends. The width of the daily bars is usually fairly constant, or when it's not, it usually is a multiple of the average move, so if the normal day's movement is 10 to 15 points, a big day would be twice that, or three times that amount. Later we'll learn about "measured moves," which are standard fluctuations that most patterns exhibit and are very useful for forecasting price targets.

On the following page, Chart #3 of the Dow Jones shows individual bars of about the same magnitude, but also note that the highs and lows of each day don't greatly exceed the highs and lows of surrounding days except during times of "runaway" momentum moves. Most bars overlap the prior day's high or low by slight amounts and then fall back into the trading range. The most common error in all of trading comes from the tendency to buy or sell the "breakouts" thinking a big move is underway only to see it fail and later fall back into the middle of the range. Many day trading mechanical systems use this idea to scalp trades going against the move in the first 30 minutes of each day if

## Charts

Chart 3



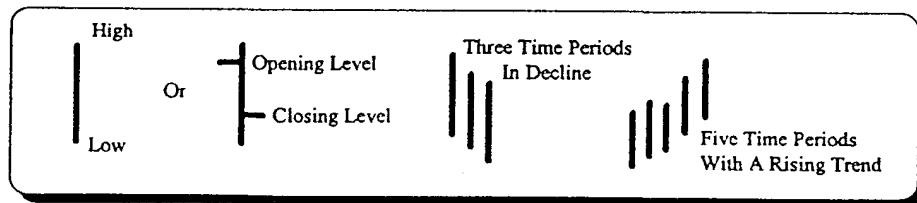
there's a small overlap without much momentum. The ideal buying strategy is to wait to buy at a pullback point near the prior day's low, plus or minus a small percent and buy with a stop. Ninety percent of the time if you are disciplined enough to do this you will have a very good trade going for the next day. The emotional difficulty here is that usually the market opens up overlapping the prior day's high slightly and gradually trades down to the low of the day, which is the perfect buy point, but traders are so emotionally afraid that the trend is reversing, that they won't make the trade at the end of the day and carry it overnight. When that happens the buyer of last resort is of course the specialist, and he buys cheap stock and marks it up the next morning. Sometimes the best trades are ones we put in to buy with stop orders, or limit orders at a set price determined the night before, in the calmness of looking over the charts at the end of the trading day. If the charts truly don't lie, then those objective decisions made with careful calculations and protective stops, are the best ones and our emotions shouldn't override those decisions. Here again it's like dieting. If you're afraid to trade because you might lose money, you're trading

## *Charts*

with the emotion of fear and similarly you probably only buy out of greed to make money. This is not the way to beat an emotionally driven creature like the stock market. We must buy when we feel we must sell, and vice versa. We just can't be stupid and buy into a panic free fall or avalanche of sell orders on a bad earnings report. Interpreting the bar chart can help us determine the trend and the support and resistance levels we should trade near.

Let's start with the simple trend. The trend is up if the low of the daily bar on our chart makes a higher bottom than the previous low on the preceding bar. This trend can extend for long periods of time depending on how it is defined on a longer-term chart. For instance, an hourly bar that's higher than a prior hour is up for that hour, but says nothing about the day or week's trend. Whereas a weekly bar on a chart composed of 5 days activity compressed into a single bar, will show trends lasting a week to three weeks at a minimum. When a market reverses it is similar to a series of Chinese nested boxes that fit one within the other. In other words, a turn on a 15-minute chart as it extends, usually turns the hourly chart, and after a few hours the hourly chart turns the daily chart and finally, after a few days the daily chart can turn the weekly chart. Big moves come when all these time frames cluster tightly together and all turn simultaneously. Often this is just after a very narrow flat with little price movement.

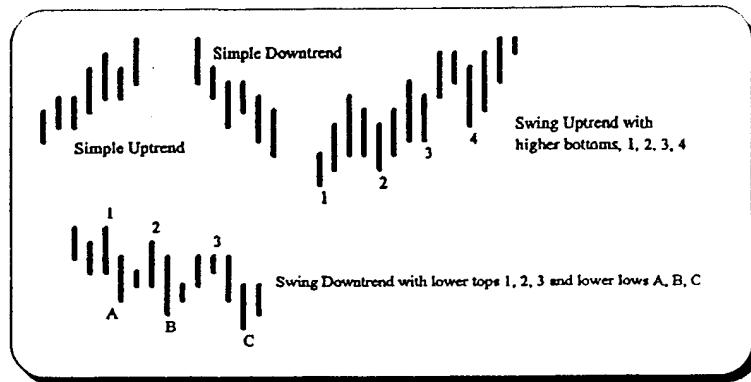
*Chart 4*



Traders love to jump aboard a flat breakout, since a big move comes very fast.

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Chart 5



Trends usually persist or else they wouldn't be of help in trading. The persistence of trend is usually at least *three bars at a minimum*. This is the rule of three, or three-day rule, or three-week trend, or three-month trend. If the trend lasts more than three consecutive bars then it will usually go a Fibonacci number of bars such as 3, 5, 8, 13, 21, 34, 55 etc. The Fibonacci ratio 1.618 is achieved by an additive series of adding each number to its neighbor to get the next and is found in all aspects of nature. Here we have 1 plus 1 to get 2, 2 plus 1 to get 3, 3 plus 2 to get 5, 5 plus 3 to get 8, etc. On hourly charts a five-hour advance is usually a sign of an uptrend, and we then look at 8 hours, 13 hours and 21 hours for reversal points.

The bar chart examples, charts #4 and #5, show simple trends and we need to know more about the volume traded each day and some long-term perspective, but before we can do that, we need to examine reversals in trend and define just what that is. Since trends manifest to greater or lesser degrees, such as hourly, daily, weekly, and monthly, we will often get reversals of a *minor* nature that will not change the main trend. In the final analysis, this confusion of which trend is the dominant one is the key that separates good traders from everyone else. For instance, over the past decade each time the Dow Jones Averages dropped a few hundred points, it looked like the long-term trend had turned down. Certainly the hourly, daily and even weekly bar charts showed lower bottoms and

## Charts

lower tops, but the yearly chart never broke a low from the prior bar (year) and neither did the quarterly chart (3 months to a bar). In most cases the monthly bar chart only broke the low of one bar and not three months, to show a persistent trend that would define a long-term decline. For traders, the trade turned bearish with the hourly chart breakdown and the daily chart breakdown, but when the bottom was made the hourly chart and daily turned up before the monthly turned down again. Long term investors like mutual funds never sold since the breaks were so short lived, but it was scary to hold positions through 200 to 500 point Dow Jones drops if you didn't really know what the trend was. At the end of this lesson you will know.

The *uptrend* is defined as a bar chart that makes *higher bottoms*, or the lows on each bar are higher than the prior bar's low price. Note that this definition says nothing about the *highs* on the bars. Uptrends are caused by accumulation when big institutions buy at the bid side of the market on limit orders and don't chase prices. As long as the bid side holds and goes up it shows unsatisfied buyers in competition with each other, so they keep raising prices to higher levels thus creating the higher bottoms pattern. Day traders and the inexperienced public often chase stocks up on good news, creating the high tick on the daily bar chart and are forced out at a loss as soon as the price drifts down. Usually the low they sell out at is slightly higher than the last low, and the perfect place to buy, not sell. This points out the emotionalism of the market. When people buy out of greed, they chase stocks and buy high to later sell low. We want to buy low to sell high. That's impossible if you buy when everyone else is doing so and the stock *looks* good. We want to make note of the prior day's low, or better yet the prior week's low, and be prepared to buy at that point with a trailing sell stop if we're wrong. To summarize again, the rising trend shows a series of higher bottoms on bars on each of the various time periods trade.

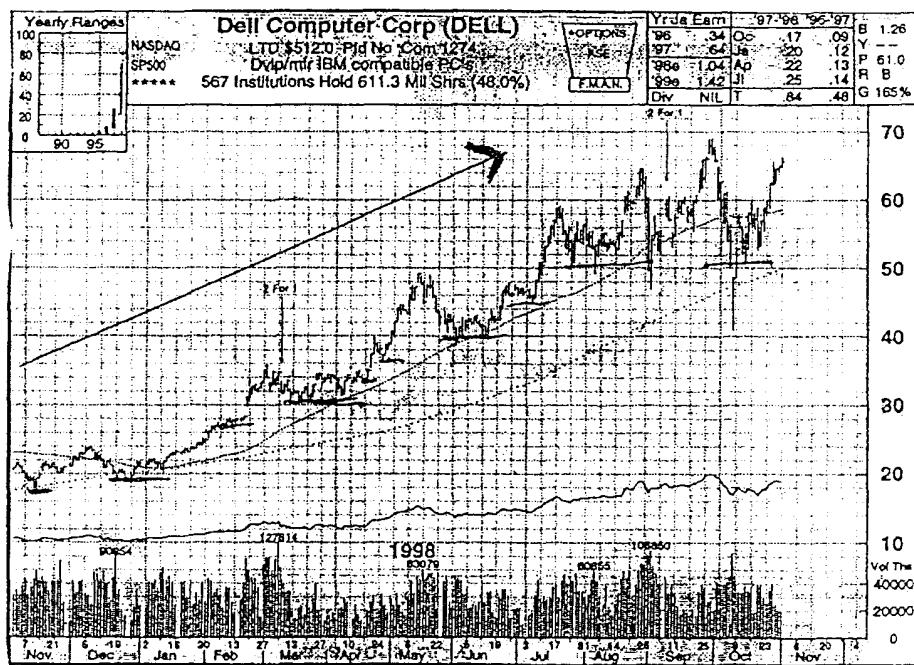
The downtrend needs *two* criteria to validate the trend. It needs *a series of lower*

## Charts

*lows or bottoms, and a series of lower tops or highs. Each low should be lower than the prior low and each high should also be lower than the preceding high. Note that this is a pattern.* The most important idea in all of the discussion about trend is that *trends are defined by patterns.* In uptrends it's simply higher bottoms. In downtrends it's both lower highs and lower lows.

Keep in mind the process of selling or liquidation. Investors are in competition with each other to sell out because of bad news, or need for funds, and if the volume doesn't support the selling they must lower their prices to get out. The only buyers are usually bargain hunters, who only show up at new lows for a scalp, or the buyers are shorts that are covering at a profit. This creates the pattern of lower lows and lower tops, as people continuously lower their expectations. Basic Uptrend:

*Chart 6*

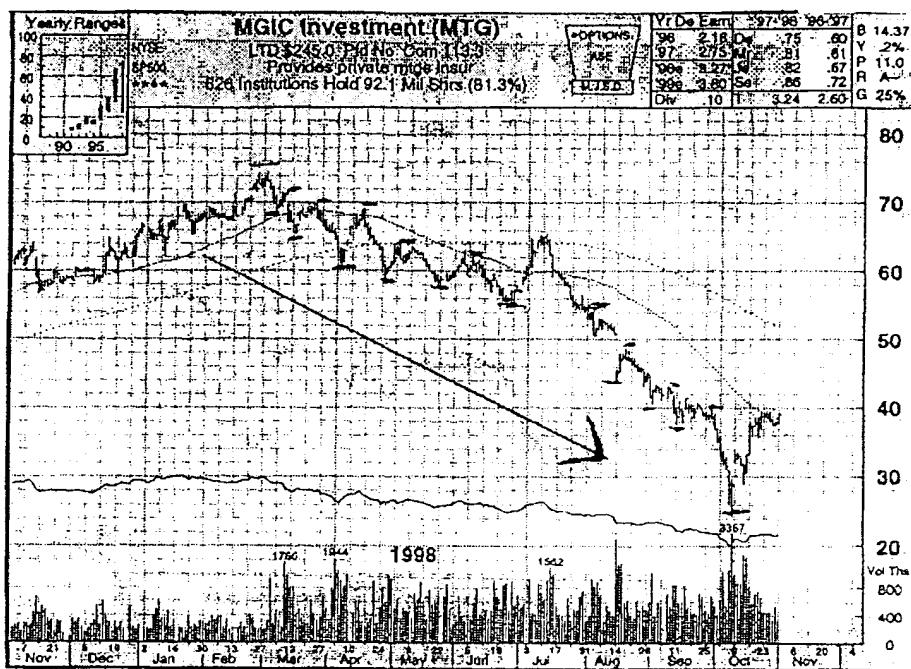


Trend is up in Chart #6. Bottoms are all higher or at the same level.

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Small breakdown in October during crash, but lows are quickly regained which is a classic sign of another buy signal.

*Chart 7*



Trend is down in Chart #7. There is a series of lower tops and lower bottoms. Only one small exception of lower tops in entire move and that is quickly erased. Also note that this is an identical time period to previous chart, demonstrating two very different investments.

Charts #6 and #7 are two examples of trend and clearly demonstrate the importance of trading each stock individually and not as part of a general market theme. Usually stocks will follow the main trend of the market averages, but there are many exceptions, and if you just held onto this declining example you could have lost a lot of money waiting for it to turn around. Trends persist, and I have seen past leaders turn sickly and go continuously down for three to five years before attempting a comeback. You must therefore be objective and trade the patterns and not use guesses.

**MICHAEL S. JENKINS COMPLETE STOCK MARKET TRADING AND FORECASTING COURSE**

## Chapter 2

### **REVERSAL OF TREND**

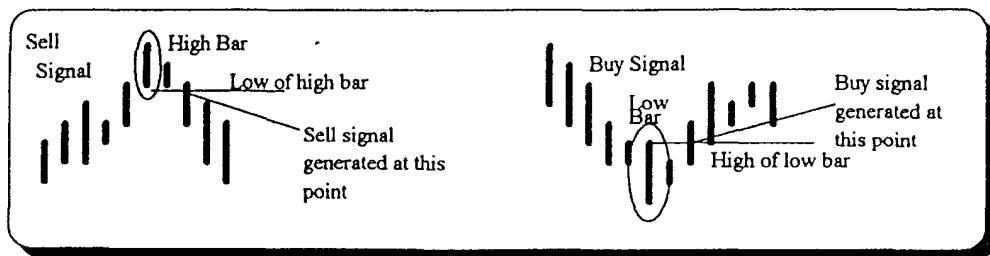
We know that an uptrend is a series of higher bottoms and a downtrend is a series of both lower tops and lower bottoms, but what indicates a reversal? In its simplest form a reversal on a bar chart occurs when the extreme bar is identified as being the prior bar and the opposite extreme of that bar is exceeded on the next bar. In other words, in an uptrend you find the high day bar where the high was the highest price for the move and you note the *low* of that bar, not the high. Most technicians will tell you to watch the high, but that's not what happens in real time. At the high, the reversal is made when exhaustion sets in, and since the big buyers are always on the bid side of the market, the penetration of the low is the sign that the buyers are gone. Sometimes the penetration of that high bar low won't occur for several days and the price will be in a narrow range, neither taking out the high nor the low, but once the low is taken out, the sell signal is given.

The reversal of a downtrend occurs the same way. You identify the low bar of the move and note the *high* of that bar. When that high is subsequently exceeded, the trend turns up and you can go long with a stop at the low of the move, which would negate the buy signal if it went back down to that low. Again, keep in mind that the sellers use

## Reversal of Trend

### REVERSAL BAR SIGNAL PATTERN

*Chart 8*



limits and are working the offer side of the bar, so that when that is exceeded the sellers are gone, at least for the time being. Chart #8 illustrates examples of both signals.

These are simple buy and sell reversals and if taken indiscriminately will lead to swift and sure bankruptcy. Good judgment can determine how long a trend has been in effect and whether a normal measured move in some direction has occurred, which usually ends the move. Trendlines breaking, combined with time cycle counts coming to an end, are usually helpful. High volume is usually indicative of reversals and price reversal momentum is also often a key. In big moves like the endings of bull markets, the first few weeks can often reverse the entire gains of the past year or two. But no matter what happens, the first sign will be a reversal of an individual bar and that should be noted for reversals on all next larger size time scales, like hourly turning to daily, weekly, etc. Charts #9 and #10 show two examples of several simple buy/sell signals. Not all of them are shown, but as you can see, the ones that came at the end of extended moves were good for several points at a minimum and often went weeks before reversing out.

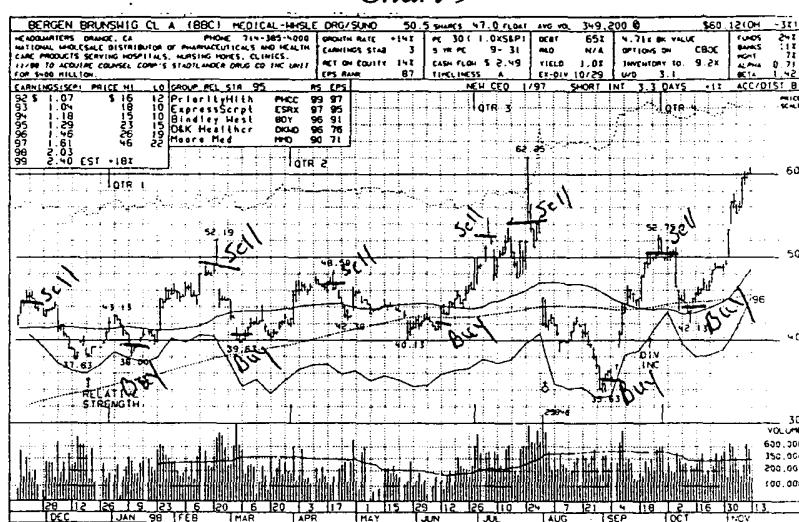
I've used the term "measured move" before and we'll see examples of it later on, but the concept is basically that over a given time period like six months to three years, the players in the market are the same. Over long time periods their composition may vary, but for the intermediate term they exhibit the same buy and sell habits and their reactions to extremes don't change very much. If we examine a chart over a few months to a couple

## Reversal of Trend

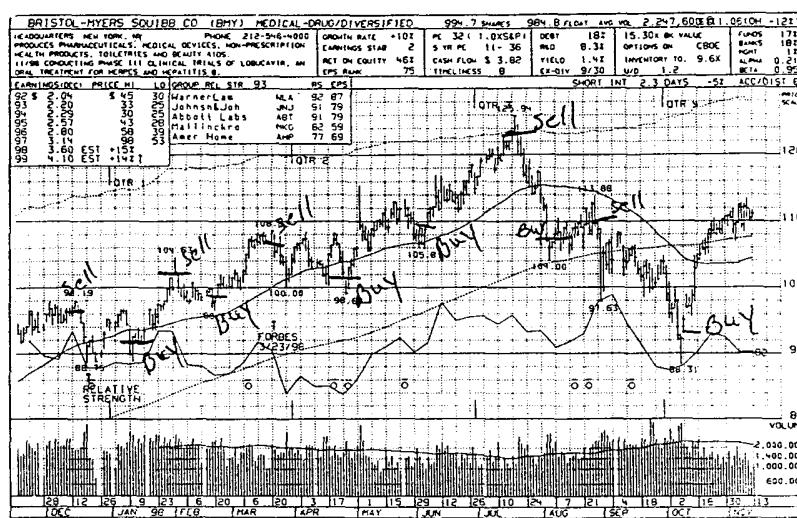
of years and note the extremes, we will notice that each stock or commodity has an extreme bullish and an extreme bearish phase. These can be "measured" with a ruler, compass, or even our fingers on the chart. The idea is simply that once a trading move has reached this usual extreme, a reversal in trend is expected. Looking for reversal bars can be beneficial if they fall at one of these normal extremes or "measured moves."

### SIMPLE BUY AND SELL SIGNALS

*Chart 9*



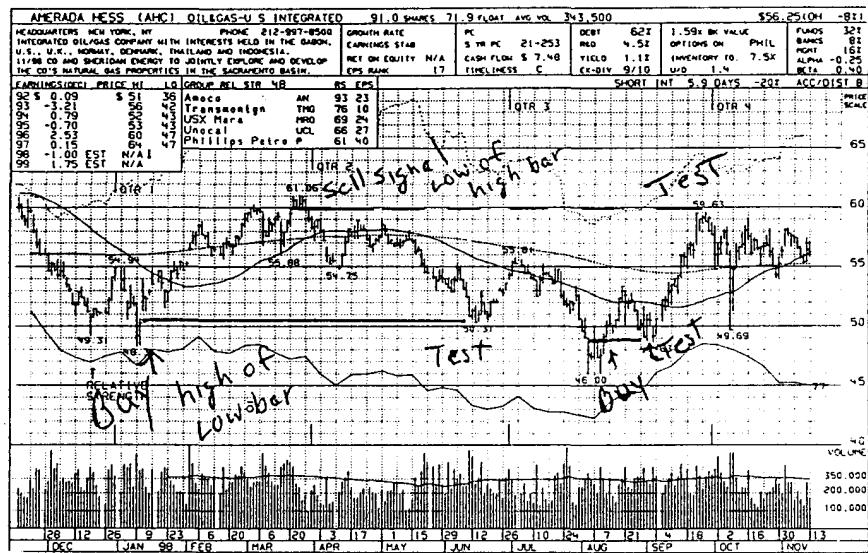
*Chart 10*



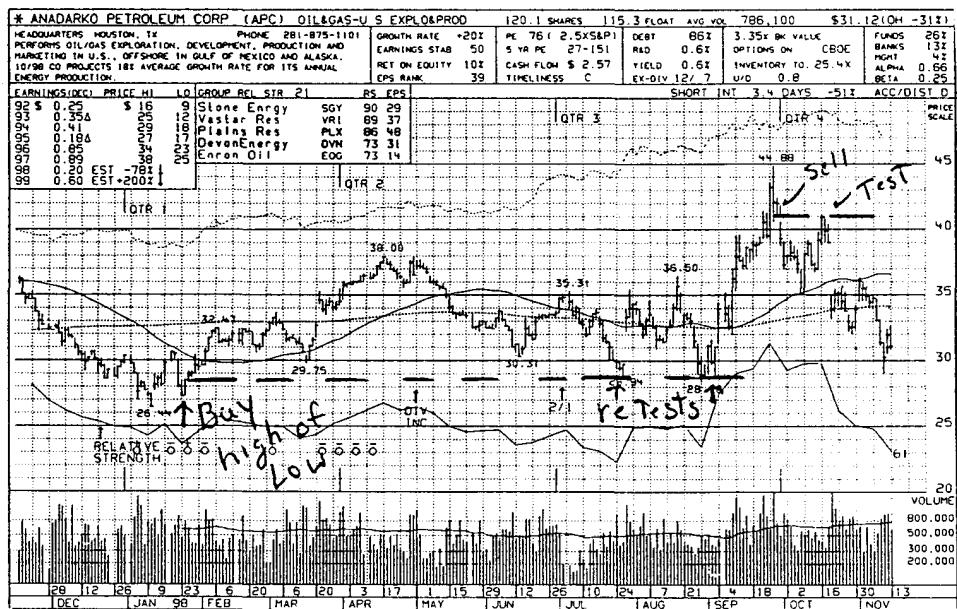
## Reversal of Trend

Tests of prior buy or sell reversal bars usually come at the point the original signal was generated.

*Chart 11*



*Chart 12*



An adjunct to the simple buy/sell reversal bar idea is that once the signal has been generated and you later get a counter-trend movement back to where the signal was given, that movement will usually fail exactly at the

## *Reversal of Trend*

point of the original signal. Ninety-nine percent of all other books on technical analysis erroneously tell you to expect a test of the high or low and that's what all traders watch for. It hardly ever happens, however, as indicated in Charts #11 and #12. The move will stop before the extreme, at the place where the buy or sell signal was given. In a long-term trend this is one way to validate that the long-term trend is still operative. For example, if you get a buy signal and six weeks later on a correction you go back down to the "test" area and then generate another buy signal, the second signal confirms the first as being long term valid. It's quite possible to see a string of such signals stretched over a year just pulling back to prior signals and confirming their initial ruling.

## Chapter 3

### **VOLUME**

No basic discussion of chart patterns is complete without examining volume patterns. Unfortunately, little is written about volume, though it is one of the most important considerations to the trader. No significant move can ever take place without some heavy volume being done, but in the middle of most moves, volume dries up. It is imperative therefore, that in examining charts that you notice where the very heavy early accumulation took place. Big volume starts as the move is just beginning, because the big institutions take large positions and it may last several months to a year or more before it subsides. After that the stock may rise another year or two before seeing big volume again, this time on the sell side, as they start to get out. In general, it is said that volume is positively correlated, or that the heavy volume goes with the direction of the primary move and especially in the bull move, the volume goes up as the stock goes up. This is the only time that volume is really bullish – when the move is just getting started. Most of the time volume is negative, in that when it shows up, buying and selling are matched and a top is made. A decline then usually results until the volume dries up to the lowest reading of the move and then when it increases, the buyers are back and the advance starts again. Some technicians use a simple general market sell signal tied to three day or five day moving averages of the volume. After a high volume reading, as soon as the moving average turns down, the market tops out.

## Volume

You must pay attention to the pattern of volume over a several week period. During that period you will note the normal spikes of volume that are usually found within a day or two of all the swing highs and lows. If an advance has been underway for three weeks, and then the biggest volume of the month is recorded, it is a certain sign of a coming correction. Likewise, when you are day trading and buying into a three-day dip, you are likely to see increasing volume with little price movement. That usually means the seller is getting "cleaned up" and the stock is about to reverse. I learned this from an old professional, who pointed out a stock that was doing about 6 million shares that day when the average volume was 1.2 million. I was bearish and the stock was down 50 cents on the day on that heavy volume, but he correctly inquired of me why it wasn't down a lot more if the volume was really selling and not scale buying. Of course he was right and the stock reversed up on the close and quickly ran about \$10 over the next three days. I now make it a point to match my predicted lows and highs with exceptional volume. Cycles also bring in the volume and in the general market you

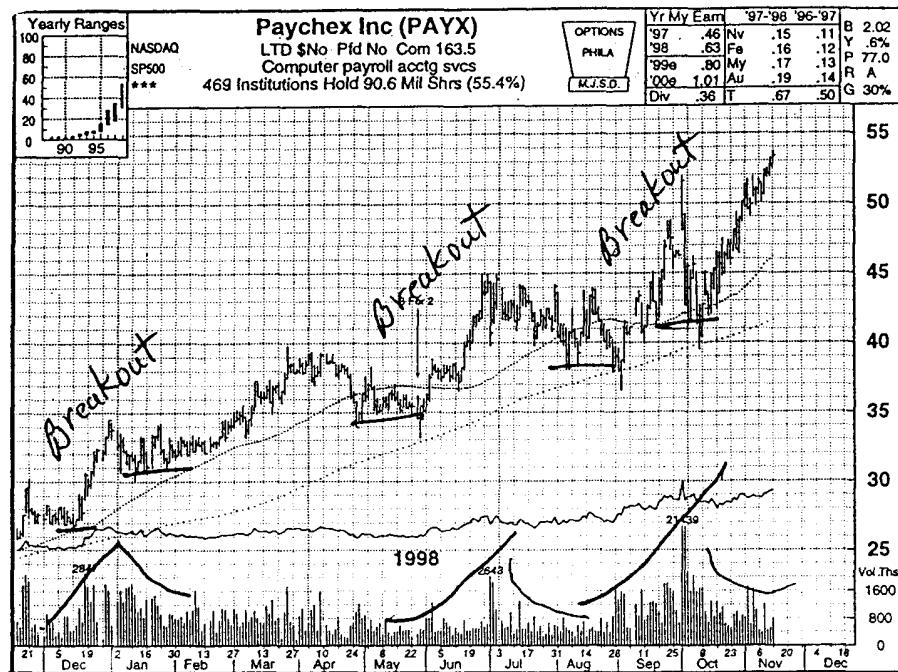
*Chart 13*



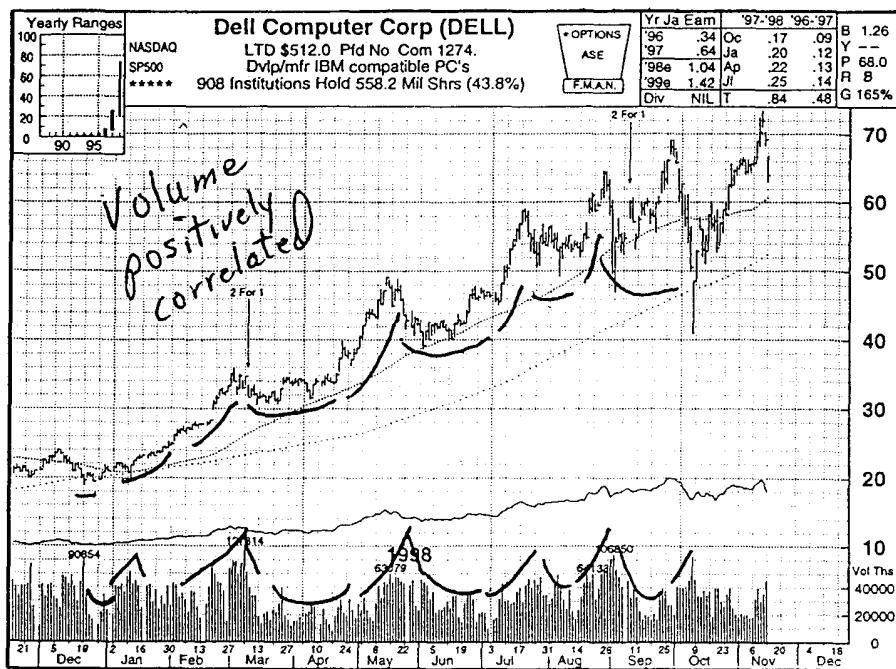
MICHAEL S. JENKINS COMPLETE STOCK MARKET TRADING AND FORECASTING COURSE

## Volume

*Chart 14*



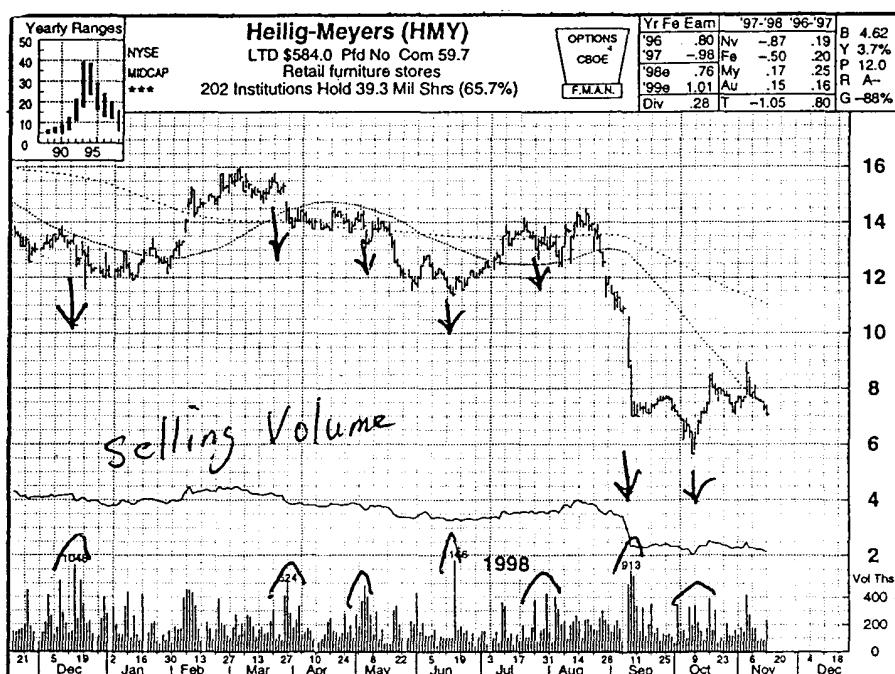
*Chart 15*



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## Volume

*Chart 16*



can always tell when major long-term cycles are beginning to change. That's when the volume will set new records for several days to a few weeks, and then a new bull or bear trend will emerge.

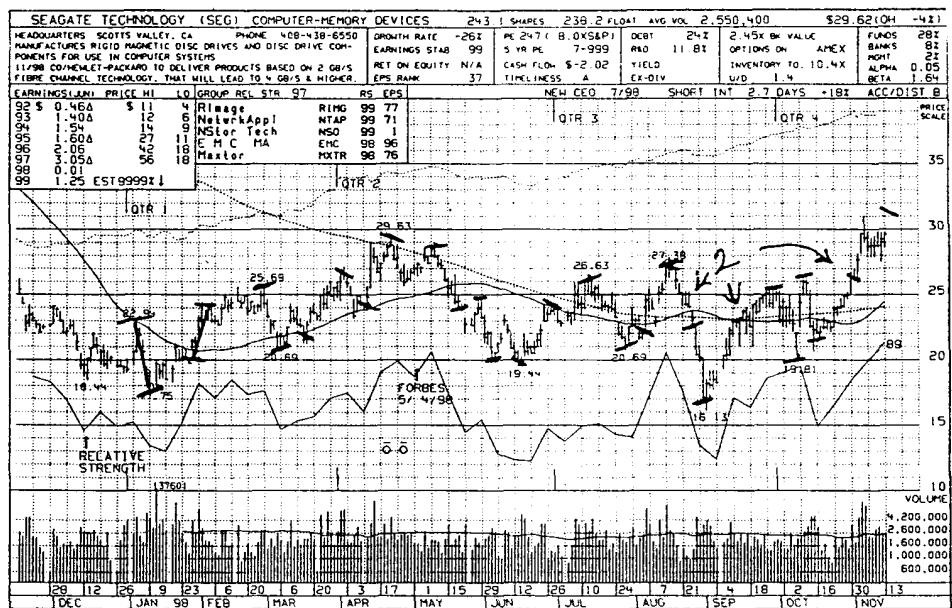
One significant observation I have made over the years in examining individual charts is that when you find a chart that is becoming a new and future leader, there will be huge volume spikes every several days for many months. Most people see those volume spikes, or read in the paper that the stock was the weekly volume leader for several months, but few realize how long and how significant that is. Quite often those early volume leaders will be just starting *five-year* bull runs that will quadruple their prices and it won't stop anytime soon. If you follow the stock and watch the chart, you can be very safely assured that no significant downside will come about until you again see those same

## Volume

volume spikes to the downside for several weeks. If you don't see the volume, there is no change in long-term trend.

Another key concept is that all big moves are accompanied by a significant turnover in capitalization. If a stock has 200 million shares outstanding, no big change will come until a large proportionate part like 1/3 or 1/2 or more of that capitalization is turned over. Only after many new buyers have entered at new price levels can a real change take place. A basic corollary to this is that between each high and low you will find a key volume total. This is a closely held secret and one I don't care to elaborate on, but if you do such studies, you will find that given a length of time, once a given volume of shares changes hands a change in trend will come about. With light volume the change may take weeks, with heavy volume days, turnover is the key.

*Chart 17*



#### MEASURED MOVES/HOURLY CHARTS

In Chart #17 we see examples of “measured moves,” or equal time and price vectors that pinpoint changes in trend. In the chart, the handlebar ticks are a measured length (measure them yourself with a ruler or compass) and after each measured vector distance the trend reverses. When the trend does not reverse it usually goes a multiple of the basic distance, often 2 or 3 times the fundamental unit. Obviously, the very first thing you do when examining any chart is to look over the past few months and try to find this fundamental unit. If the stock has already moved in a direction of this fundamental measured move, it’s usually better to wait and look for the reversal, unless there are clear momentum signals that a more powerful move is developing that might go a multiple of the basic unit.

## Chapter 4

### **HOURLY CHARTS**

Serious students will always maintain an hourly chart and it is best to draw one by hand and not to rely on computer drawn graphics. For commodity traders this is a must, but stock traders can often get by with simply a daily chart. If you want really accurate forecasts and precise timing, there is nothing like an hourly chart. For a great many years I always maintained a Dow Jones Averages hourly chart and an S&P cash chart for S&P Futures trading.

The number of hours in a day has always been a tricky question, since it has varied over the years and the basic principle of charting is that you want a one to one correspondence of time and price, preferably one hour of trading and one point in price. Since there are now 6 ½ hours in a day, a more perfect fit is a 30-minute chart. I use a 6-hour day for numerological reasons with the first bar being 1½ hours and starting at 11 a.m.

Six is a magical number for a variety of reasons going back to the creation story in the Bible and the Pythagorean use of  $10 \times 6 \times 6$  for the circle of 360. In any event, 6 hours seems to work very well and much better than seven, or six and a half. Another fit would be a bar chart consisting of 65 minutes per bar, since that time period creates exactly 6 bars per day and includes all the minutes in a day. Many computers allow you to create such charts that have a variable number of minutes per bar, and the 65-minute one works very well. You can also use half hour charts, since there too you have an exact correspon-

## ***Hourly Charts***

dence with the number of half hours in a day and the chart you are using in terms of full bars.

I prefer to use *line charts* instead of *bar charts* on my hourly charts since I use them for predictions, and the *close* each hour is much more important than the intra hour extreme. On a line chart you only need to put a “dot” at the price level that closes on the exact hour. You then connect the six dots that make up the day. The whole process can be done with the morning’s Wall Street Journal or any other paper that lists hourly readings for the prior day. If you keep it current you only need to watch the tape on the full hour and note the hourly reading. Many people don’t understand how a simple line chart with only six dots per day can show anything significant, but after a few weeks of charting you will usually have more than enough points to make some very significant forecasts into the future. Trendlines that connect the highs and lows on an hourly chart clearly point out reversals in trend, and very long term trendlines lasting over several weeks to months often pinpoint culminations that move the market averages hundreds of points within a few hours of the turn! Cycles applied to highs and lows come out perfectly. You have to see number counts like 100 hours, 500 hours, and 1,000 hours to believe them. The Gann idea of the “squareout” where the time period is equal to the past price is one that always amazes. For instance, if a top were 3,000 on the Dow Jones, then 3,000 trading hours later you would see a big turn in the market. These turns are almost always within an hour or two of accuracy if the chart is maintained properly, and that is truly amazing after 3,000 trading hours. Believe it or not, the August 1982 low at 770 created a top in August 1987 that was almost exactly 7,700 hours later!

The beauty of an hourly chart as opposed to a daily one is that the hourly pattern shows a series of waves that form within the single daily bar. You may have two daily bars the same size next to each other, but if the hourly bars showed an upward zigzag pattern

## ***Hourly Charts***

and a close at the high the second day, you would know a breakout would happen the third day.

The Fibonacci sequence mentioned previously of 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610 etc., lends itself very well to hourly chart interpretation. Once a trend goes 5 or more hours in the same direction it is usually a sign of longer-term persistence. With our trading strategy if we buy a low, how long do we know to stay in the trade? Usually, if we are in the trade for *five hours* and the market hasn't reversed, there's no need to worry about selling in hour number 6 or 7, since the number after 5 that a reversal is likely is 8 and if that long, 13. The tendency to persist for a Fibonacci number of hours is very reliable and can calm our nerves if we maintain a count. An hourly chart allows us to do just that and to keep track over several days of the actual hourly high or low and the time at which it occurred.

Using Gann squares, which will be explained in a subsequent section, we can make excellent predictions about when a turn in the market is going to take place. Angles coming down off hourly highs and up from hourly lows, time important turns at the intersection point. Likewise time counts off the all time high price, such as 50 hours from a high at \$50, are very important to maintain.

Another reason that we watch the hourly chart is for intra day turns and specialist openings. One of the most important day trading secrets is the "opening bulge." Traditionally, the N.Y.S.E. Specialist will look at his book to see whether there are more buyers or sellers and then open his stock at the extreme of the day. If there are sellers around he will often open at the high of the day and then slowly drift the price down all day. If there are buyers, he will often open down and then slowly bring the prices back up throughout the day. The trading rule is to never go against the extreme set in the first half hour. If the stock opens up \$2 and at 11 a.m. is up \$1, it may look bullish, but in reality it's been going down for an hour and will probably close weak. On the other hand, if a stock opens down

## ***Hourly Charts***

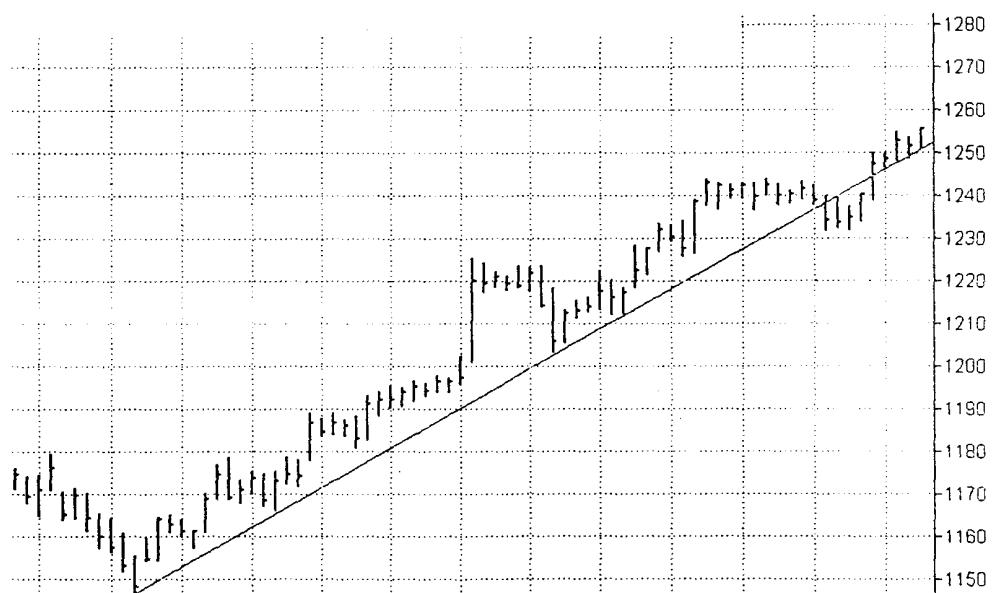
\$1 and a half hour later is down 50 cents, it is a sign of strength. Your strategy is basically to go in the direction of the trade after the extreme has been set in the first half hour to 40 minutes. This rule is extremely important in trading S&P futures and is rarely violated. Here the time period extends about 40 minutes from the opening. With all the "front running" of big orders these days and the advent of basket program trading, the daily opening bulge represents secret inside information about big programs in the street that probably haven't hit the tape as yet, but will do so sometime that day. The "big boys" who have guaranteed information, will leverage up with lots of S&P futures as soon as they can, and the big gap bulge is the sign. They like to misdirect you, so often the S&P's open down hard and then slowly and steadily go up all day long, but you're too scared to participate after you saw that frightening big down opening. The rule is to identify the extreme price by 10:30 a.m. and go in the trending direction after that time period with a stop at the extreme price. Any new high or low made after 10:30 a.m. is usually the legitimate trend.

Reversals in trend during a day usually happen at 1 p.m. or 3 p.m. and the hourly chart is helpful in defining the levels for knowing when a reversal is taking place. Usually a line connecting the 10 a.m. print with the 1 p.m. print shows a good daily trend, and if that line is broken after 1 p.m. then a reversal may be taking place. Most people draw trendlines connecting highs of bars to other highs, or lows to lows, but I have found a unique correspondence to the *time* of a bar and not necessarily its price. For instance, if on a five minute chart the high is made at 10 minutes to 10 a.m., and the 10 a.m. bar is actually much lower in price, a line drawn from the high of the 10 a.m. bar to the 1 p.m. bar and not necessarily to actual highs, will correctly define the true trendline. You must see this to believe it, but it really does work and lines connecting the hourly prints from one day to the next, such as 1 p.m. to 1 p.m., or 10 a.m. to 10 a.m., do show correctly a true daily trendline.

## ***Hourly Charts***

Interpretations of intra day bars are just like daily bars in that we look for a pattern of higher lows for an uptrend and a series of lower highs and lower lows for a downtrend. Chart #18 is a typical 60-minute chart of the S&P futures in a strong uptrend. Note the series of “swing” higher lows and the fact that each correction ends at a higher level than the one prior to that. The trendline demonstrates this, but you should notice where each correction ends, without having to resort to trendlines that can sometimes confuse the trend if the lows are way down and the trendline connects points that may have violated a

*Chart 18*



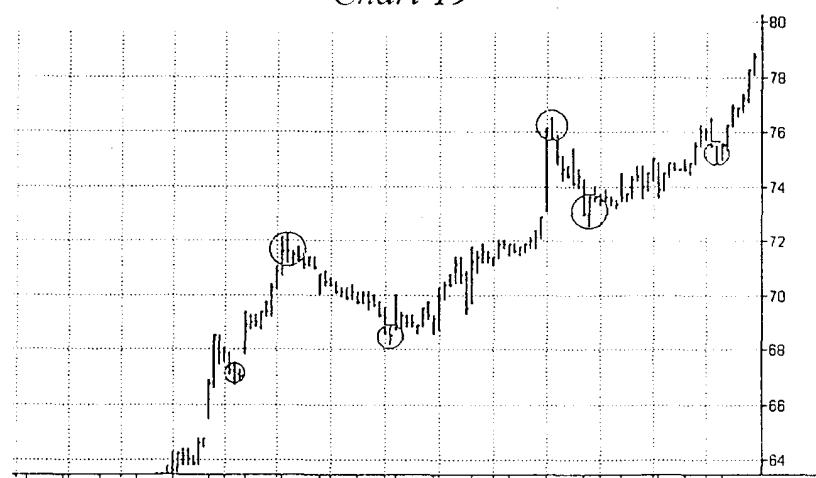
prior swing low, even though the long term trendline is still intact. You should also note on the chart that each bar that starts up from a correction bottom is a larger bar than the others and this shows the “impulse” nature of the move. Impulse moves *always go in the direction of the trend*, so that when you see a “big” bar, that’s usually the longer-term direction. Also note on the chart that at about the middle of the graph there is a very large impulse bar to the upside. Notice now the correction goes on for seven bars but stops just above the low price, where the impulse bar began. In strong trending markets the corrections are basically sideways and will never completely retrace a previous advance until the

## Hourly Charts

trend has turned down. On daily charts, time corrections of 3.25 weeks to 6.5 weeks will often go sideways and the low day will be near, but above, the start of the move up. That's a sure sign to buy when another advance starts from that level. Also note that on Chart #18, the trendline was violated towards the ends of the graph. However, the correction low was a higher bottom than that last one, so the trendline break was a "false" one, and as long as a *horizontal support level* was not violated, you should stay in the trade. I can't emphasize enough that trendlines are timing lines that show momentum, and a break just shows a loss of upside momentum and not necessarily a downtrend. For that you need a *pattern* of lower lows and lower highs. Many traders lose money shorting stocks on a trendline break, only to have them yet advance to new all time highs because a horizontal support level was never broken.

An hourly chart of AT&T, Chart #19, shows simple reversal signal bars. I have circled those bars so that you can identify them clearly. Note how the buy signal bars always occurred at a higher low than the prior buy signal and that helps to validate the signal, but since these signals come frequently on intra day charts, reversals should be used in conjunction with trendline breaks, measured moves, and time counts. Note how a simple trendline used in conjunction with these reversal bars would have aided with the chart interpretation.

*Chart 19*



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## ***Hourly Charts***

Keeping count of time is important when using intra day charts. On my hand drawn charts I make a tape measure strip of Fibonacci numbers, with hourly counts like natural squares. I slide it back and forth across the chart to line up highs and lows, in order to find clusters in the future where past highs and lows would have important time counts. Fibonacci numbers are important and many computer programs have either cycle finders, or Fibonacci cycles on them and they can be of help. The general rule is that the cycle is more powerful the farther away it is from the origin, so that an 8-hour count is not as strong as a 21 or 34-hour count.

*Chart 20*

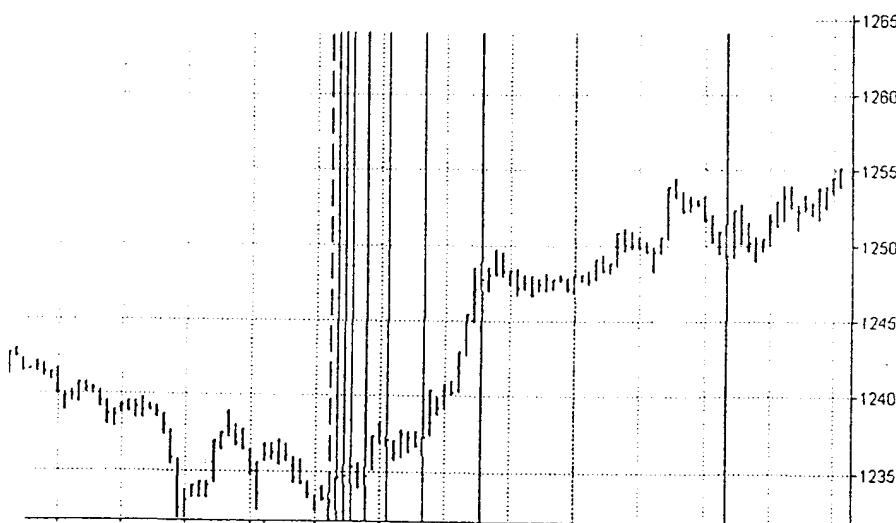
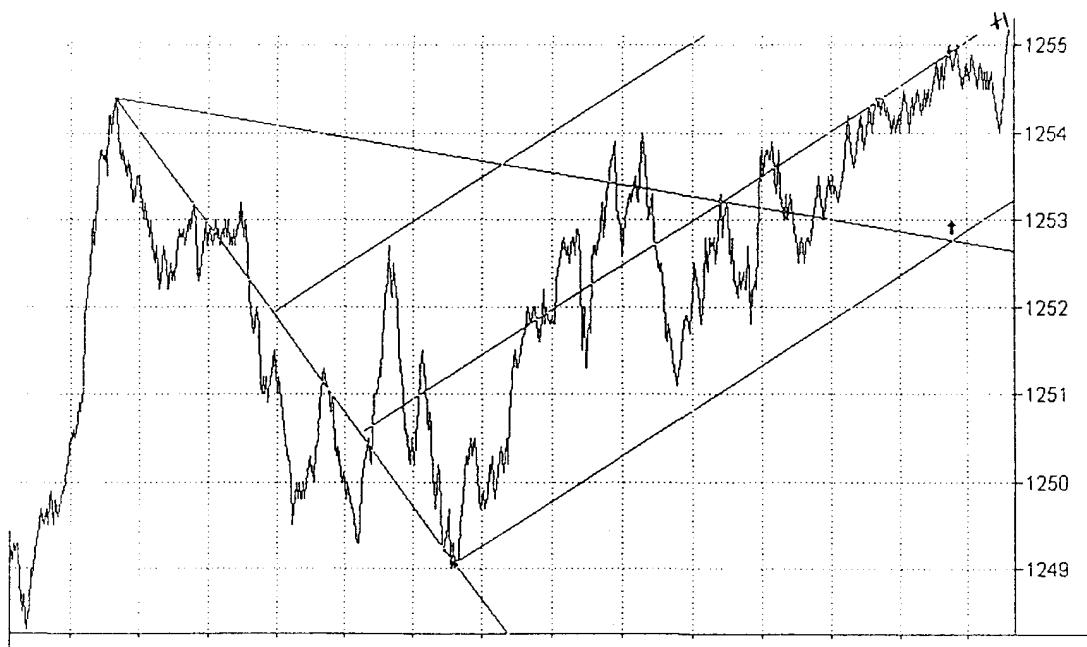


Chart #20 is a five minute chart of the S&P futures, with computer drawn Fibonacci time counts of 1, 2, 3, 5, 8, 13, 21, 34, 55 etc. As the time counts get further along, the swings get larger. You would not necessarily use these on your trading charts but they are helpful to find clusters to note for future time periods. You would also draw multiple starting points from various highs and lows and look for common clusters, such as 34 hours from a low, and 13 or 89 hours from a high, that come out together at the same hour in the future.

## Hourly Charts

You see that Chart #21 is a “tick” chart of every single trade in the S&P futures during a day. These types of charts are useful for counting waves and making measured moves. Note that all tick charts are “line” charts instead of “bar” charts. In this particular chart I point out a technique I use of making an “adjusted angle” by running a line from the high to the low to find the *true axis* of the decline, and then running 90-degree angles up to form support angles. The main axis is also subdivided to draw other parallel angles and as you can see, this forms a nice fit to the data. The 90-degree angle from an adjusted axis is usually the greatest support you can draw, and when that angle breaks it’s a sure sign of a reversal in trend to the downside. Also note the 45-degree adjusted angle coming down from the high to show resistance, and the fact that prices broke above this angle suggests

Chart 21



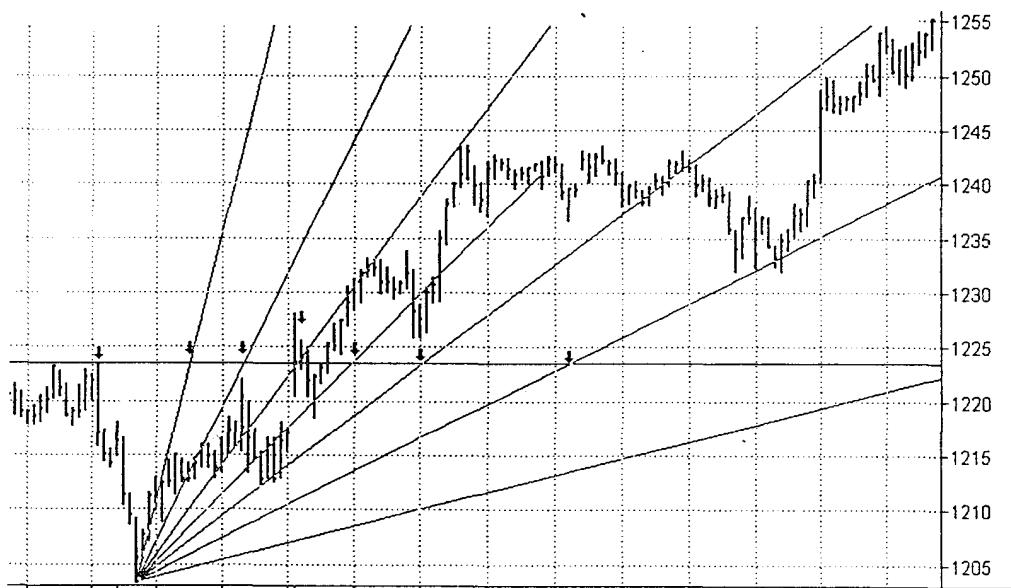
great strength and a new high just ahead. Also notice as well the arrow where the two angles from the high and the low intersect. A top was made on that squareout at an angle, so it was a short, even if in this case it didn't last long.

## ***Hourly Charts***

Chart #22 is a five-minute chart demonstrating Gann geometric angles from a low intersecting a horizontal line from the last high before the low. At each intersecting point a reversal of some type occurred, demonstrating how angles and resistance numbers combine at cycle points. You would watch for these turns and look for reversal bars to buy or sell. This is only a five-minute chart so the moves aren't large, but on an hourly or daily chart the moves could be very significant.

Also note the rule with fan angles that "when you break one, you must fall to the next one."

*Chart 22*



I discuss arcs at length in another section, but they are very useful for intra day charting, particularly for S&P or Bond futures traders.

Chart #23 demonstrates the principle that a circle drawn about a high to low will create support and resistance levels at the 12 o'clock and 6 o'clock positions on the circle, while the 9 o'clock and 3 o'clock positions define cycle turns in time. Note the high at the 3 o'clock point and the pull back to support on the top of the circle.

## ***Hourly Charts***

*Chart 23*

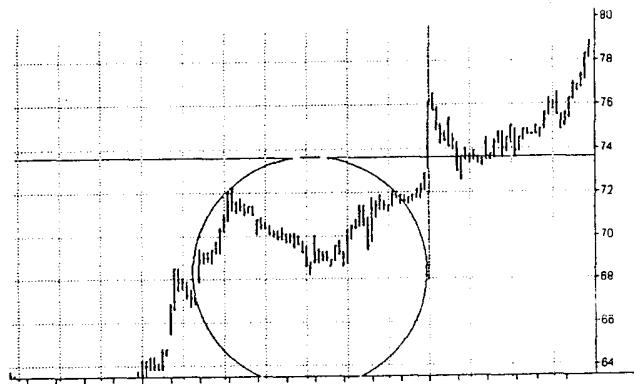
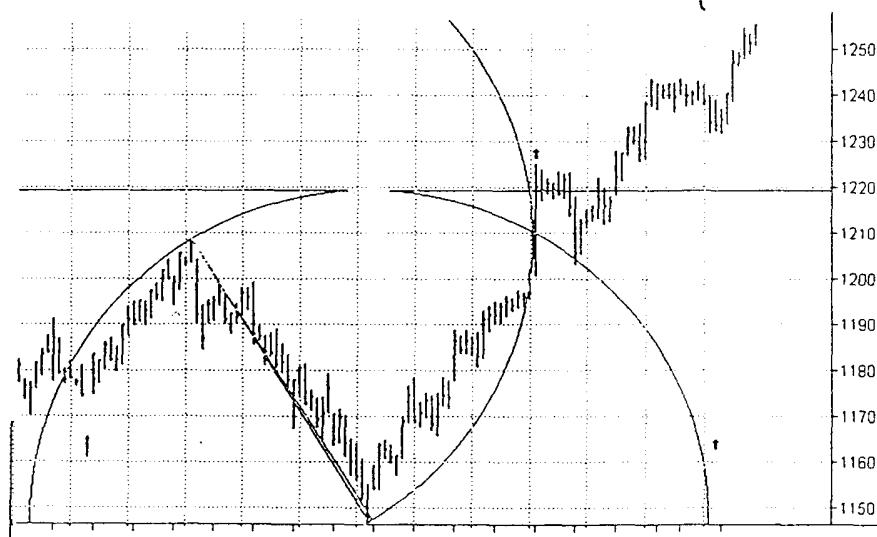


Chart #24 demonstrates how an arc swung up defines a top, while an arc swung down defines a low.

*Chart 24*



In the case of this low, it was minor because of the strong move, but most times it will be a crash low climax as the arc goes the maximum vertically down.

## Chapter 5

### TIME AND PRICE SQUARED

One of the key concepts in all of technical analysis, and specifically the Gann material, is the concept that time and price are the same thing. The fact that price levels are described on pieces of paper for charting purposes on a vertical scale, and the time correspondence along the horizontal axis, doesn't mean that the two aren't more directly connected. Gann believed, as I do, that cycles recur in nature and it is the cyclic manifestation of energy that is transferred into price patterns when people buy and sell. It's not hard to prove that price cycles repeat. You see them everywhere and exact proportionate correspondences from cycles such as 10 years ago, or 20, or 60, or 100 years, are so similar as to be almost mystical. On an unconscious level the mass of human emotions follow rhythms that recur with exact mathematical precision. Somehow the subconscious keeps track of time and translates that movement through space as numbers and these numbers recur when the cycle returns. This can readily be seen on any chart and has never been disproved. It's just that the establishment doesn't know what to do with the facts since they fly in the face of standard fundamental analysis and would put most of Wall Street out of work if they were more widely known. For instance, if you take the first time the Dow Jones hit 1,000 in February 1966, and went forward 1,000 *days* to the end of 1968, you would see that that was the second time the Dow hit 1,000. One thousand days and a price of 1,000! If you keep that cycle active by going forward 1,000 days you get most of the

## ***Time and Price Squared***

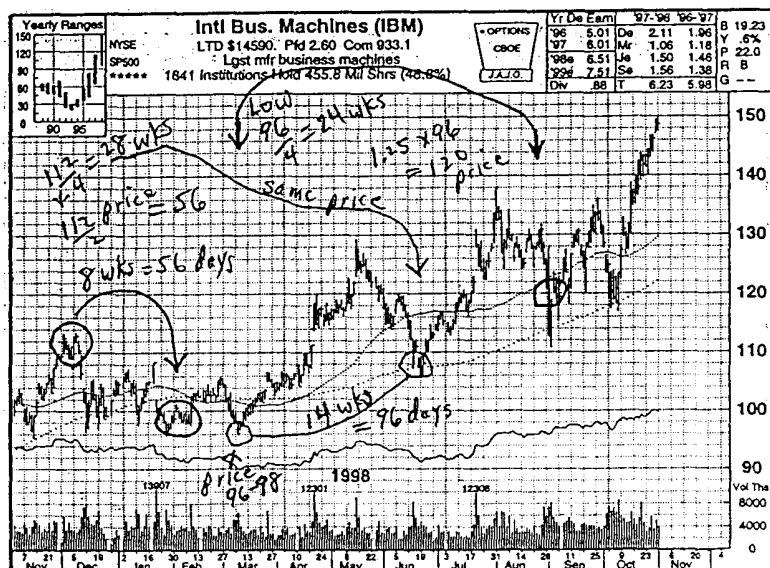
next major highs and lows in market history. Similarly if you took the 1929 top of 386, and went forward 386 *months*, you get the 1961 market top just prior to the 1962 biggest waterfall drop since 1929.

These time and price equivalents are everywhere and indeed are the basis of all fluctuations in the stock market on all levels. The theory goes like this. If a stock's high is \$50, then that price is related to a time cycle at work relating to 50 time periods. These periods can be hours, days, weeks, months and years and are usually all of them. Fifty days after that high at \$50 will result in a big turn in that particular stock. Turns will also be evident at harmonics or proportions of fifty, such as 25 or 75. It only takes a minute to test this on any chart and you will see it demonstrated for yourself. The key of course, and the difficult part is keeping track of all these turns. Each and every high and low in a stock's history spins out price cycles, and as they come out each day in the future, you will experience a little price blip in the stock. The major highs and lows and the culmination's of bull and bear markets are nothing more than clusters of these cycles all coming due at the same time. For instance, if a high were made at 50, then cycles of fifty would spin out, but also cycles of 25. If 25 days later a low came in at 30, then a new cycle of 30 would be spun out along with the current one of 50. At the common denominator of 150 ( $5 \times 30$  and  $3 \times 50$ ) a big turn would be seen. In my work I keep tickler files on averages and individual stocks, to keep track of these highs and lows and when big turns come, it's usually because many different harmonics are all coming out at the same time. Keeping track is the key and there are several ways to do so, but the easiest is with *timing angles*. However, let's look at the theory again. If the subconscious minds of the masses are keeping track of these time cycles, how is that accomplished? What will be a final high or low, as opposed to just another big daily movement? How do we know the beginnings and endings of the cycle at work and not just the harmonics, such as quarter cycles?

## Time and Price Squared

### IBM CHART SHOWING TIME & PRICE CYCLES IN DAYS AND WEEKS WITH PRICE CONVERSIONS INTO TIME HARMONICS.

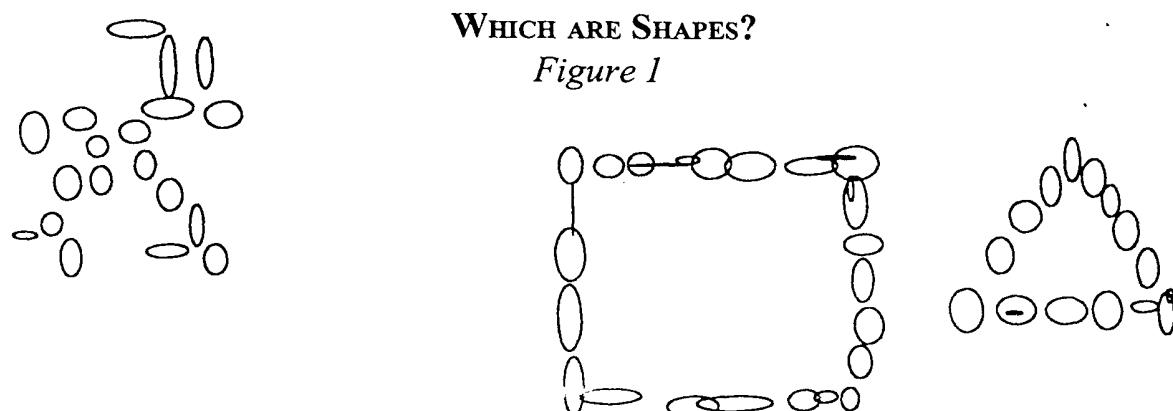
*Chart 25*



If you think all of this is strange, just think for a minute about how humans see shapes. The fact that we see shapes is strange in and of itself. That is, we must be genetically programmed to innately recognize shapes like circles, triangles, spheres, squares etc., as opposed to some multi-angular mush pattern. We know all children can recognize shapes and all can picture the perfect shape in their mind's eye even if they can't draw it. These are "a priori" experiences and somehow time must be one of those skills. We must have a time cycle facility to keep track of the passage of time in order for these observations to work, or it must be an external timekeeper like planetary movement that does it for us.

### WHICH ARE SHAPES?

*Figure 1*



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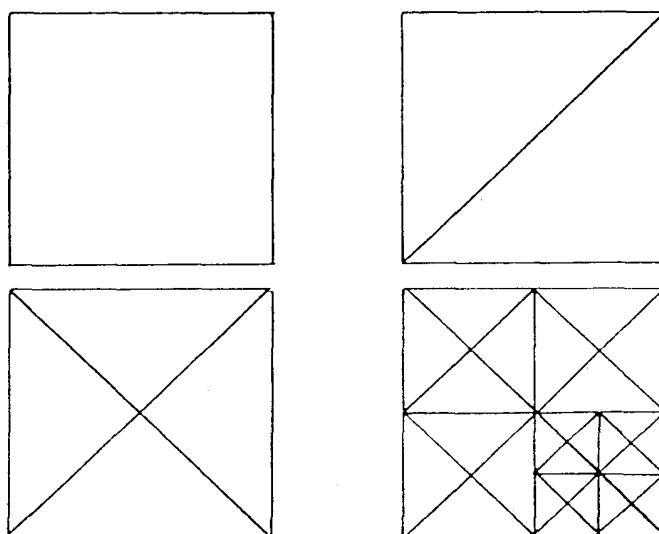
## ***Time and Price Squared***

Clearly everyone can see in Figure #1 that the first object on the left is not a shape, but all can see a square and a triangle in the other two. Indeed, I asked my 5-year-old son about this chart and he clearly saw a triangle and a square but said the other object was not any shape. And yet what differentiates an orderly arrangement of squiggles from a disorderly one, or for that matter what's order? If your answer is that's the way it is, then I say that's how stocks work. Time must form shapes that angles define and keep track of. Somehow people know when a stock is finishing a time cycle, and when the time is up, the stock moves. In retrospect, it's always easy to back track and find all the origin points, but we need to find them ahead of time, and that's where Gann's idea of "squareouts" comes in.

Gann thought in geometric terms and especially used the square as illustrated in Figure #2. What divides the square perfectly is the diagonal and the diagonal is always an angle of 45 degrees. This angle serves as a timing line to keep track of the passage of time from past highs and lows. Visually one could draw a square around the high price and box it in to show the time cycle box. The next cycle would be another box and the 45 degree angles coming down and going up from the sides of the boxes would be support and resistance lines, but would also indicate time periods of equilibrium. The important key to

### **TIME AND PRICE SQUARES**

*Figure 2*

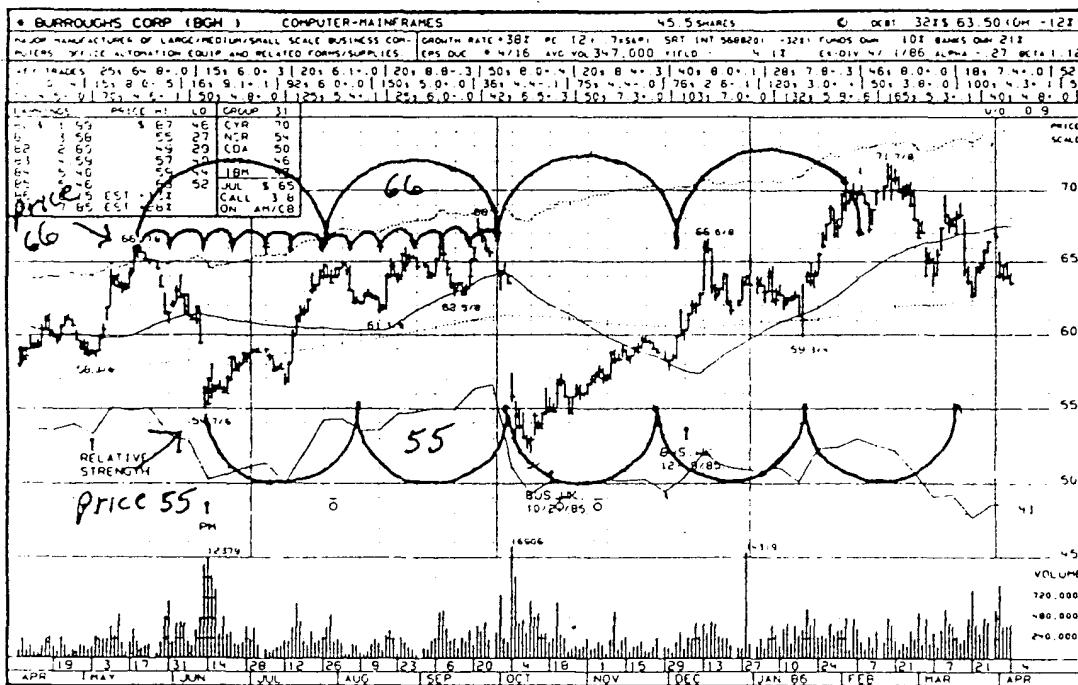


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## Time and Price Squared

remember is that *all along an angle, time and price are in equilibrium* or equal if it's a 45-degree angle. The 45-degree angle equally divides a square, so that all along that axis there is exactly one unit of time and one unit of price. If we go back to our shape exhibit, Figure #1, and remember that orderly arranged objects are easily discernible, then we perhaps can see that along an angle coming from a high or low, at each and every point along that angle, the time and price are at equilibrium and it is at these equilibrium points that changes can take place. This is the whole point behind trendlines. That is, when price hits a trendline it is again at equilibrium in terms of time and price, from the high or low that spawned the trendline, and only at that time can a new cycle manifest and change the direction of the stock. It doesn't have to change the trend, but the change can only occur when the trendline has been hit. This is why Gann called these angles "timing lines" instead of trendlines.

*Chart 26*



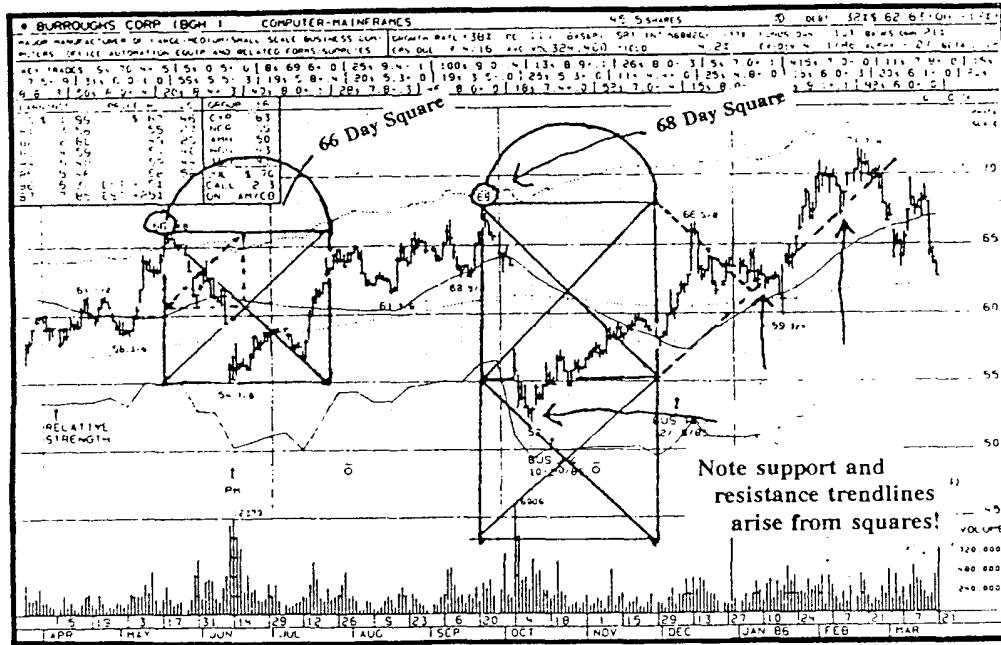
## Time and Price Squared

Chart #26 shows the time cycles of 66 coming from a top at 66 as similar to ripples in a pond. Each cycle of 66 minutes, hours, days, weeks, months and years will now come out at the appropriate time period related to the number 66. In this chart we can see the effect on the price at each 66<sup>th</sup> day. We also can see another cycle of 55 days that came about when the stock suddenly broke and stopped at the price of \$55. Now we can see the interplay of each of these cycles as the 66<sup>th</sup> day tries to get the price up to a high and the 55<sup>th</sup> day down to a low. When they both come out near to each other, we see a big climatic move. Do not think that this is a strange or unique example. All stocks behave this way, it's just that some are operating on harmonics from tops or bottoms made long ago in the past and we can't see them directly, only indirectly, when one of their harmonic cycles hits.

Our next step is to convert the raw time cycle count of 66 to a timing angle and this is done through the use of a square of 66 units drawn about the high of 66. This part can be

### ORIGIN OF TREND LINES

*Chart 27*



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## ***Time and Price Squared***

tricky because to get consistent results the graph itself should be a one to one correspondence, like one day to one point of price. This rarely happens with commercial charts, so that most 66-day squares won't look like a square, but more like a rectangle. The same thing applies if we use \$66 as the price. Then the time is distorted. One method that usually works, is to take a ruler and measure the amount of \$66 on the vertical price scale and draw that horizontal measured line across for the 66-day top count. Then complete the square, even though it may not have a perfect time correspondence. If the fit seems to work, use it! Sometimes experimentation is needed to find a good fit, but once you have one, it will work for many years, making it well worth the effort. From the initial square we extend the 45-degree trendlines and we can now see the origin of all trendlines. These *trendlines come from the timing lines connecting highs and lows*, and on most charts when a new high is made it was because some angle from the past caught up with the price on that date and price. To prove this after the fact, or to confirm that a high was just made, you can draw a *backwards* timing line of 45 degrees (and others to be described shortly), and as you extend them backwards you will find an origin point where they came from. If there was a higher high many years ago, you extend those trendlines backwards and at an upward angle. Note that in using rectangles, as opposed to true squares in the example shown, because of the lack of a one to one correspondence of the time and price scales on the chart, the diagonal lines that represent 45-degree bisecting angles in a real square are angles of a differing degree on these charts. Nonetheless, they are the timing angles that relate one to one in this example and they become our real 45-degree substitutes no matter what their actual degree. We must extend these exact angles up and down into the future, as long as we use this distorted chart.

Extending angles up and down has as its effect the bisecting of the original square, and the construction of that square's harmonics and subdivisions. Each square is bisected

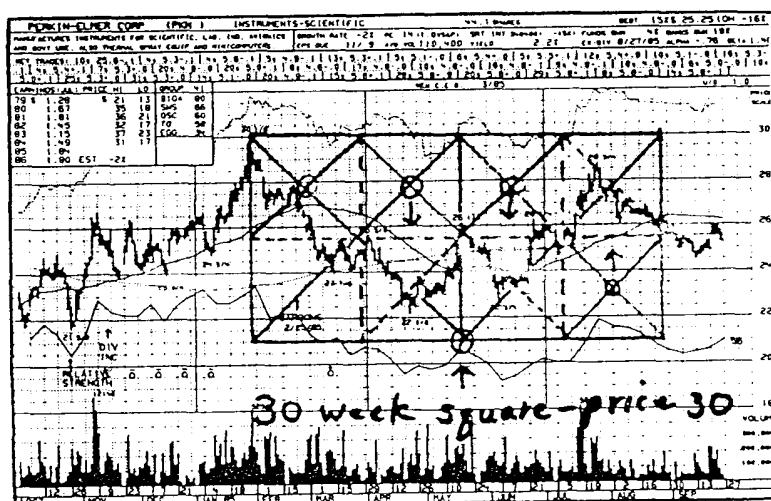
## Time and Price Squared

with the diagonal and then a new smaller square is made. That smaller square is bisected again and the process goes on and on as far as we want to take it. In the case of the Dow Jones with a 1,000 price we could derive smaller cycles of 500, 250, 125, 62.5, 31.25 and 15-16 days. The principle is that at each of these cyclic turns in time we would most likely find the Dow Jones selling at a price that would be one of these harmonics added to, or subtracted from 1,000. The key is that time and price always trade together and at the point of the major harmonics, changes in trend occur.

If angles are timing lines and price harmonics, and if a change in trend comes about when time and price come together, then it *stands to reason that when timing lines cross, cyclic change will reverse the stock's price*. Charts #28 and #29 showing intersecting lattices of the timing angles prove this point. Look at the intersecting nodes and notice what happened to the stock's price at those times. Many times the stock tried to sell at the exact price of the intersecting point. Also keep in mind that all these points of force into

### INTERSECTING LATTICES CREATE CYCLICAL CHANGE

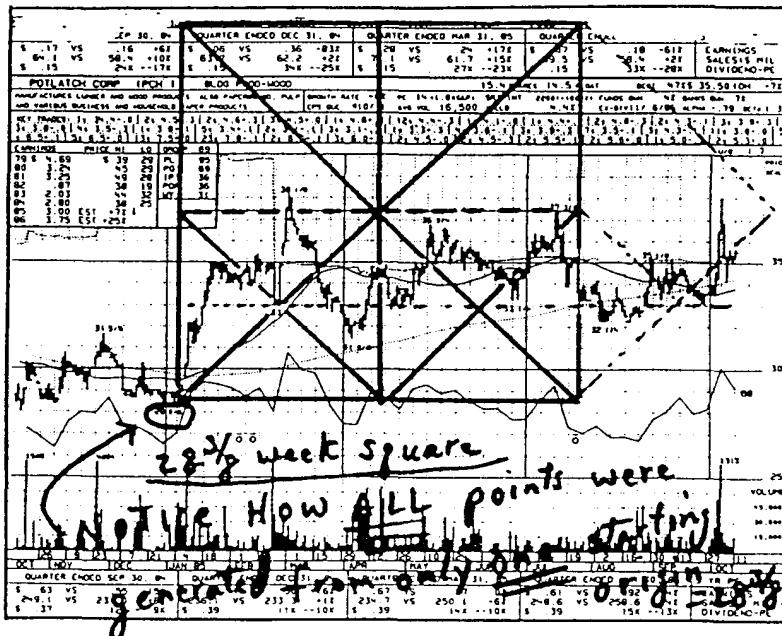
Chart 28



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## *Time and Price Squared*

### *Chart 29*



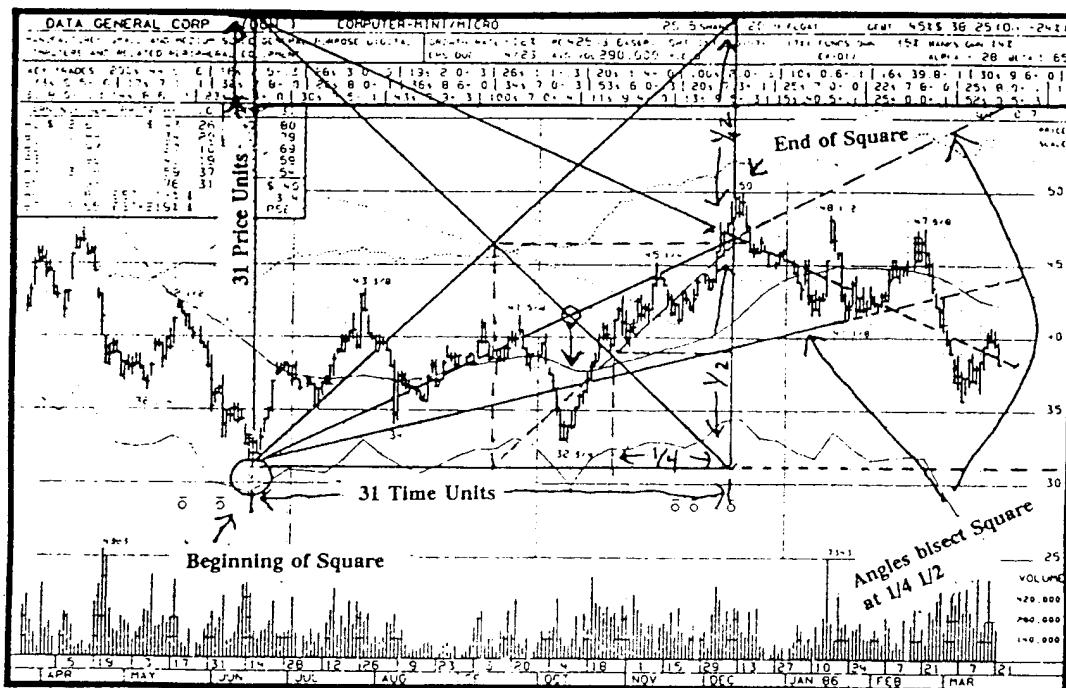
future periods are generated from only one time and price origin, either a major high or low. Nothing in these charts has been trendfitted. The timing angles were simply run up and down about the square of the major high or low.

Chart #30 is another example of a square using a strange square unit of 31, since that was the major low. The square is drawn up from that low at \$31 and angles are put on that bisect the midpoints of that square. Note how precisely the big price high came out, just at the midpoint of the time square! After that high, the price followed a trendline coming from “outer space” from the top corner of the theoretical square at a price the stock never traded at before. Nevertheless, the trendline coming down took hold of the price and pointed the way down. If you study these charts and meditate on them, you will realize that 99 9/10 of all the stuff taught in schools, or on Wall Street, about stocks and their valuations are all worthless and misinformation. Stocks follow mathematical prin-

## Time and Price Squared

ciples that relate to time and price and can be forecasted with great accuracy, years ahead of time with the proper data.

*Chart 30*



As you look at the examples of time and price coming together at equilibrium levels of time and price proportions, you may become confused as to how to keep track of all the time and number combinations. If the cycle of 50 spins out harmonics of 25, 12.5, 75, 100 etc., it can be confusing especially when you throw in 50 hours, 25 days or 75 months. The accepted approach to organizing all the information is to use timing lines, but more specifically, geometric angles. This will be the subject of the next chapter.

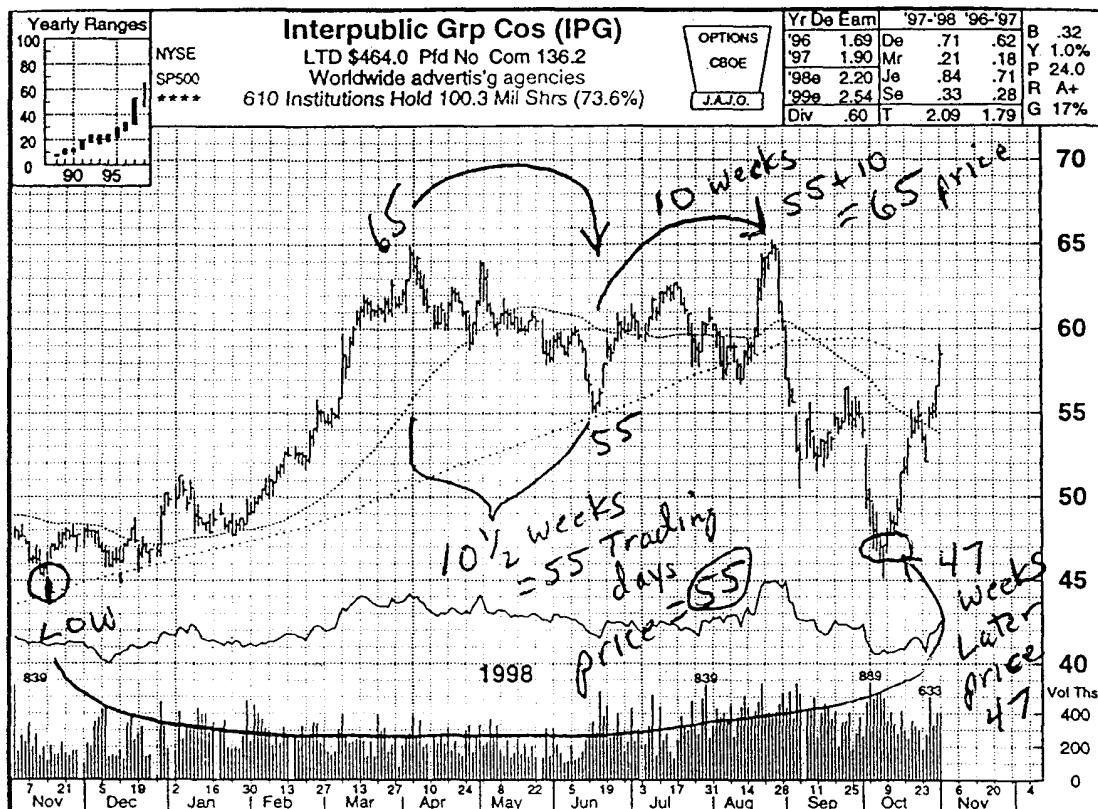
An example of time and price being related is illustrated in Chart #31. It shows a low at a price of \$47, and 47 weeks later there is a plunge and another low at \$47 occurs in the 47<sup>th</sup> week. The high price of \$65 has a correction that lasts 55 trading days and the price decline ends at \$55, 55 days from the top. From that low of \$55, the stock rallies 10 weeks to a price of \$65 for another top. These are not coincidences. It may appear strange

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## Time and Price Squared

to you at first, but with some practice you will see that all stocks follow such patterns. There are a number of useful techniques that will be explained in the following sections to help to accurately identify the direction of the stock and what its final time and price will be.

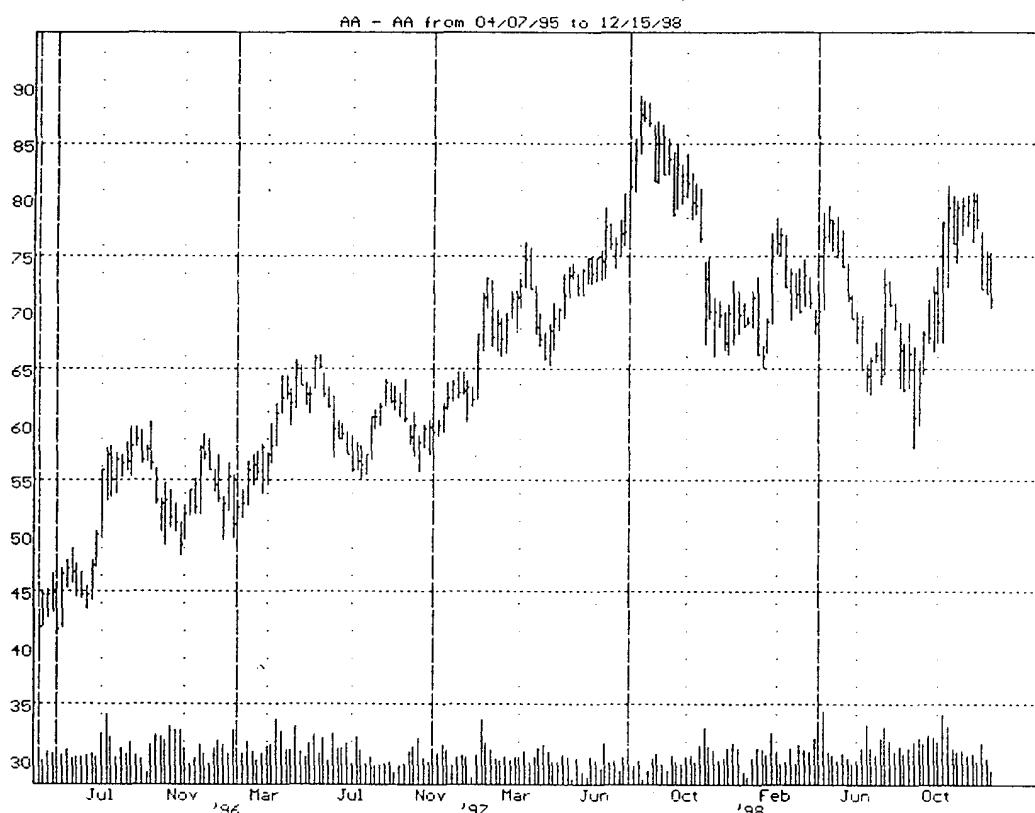
*Chart 31*



## *Time and Price Squared*

A weekly chart of Alcoa, Chart #32, demonstrates a “squareout” of 40  $\frac{3}{4}$  weeks from a low at \$40.75. Each vertical line is about 41 bars (weeks) wide and as you can see, there is a big turn just about where each of these vertical lines is drawn. That is the effect of time and price being equal and a change in trend is usually indicated at that time.

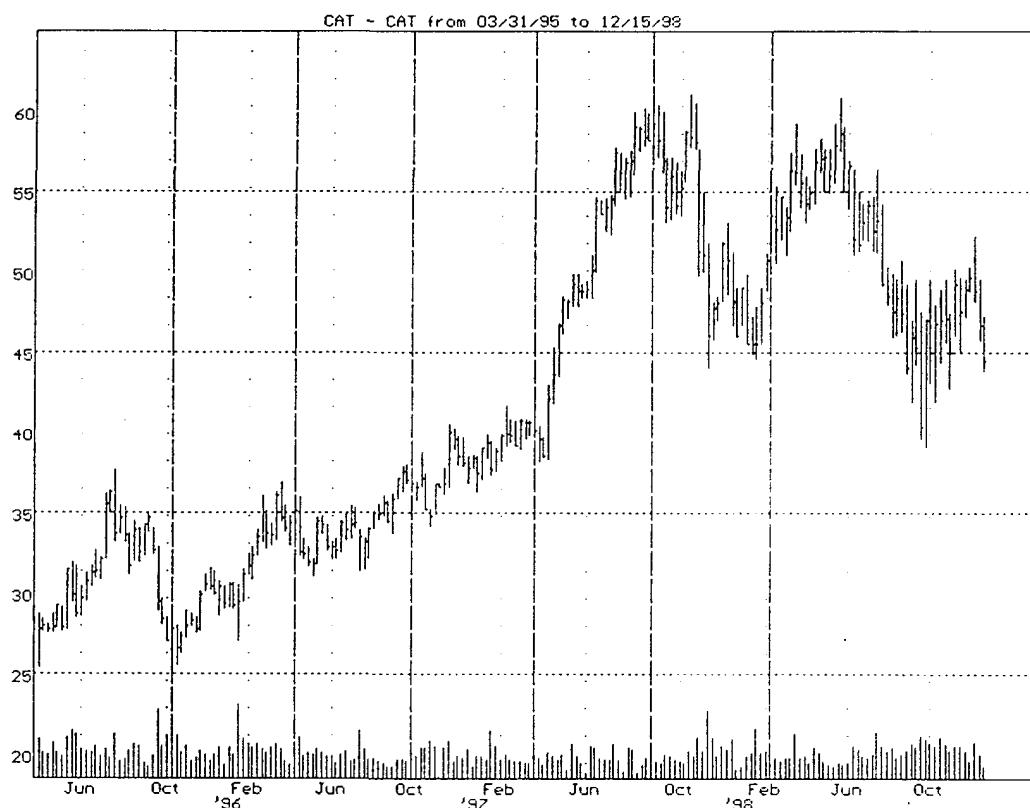
*Chart 32*



## ***Time and Price Squared***

Chart #33 illustrates a weekly squareout of Caterpillar coming from a weekly low of \$25.375 and squaring every 25 1/3 weeks (Vertical lines).

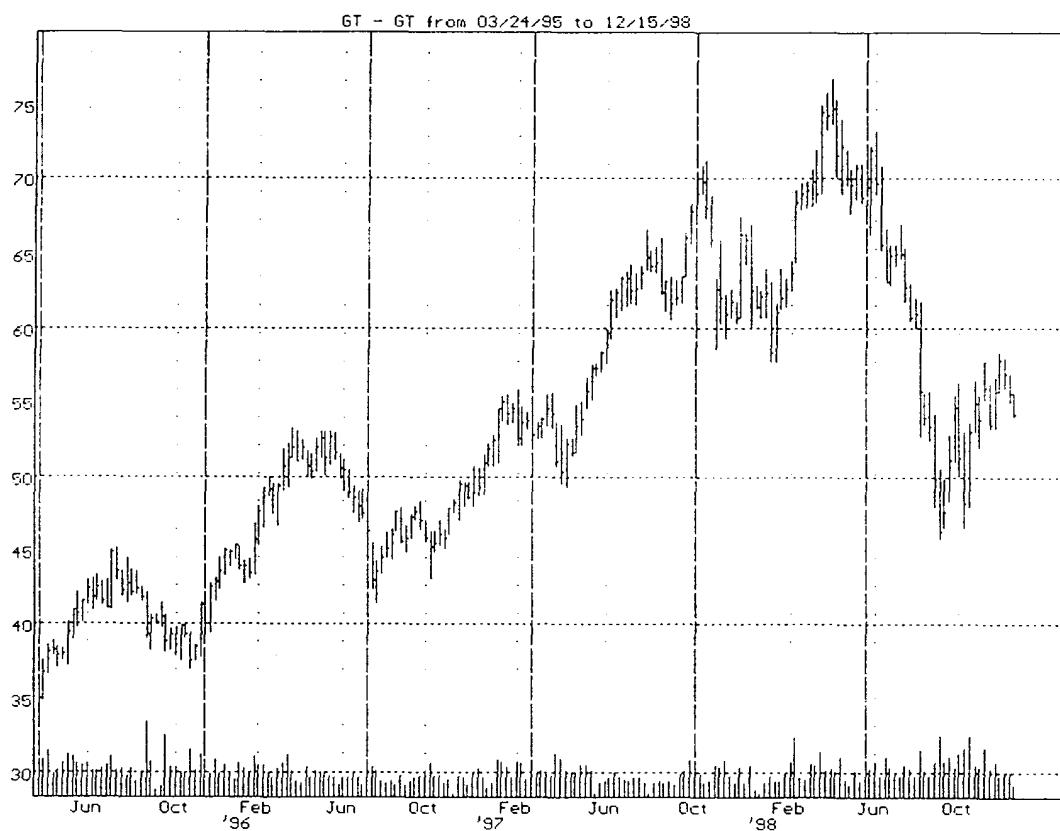
*Chart 33*



## *Time and Price Squared*

A weekly chart of Goodyear, Chart #34, shows vertical lines placed every 33.75 weeks from a low at \$33.75. When examining these charts think about how valuable it is to be able to pinpoint fairly accurately when and where the big moves are going to take place.

*Chart 34*



Traders are usually fighting for every 50 cents on a trade. Knowing that a \$10 move is about to start is a tremendous advantage!

## Chapter 6

### **ANGLES**

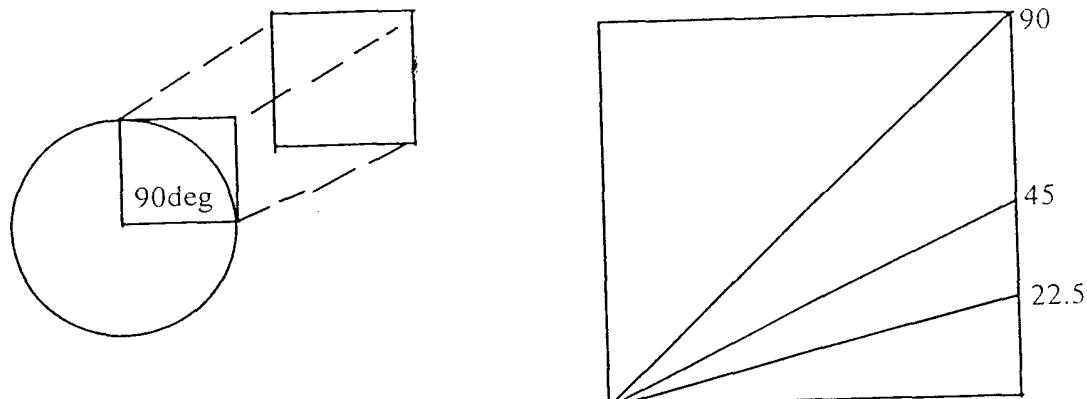
I mentioned previously that random dots or objects had no recognizable interest to humans, but organized dots like lines, squares, and other shapes did. The straight line is a special collection of points that shows a specific correspondence with time and price when drawn on a price chart. So many units of time have passed and so many units of price have advanced or declined. When the price of a stock fluctuates and then returns to an angle drawn from its highest price or lowest price, it is at that point that time and price for that issue are exactly in some kind of proportion. Any price apart from that angle is not in proportion to the time and price equation that originated with the high or low the angle was drawn from, and since cycles start at those highs and lows we must keep track of them. It is because of this unique correspondence that only takes place at the moment of contact that we can see a change in trend for that particular stock. For example, a stock hits \$50 and declines and we draw a line going down at \$1 per week. Three weeks later that line will be at \$47, but the actual price could be \$40, or \$49, or any other number. If, however, during that week the stock hits the line at \$47, then time and price would be balanced and it would be at that point that the equilibrium level would have been reached and a change *could* take place. Change doesn't always take place on the angle, since stocks can move along an angle for weeks at a time without deviating, but sooner or later a major time cycle will come out, and at that point when the price touches the timing angle

## Angles

a major change will take place. You probably have not noticed this before, and it really isn't talked about much, but if you look closely at all major turns on market averages or stocks, you will always find a simple long-term trend line that was hit at the exact moment of the change in trend. In many cases people see a stock breaking out through a trendline and call it a trendline break, but what is actually happening is that as the stock rose to reach the trendline and hit it, a major change took place as the cycle ended and the new direction manifested. This might seem like splitting hairs, but the concept is very important in understanding how angles work, and can be used for forecasting and long-term prediction.

As mentioned previously, the square is the best representation of time cycles and as each stock's price "squares out," or equals in days, weeks, months, etc. its price, the cycle

*Chart 35 & 36*



comes to an end and a change in direction takes place. Timing angles originating from squares are therefore our theoretically perfect starting point. The diagonal of the square is 45 degrees and this is the perfect one to one correspondence of one time period to one price unit. If we take half of that 22.5 we get our next angle. In short, we find that straight

## Angles

up is 90 degrees and the steepest angle imaginable and we can subdivide by two to get its harmonics:

$$90 / 2 = 45. \quad 45 / 2 = 22.5. \quad 22.5 / 2 = 11.25. \quad 11.25 / 2 = 5.625$$

It is important to note that these are divisions of *price*, but are not angles. Half of a 45-degree angle is an angle of 26.75 degrees, not 22.5 degrees as will be explained shortly.

In measuring time we think in circular terms and we recall that the great Pythagoras stated that the angles of a circle have numerical co-ordinates, which are harmonious, and this relationship between angles and numbers allows us to project stock movements by relating the lift of the angle that harmonizes with price resistance and time resistance. In other words, the angle a stock moves along will tell us how long to expect that move to go in both price and time.

To understand this we must consider that all angles are a type of circular measure starting from the center of a circle and moving through a 90-degree quadrant. We only use the first 90 degrees of the 360-degree circle, and since we can only graph stocks on a flat, square piece of paper, we project that 90-degree quadrant onto a flat square to coordinate our angles. In this pictorial representation we see the square represents a 90-degree quadrant of the circle, but instead of the diagonal being 45 degrees, it is 90 degrees, in terms of vertical units. Now, the angle up from the origin to that 90-degree top is still a diagonal and therefore 45 degrees. However, if we take the halves of that, such as 45, 22.5 or 11.25, these are not angles of those degrees, but are 26.25 degrees, 15 degrees, and 7.5 degrees respectively. Basic trigonometry tells us that the angle designated as 45 degrees on the grid is really the Arc Tangent of  $\frac{1}{2}$  ( $45/90$ ) or 26.57 degrees, and the 22.5 one is the Arc Tangent of  $\frac{1}{4}$  ( $22.5/90$ ) or 14.04. Most Gann protractors use 26.75 and 15 degrees

## *Angles*

since these are close theorecticals and have been used for years. They also follow the traditional harmonics of the circle divided by two and by three. In other words the divisions by 2 are:

$$360 / 2 = 180 / 2 = 90 / 2 = 45 / 2 = 22.5 / 2 = 11.25 / 2 = 5.625$$

Divisions by three are:

$$360 / 3 = 120 / 2 = 60 / 2 = 30 / 2 = 15 / 2 = 7.5$$

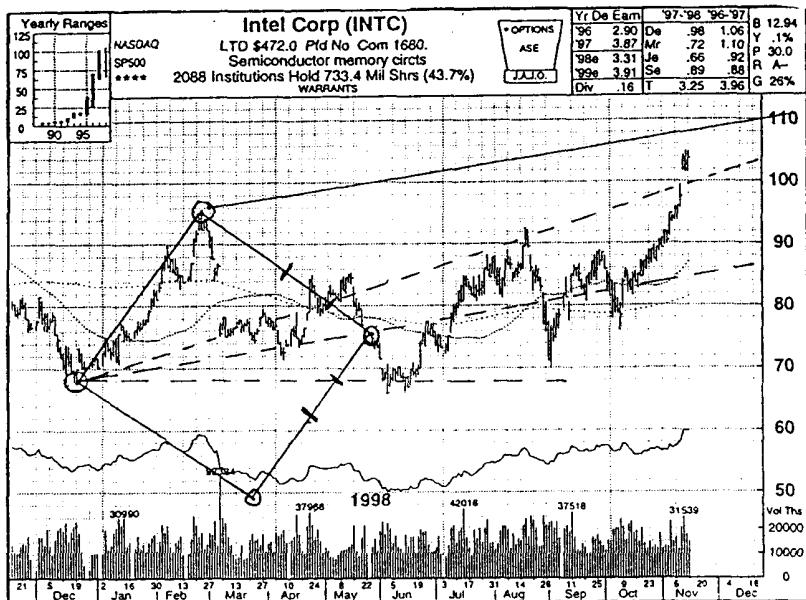
The interplay of these two sets of numbers creates all of the time and price resistance found in stocks. For instance, if a stock hits a low at \$10, then, if you add 5.625, and then 11.25, and then 22.5, you get \$15.625, \$21.25 and \$32.5 as price and time harmonics for the two's, and if you use three, you get 7.5, 15, and 30 or \$17.5, \$25 and \$40. Each high or low finds natural support and resistance at these natural number harmonics that come from the circle. The corresponding angles are  $5.625 = 3.75$  degrees,  $11.25 = 7.5$  degrees,  $22.5 = 15$  degrees,  $30 = 18.75$  degrees,  $45 = 26.25$  degrees,  $60 = 33.75$  degrees, and  $67.5 = 37.5$  degrees. If you draw these specific angles on a chart, the price will meet resistance or support when it touches them.

The purpose of this is to find "geometric" angles that will equate the angle of a stock's impulse movement with its time and space movement, so that we can tell when the movement is about to exhaust itself. A much simpler way is to draw squares around the prices as previously shown, and bisect that square to get the natural angles for that particular stock. This was shown in the material on time and price squared, but the next two charts demonstrate the technique.

## Angles

Chart #37 shows the “square” drawn about a major leg up axis, and then angles

*Chart 37*



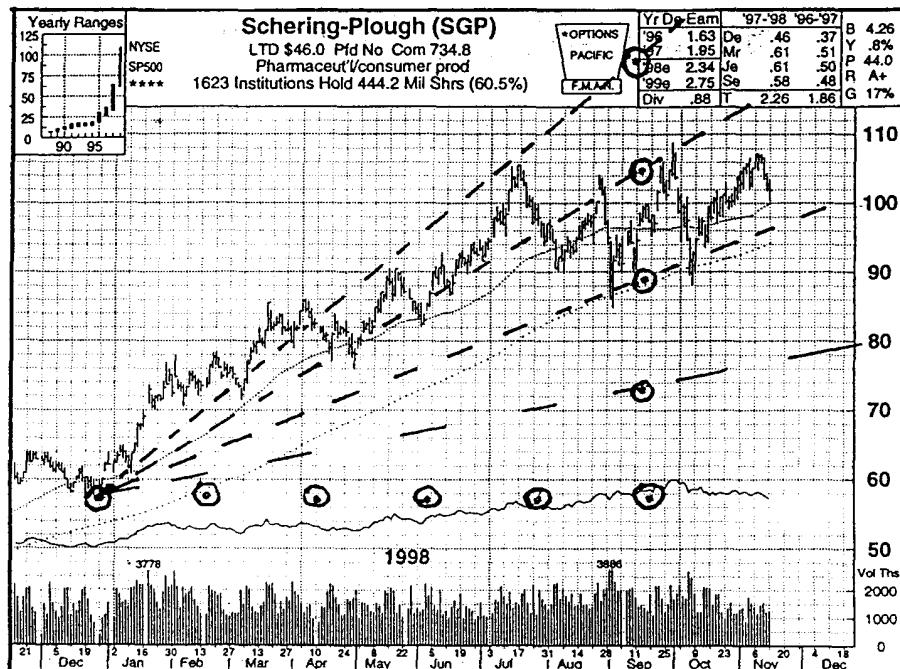
are created by drawing lines through the bisected points of the square. Note how the extended trendlines arose from that structure and contained the future price movement. This example also shows that not all squares must be drawn from the “normal” plane of straight up, but are often adjusted to the axis of the advance or decline of the stock. Adjusted angles drawn from the stock’s own axis are particularly powerful and are often overlooked by the majority of traders.

A simple method of placing equally spaced horizontal dots along a line from a high or low, and then at some point going up with the same space measurement is shown in Chart #38. Connect the dots and you will get various 1 x 1, 1 x 2, 1 x 3, 1 x 4, etc. angles. Here I moved over 5 dots and went up, but whether the number was 5, 4, 9, or anything else,

## Angles

didn't matter as long as I went up the same amount to get the important 45-degree 1 x 1 angle to start. Any number over and up will work as long as the spaces are equal. I use my

*Chart 38*



compass to quickly measure over and up on any scale chart, and it takes only a few seconds and is actually more accurate than drawing angles from a protractor.

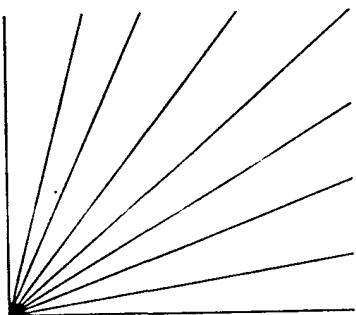
Most technical supply catalogues have pre-drawn geometric protractors that traders can use to quickly draw lines on charts and you can buy one or quickly make one out of artist's acetate paper and indelible ink pens. I do this not just for the traditional angles, but also for some more obscure angles like Fibonacci ratios of 38.2 degrees or 61.8 degrees, or 55 degrees, all of which are of importance to traders.

## Angles

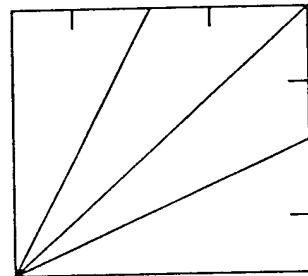
The standard protractor is shown in Chart #39:

CHART 39 & 40

The standard protractor looks as follows:



the angles are:  
82.5 1x8  
75 1x4  
63.75 1x2  
45 1x1  
26.75 2x1  
15 4x1  
7.5 8x1



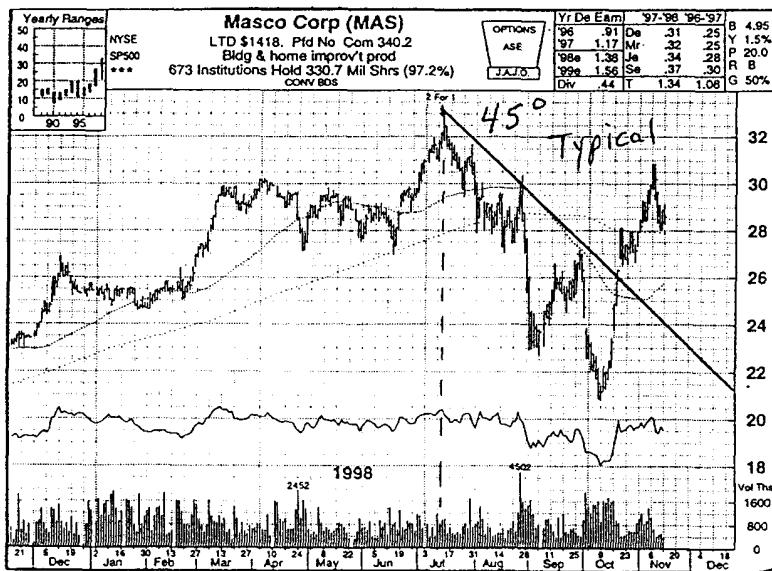
Again remember the origin is a simple square that is subdivided to get the angles.

Most traders align the angles from a major high or low with the 90-degree axis straight up, as in classic geometry textbooks. Almost all technical books utilize this technique, as do all modern computer drawn angles in purchased software. These work most of the time even *though they're wrong!* The proper method is to *align the axis* of the angles with the line that connects the major low to high or high to low axis on the chart you are using. Go back to the prior chart of Intel with the square drawn around the low to high and see how the angles constructed do not necessarily go straight up and down but follow the natural plane of the chart. Also, go back to the earlier chapter on squareouts and look at the charts of 66 days and the origin of trendlines. In those charts the square is deliberately drawn with a vertical axis and the angles coming from those squares will be traditional ones. In reality you must use both, until you find the right one that fits the particular chart you are using. You will usually find that both methods work on the same chart, but one will be slighter better than the other.

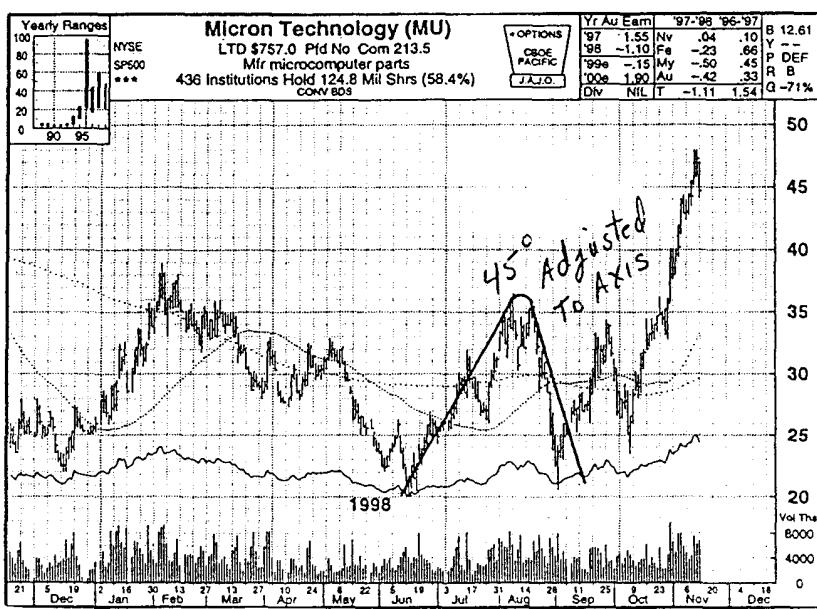
## Angles

We see in Chart #41 the effects of the typical 45-degree angle, as shown in 99% of all chart books, and in Chart #42 we see the adjusted angle of 45 degrees coming up along the axis of the low to the high. It has not been drawn, but you should mentally note how the typical 45-degree angle on the second chart has no real predictive value on this chart, if drawn in from that same high.

*Chart 41*



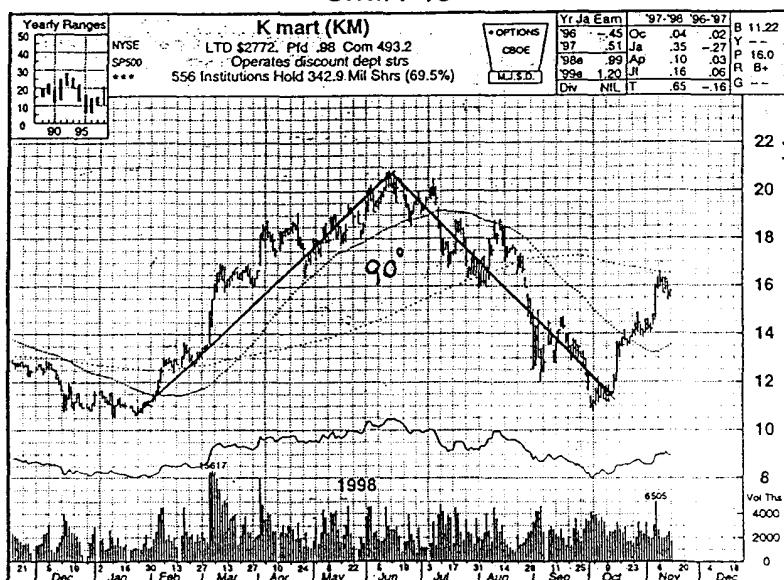
*Chart 42*



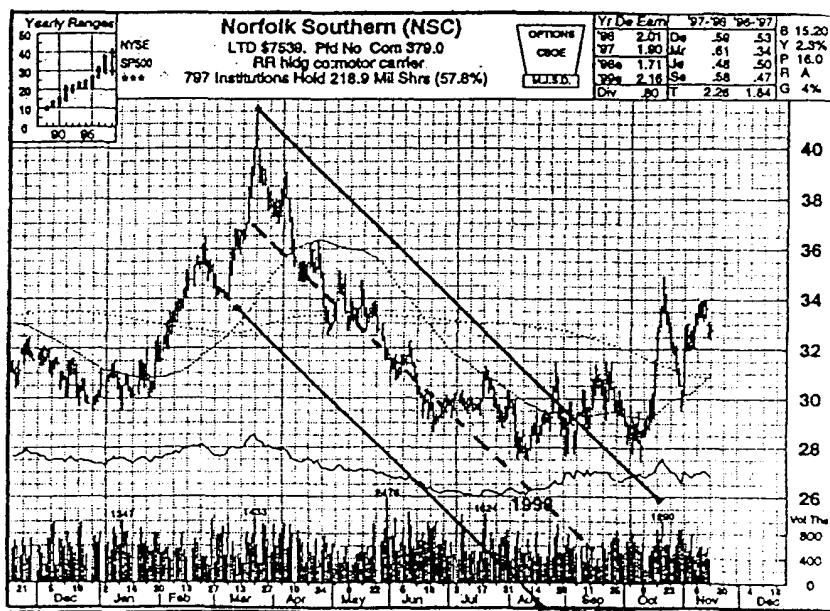
## Angles

Ninety degrees is the strongest angle, since it defines the sides of a square, and getting away from that angle means going into a new cycle and that always results in strong changes in trend. We see in Chart #43 an up and down cycle closely holding to the 90-degree angle, and once it gets away, the stock really takes off.

*Chart 43*



*Chart 44*

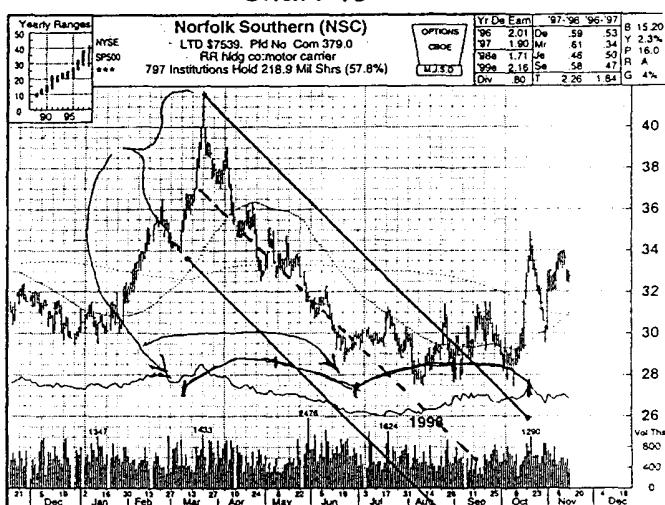


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## Angles

On long-term charts, such as 5 year weekly ones, a 90-degree angle may define a long-term bearish decline. Once the low is made and the stock starts to advance a 90-degree angle is drawn down from the last, final high to the low and then turned 90 degrees back up. As long as the stock follows that 90-degree up angle, the new bull trend will be in effect. This angle is not drawn on Chart #43, but the impulse wave just starting at the right can easily be seen to be just a little stronger than a 90-degree right angle up from the axis of the decline line.

*Chart 45*



There are several useful techniques utilized with angles, and apart from the simple trendline, the parallel channel is the next basic technique to be discussed. Parallel channels are used to validate the primary trendline, since many times the trendline is drawn incorrectly and there can be price dropouts at times that mess up the actual placement of the trendline. A parallel channel will correct for this and also define the next larger fluctuation about the primary trend. Three trendlines are drawn in Chart #44. These are of the simple 45-degree variety starting with the high as is normally drawn. It has been my experience that all parallel channels arise from the last leg up or down, so I have drawn another 45-degree angle down from the bottom of the last leg up to the high. The dotted line in the

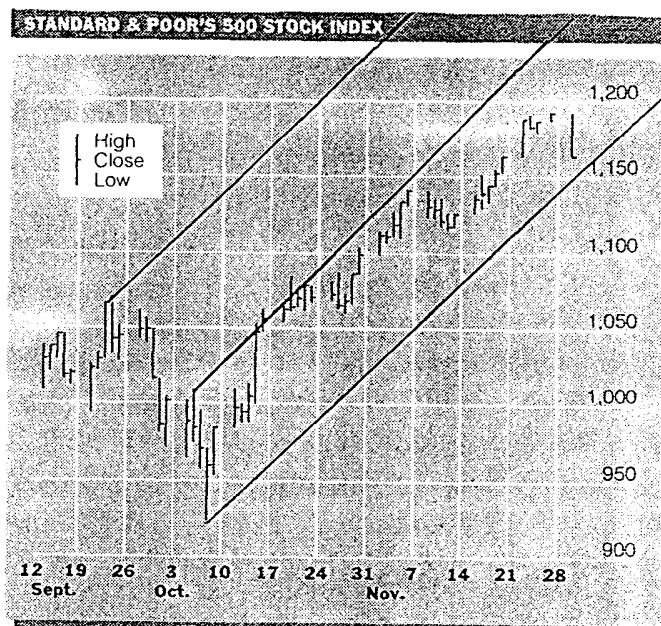
## Angles

middle is a visually spotted midpoint that seems to fit the data. This chart is not exact, but is only shown to demonstrate a simple approach to very quickly finding trendlines, and the "width" of those parallel channels can then be "offset" to the right to find future movements. The same technique is used from a low with the angles drawn up.

One important consideration overlooked by most technicians when discussing parallel channels is that the "width" of the channel when measured and turned perfectly horizontal becomes a cycle finder. That is, the width of the channel is the length of the common cycles at work in the stock, and if that width is tick marked off along the time scale from the highs and lows, you will get future market turns. Chart #45 shows I have taken the prior channel width in vertical measurement and laid it out horizontally, and you can see that the first two lows came in on schedule from the horizontal placement of the low to high range. A whole book could be written on this subject and how time cycles create angles, but you can see it for yourself if you study the technique.

In Chart #46, the parallel channel is drawn up from a low. Note how the high to low swings just before the final low set up the channels for the 45-degree angle. This will

Chart 46



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## *Angles*

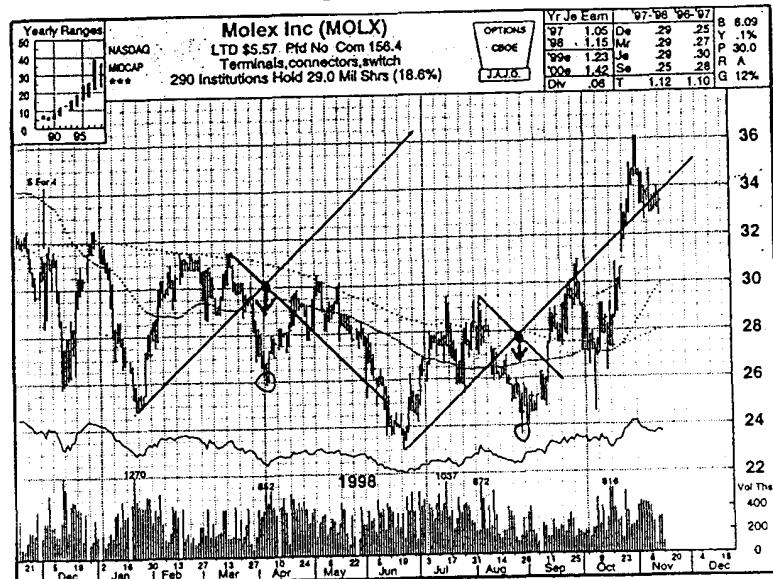
almost always give a better first attempt at finding a true trend than just connecting the lows with a trendline. As long as the high to low swing used to draw the starting trendlines approximate normal “measured moves,” the channels will be properly drawn. Should prices penetrate these angles, another set can be drawn parallel to the first set offset by the same width.

Apart from trendlines and parallel trendlines, the next simple technique for trading is to find intersecting angles that will define time periods where great change is expected to occur. The basic Gann “squareout” is two angles coming down from a top and up from a bottom, and intersecting at a point which obviously is in proportion or harmony with both the top and the bottom. Since the 45-degree is the strong diagonal, the 45-degree crossover is the most common and easiest to apply. We see 45-degree angles from two highs and two lows intersecting in Chart #47, and at those intersection points a change in trend was observed in the price action of the stock. In these two cases the stock was going down for a few weeks when the angles intersected and then went up for several weeks, but in many cases you won’t know what the new trend will be until after the fact, but you will be able to tell very quickly if you watch and wait. If you have charts with large fluctuations between highs and lows, you can set up a “tickler file” of these squareouts weeks ahead of time and wait for these changes to trade the stock. Keep in mind that we never use just one technique. We would look for a signal reversal bar for the buy or sell signal, a trendline break, or a time count, or measured move to coincide with the squareout before we actually did anything about it, but this technique would have prepared us for something on or about the date the angles intersected. Long-term trends are often difficult to reverse, so our squareouts may only last a few days and a few points before reversing again and following the main trend. It is for that reason we need big squareouts and long time counts to get a more reliable change in trend. For day traders, however, small scalps can be made

## Angles

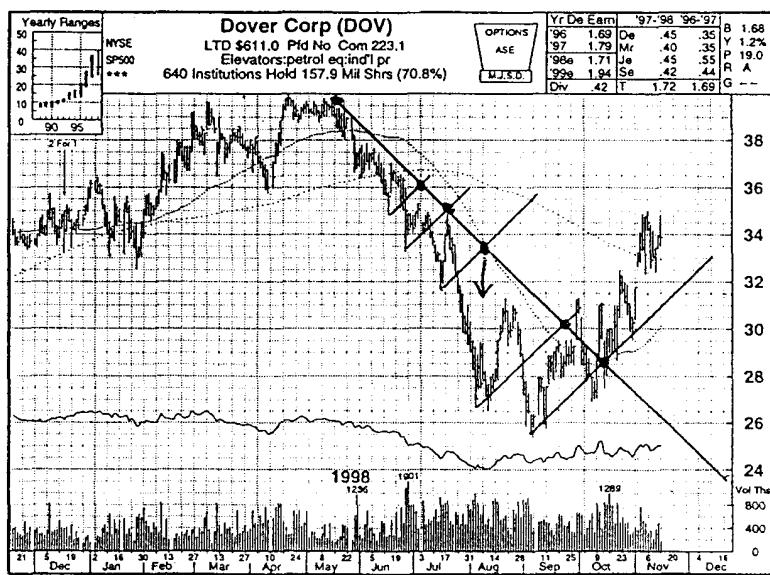
almost every day with small squareouts drawn with a long-term line.

*Chart 47*



We see a long-term downtrend in Chart #48 and some small daily lines drawn up from minor lows to the major downtrend line. Many times you will find good symmetries, where each intersection change will result in the same direction, as in the first two intersections shown, that created tops and then the third making a big bottom. Just remember

*Chart 48*



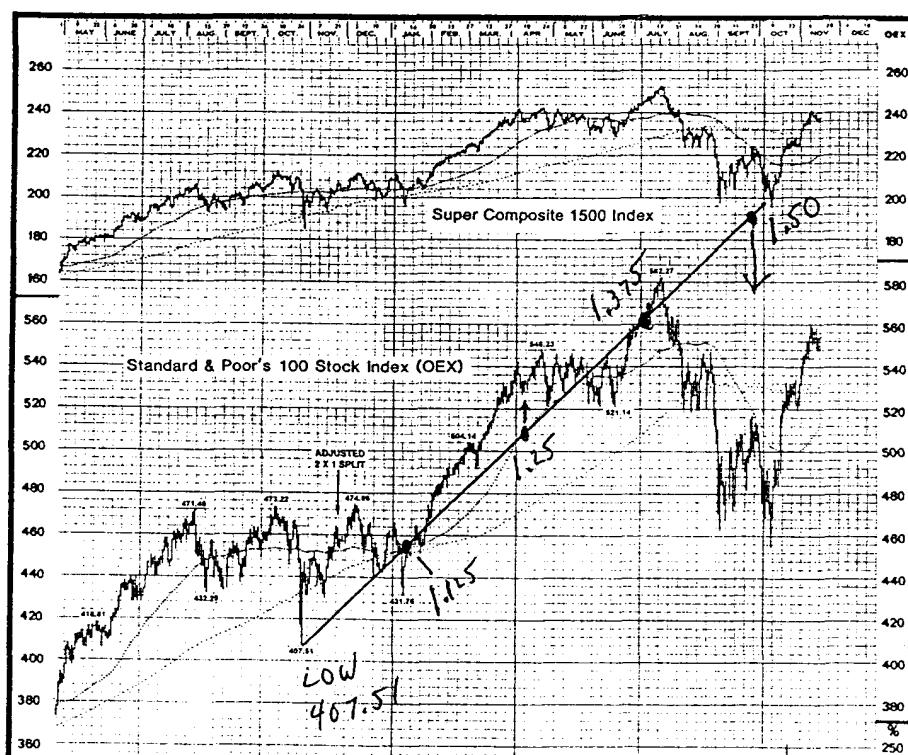
## Angles

the rule that the direction the stock was traveling in will reverse, so if the price gets “sucked up” to the intersection then it will subsequently decline, and if it plunges down into the point, it will subsequently go up.

It is important to remember the significance of these squareouts. The primary long-term trendline coming down from the top on this chart is the side of a big square, and the size of that big square won't be known until the bottom is made by a time cycle coming out. Along the way the smaller lines are creating subdivisions within the big square, and these subdivisions are harmonics of the larger square. It stands to reason, therefore, that we can guess the size of the large square by keeping track of the size of the smaller units. This is simple but unnecessary since we will know the square is finished as soon as the price breaks out above the trendline. From each point on the angle drawn, the time and price harmonics are in tune with each other and change is possible. This sets up an easy technique to find all major harmonics of the price, and this is also a major reason why these angles, particularly the 45 degree ones, are known as “timing lines.” The implication is as follows: when a 45 degree timing line coming down from a high or up from a low intersects price harmonics of the all time high or low, there should be a change in trend. In other words, if the high was \$100 and the timing line was coming down, we would see major turns when that angle intersected \$75, \$50, \$25, and when it hits \$0.0 (zero). At these prices the one to one correspondence of the angle and price means the time cycle is also at a harmonic and will turn at those points. This is where the timing name comes from. Long-term charts can have an angle that slowly intersects each eighth of the range over several months or years and each and every one will come out. It is then a simple process of continuing trendlines on your charts for years into the future, keeping track of the price levels hit that are harmonics of the all time high or low. Chart #49 of the OEX shows a timing line of 45 degrees drawn up from a low of 407.51. As the line intersects 1/

8 harmonics of the original price, I have placed a dot on the line so you can see that a cycle turn was made during that specific time period. The first 1.125 mark shows a low, the next the beginning of the top, the next the high and the 1.50 last point, the next big low. These turns aren't as precise as they could be, since I used a "spike" low that may be inaccurate and there could be possible "slippage" in the cycle length because of that spike. Better lines come from closing levels or nice clean bottoms, but I chose this so that you can see

*Chart 49*

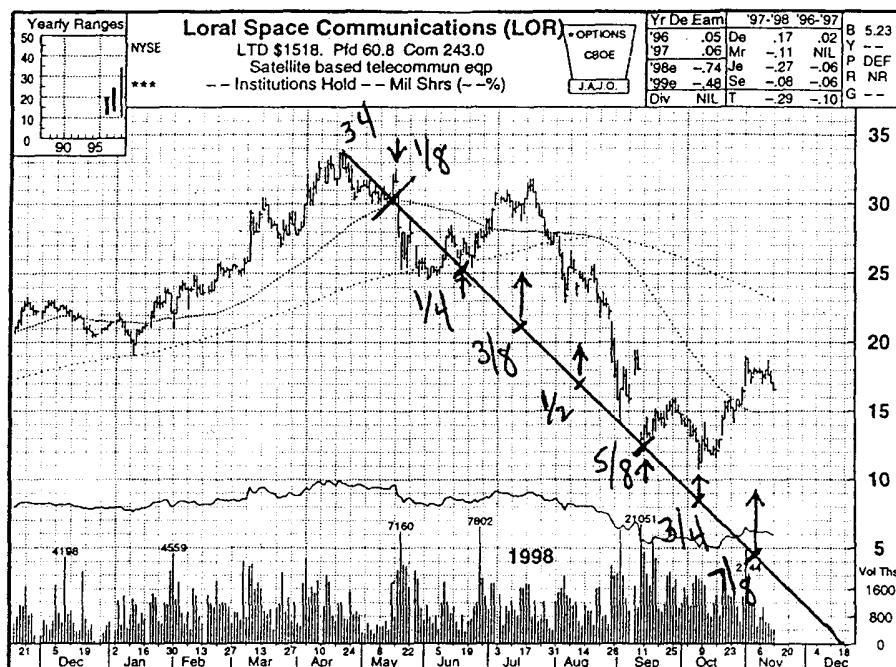


that it works on anything. Please note that in using this technique the trendline itself has nothing to do with prices per se. It is the intersection of the price scale (not actual "live" price) that is used. When the line crosses a price scale harmonic we look at that *time period* to see a turn in the actual price, and we then make our trade.

## Angles

Chart #50 shows a timing angle down from a high, with the high price divided by eighths to get price harmonics and slashes at each eighth down. You can see how the price action changed around each of these turning points. Obviously, for important turns we would use major harmonics like 50% or 100% and also use them on long-term charts running over many years to see really great trades, but even in minor hourly charts the turns will show up. The method of using complete squares, as shown in the very first examples of drawing a complete "box" around a price and watching when the square was complete, gives rise to another even more powerful technique, which I call the "zero

*Chart 50*



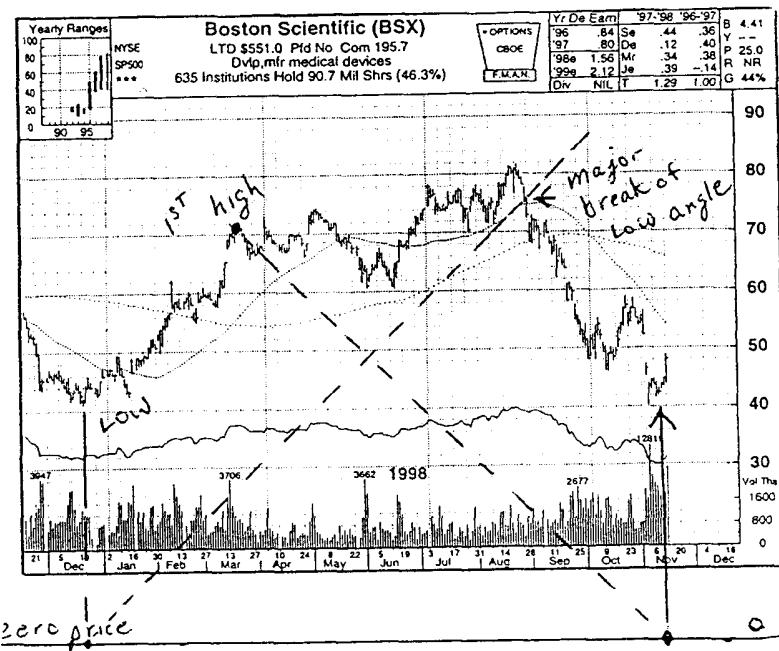
angle." To make use of it you must first adjust the price scale on whatever chart you use to find out where the actual zero price is located. On most charts the scale starts at a number

## Angles

like \$30 or \$50 if the stock is high priced and zero would be several inches down off the bottom of the chart. You need to use a ruler or compass to measure the same scale on the chart and mark it down to zero. For instance, if a chart starts at \$30 and goes up through \$60, I'd measure from 30 to 60 and take that measurement and mark it down below 30 to find the zero point. Any angles now drawn up from zero, or down from any high or low on the chart down to zero, will now have complete harmonic squareouts with their origin points. If you draw a line from a low at \$30 to zero, it implies a square of 30 has been complete. The same holds for any price high or low down to zero. Most importantly, the real power of this technique is to draw lines up from zero under each and every high and low, and as those lines rise they will support the price structure when the price first hits those lines. This is the only known technique that will stop a decline dead in its tracks and can't be seen by anyone who doesn't know the method.

In Chart #51 we see an angle coming up from the true zero price and starting under the major low for the year. This is a 45-degree timing line, and since it is coming up from a

*Chart 51*



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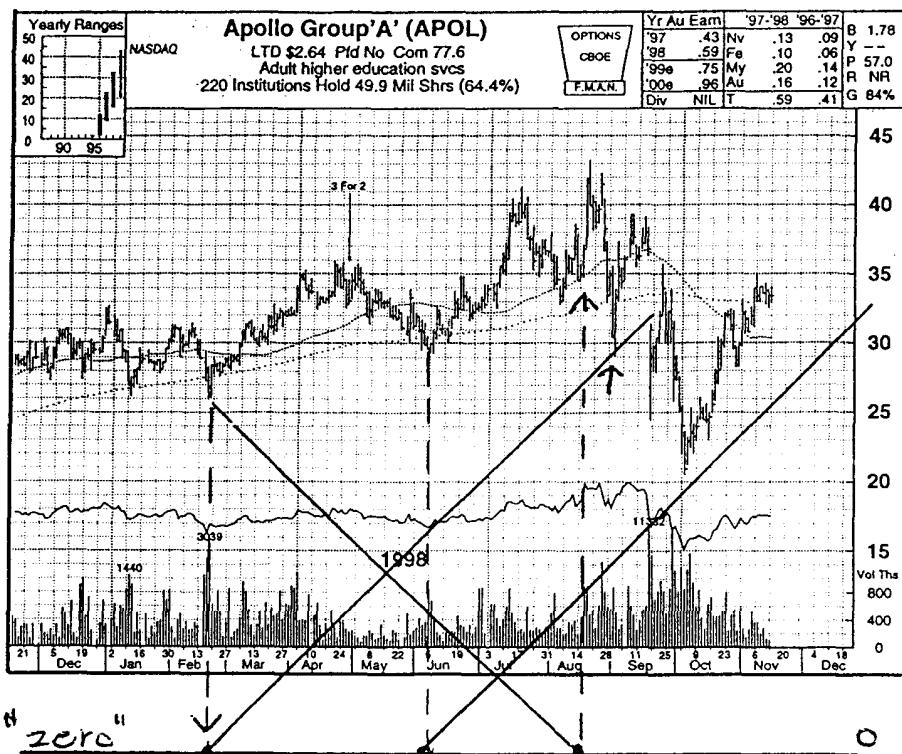
## *Angles*

low, it signifies major support and will not break until the uptrend started at that low is over. As shown, the first time the angle was hit, the price shot up to the final high, and the next time it broke the angle, it started the major collapse of the year! The second line is drawn down from the first top and as it reaches the zero price, a major low is recorded in the price of the stock! If you will remember back to my earlier statements that all fluctuations in stock prices are nothing more than cycle highs and lows squaring out each day, you will see this principle graphically demonstrated in this chart. Not shown, but clearly implicated, is the use of other than 45-degree angles (such as 30 degrees, 60 degrees, etc.). Each high or low will spin out turns from each consecutive angle drawn down to zero. Another experiment is to run a 45-degree plastic triangle across the bottom zero angle and observe that as you move that rising angle along the bottom, each bottom is caught by a trendline coming up from zero and starting at a high or low earlier in the year.

Chart #52 shows another example of an angle coming down from a low and a zero angle going up from the same low. Note that the same low generated two different outcomes! The time cycle turn hit when the angle went down to zero and the price shot up for the biggest daily move of the year and the final high, while the angle coming up from zero caught the subsequent low after the top was in and the collapse started. The cause of this collapse was the price adjustment. The angle going up went past the original low price before the actual price hit the angle. At that point, time and price still squared out and so were in equilibrium, but the timing angle had reached a higher level than the starting price. You'll see the difference if you draw a horizontal line across from that first low to the rising angle. At that point a perfect square is formed and the angle and the zero point are the same. By extending the timing angle up we simply continue the correspondence of time and price. Remember that this is why long-term trendlines work – they catch up with price and at that time the time cycle from the origin is at a one to one correspondence and

## Angles

*Chart 52*



a change can occur. If you take the time to practice with this technique you will become rich!

Before we leave this section on angles I should also state some simple rules for using angles. The first axiom is that when using geometric angles (like 1x1, 1x2, 1x4, etc.), if a price fails at one angle *it will always drop down or go up to the next angle* in the series. Geometric angles don't just break and then recover. If the trendline breaks, the price must go to the next angle in the series.

## Angles

Chart 53

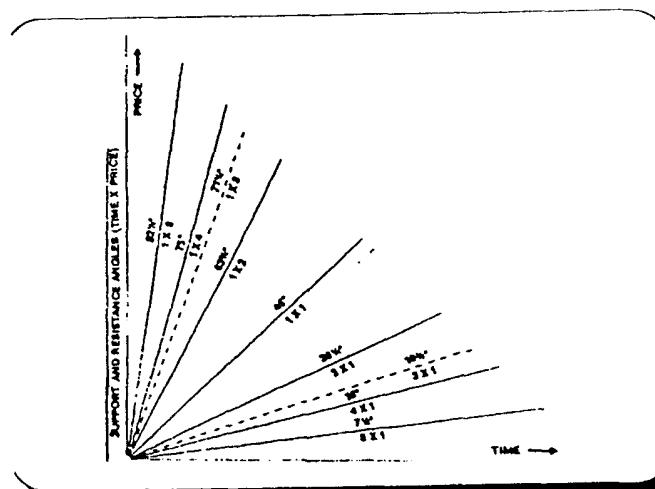
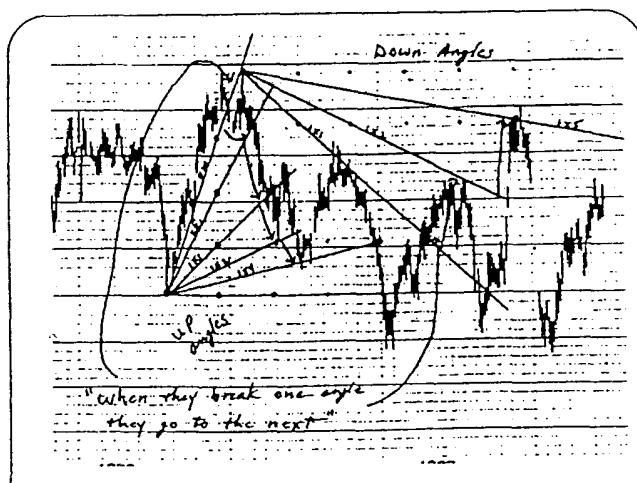


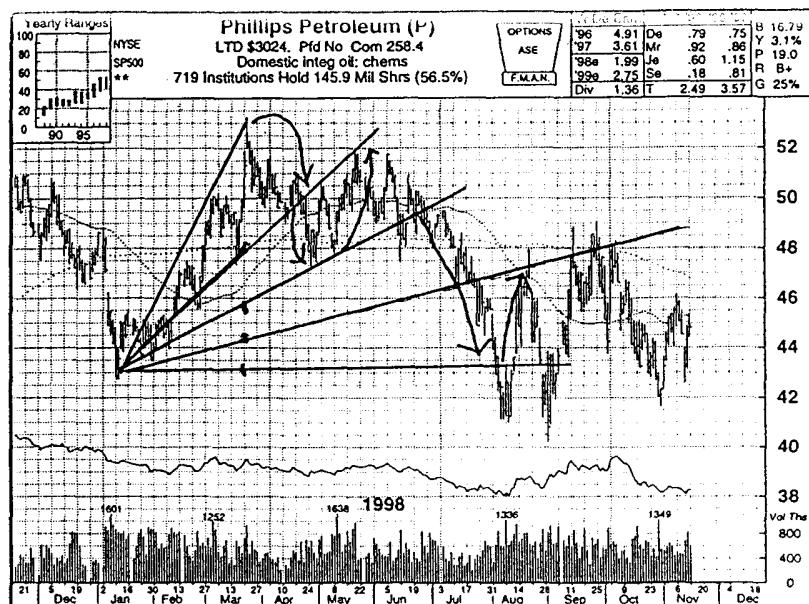
Chart 54



Charts #53 and #54 show what happens when prices break geometric angles and they go to the next angle. They usually bounce off that angle and rally back to the prior angle where they can be shorted for a decline back down. Remember, that when using these types of angles the steepest ones are the most powerful and show big price vertical moves for good trades. Weaker angles show less movement and usually indicate a coming change in trend.

## Angles

*Chart 55*

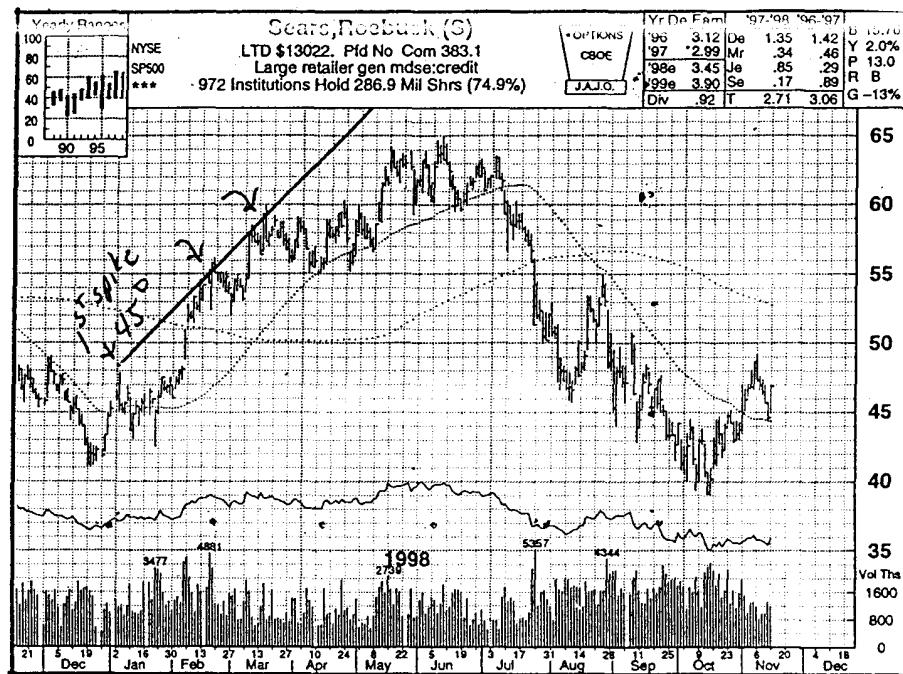


The next rule in using geometric angles is that the emotionalism of an advance or decline doesn't change. Thus, if you apply an angle to a spike low, the first in a series of lows, and draw that angle going down, future spike lows will not go lower than that angle. Conversely, if you draw an angle going up from a spike high, a future spike high will top out on that same angle. These first two rules are seen on the following charts.

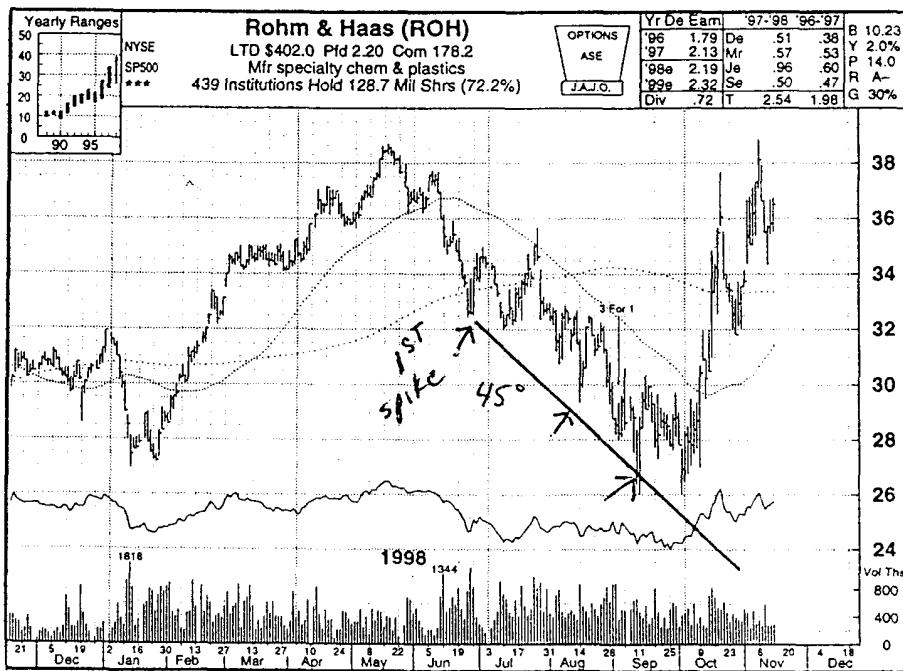
We see a 45-degree angle in Chart #56 going up from the first spike high in a new impulse wave and which will limit and define the extent of the coming move. In Chart #57 we see the downward spike angle defining the extremes of emotionalism found during selling panics.

## Angles

*Chart 56*



*Chart 57*

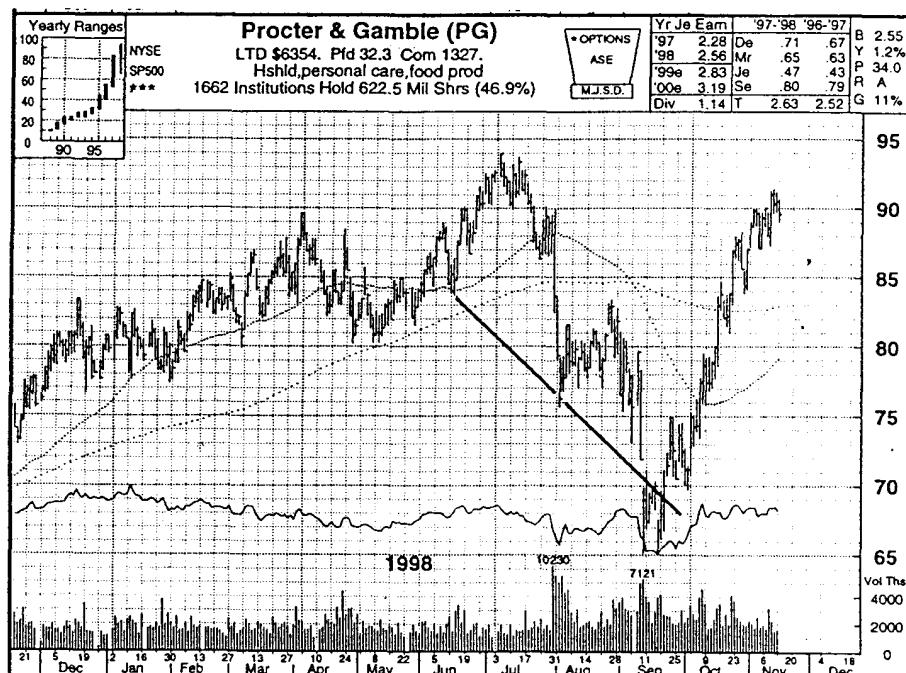


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## Angles

Chart #58 is the same technique that defines a downward emotional extreme, but note that it starts from the last major low *before* the top price, as compared with the former chart that draws the angle after the first couple of lows are defined. Actually, this kind of angle from the last major low before the final top is more common, so you should always try it first. Finding the right angle is the key. Usually a 45-degree angle will do, but in very strong collapses a 4x1, 8x1, or 30 degree will often show up. The rule is simply that emotional intensity doesn't change over time, so if we measure it at one point with an angle, it won't deviate from that angle at the next point.

*Chart 58*

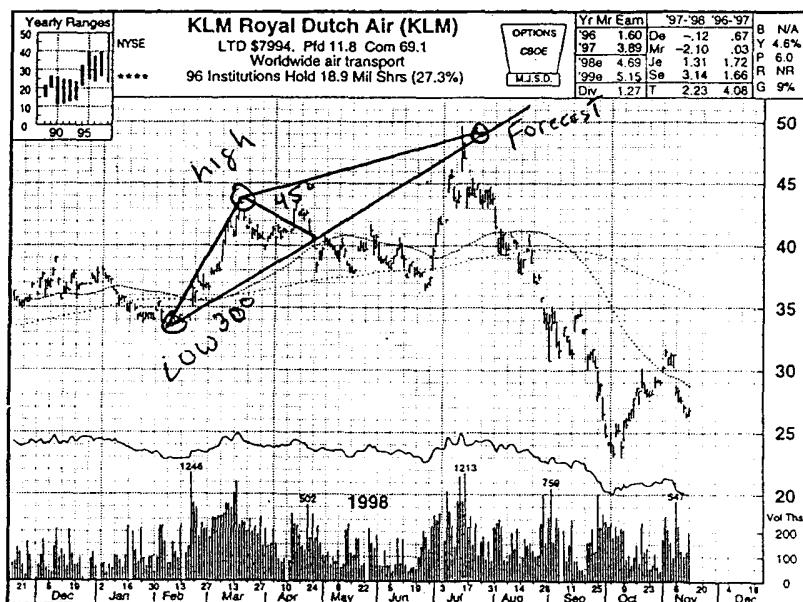


The last principle states that different angles can be used to forecast price target areas. This last idea is what we started the section with, the Pythagorean idea that the lift in the angle describing stock prices would indicate when the move would exhaust itself.

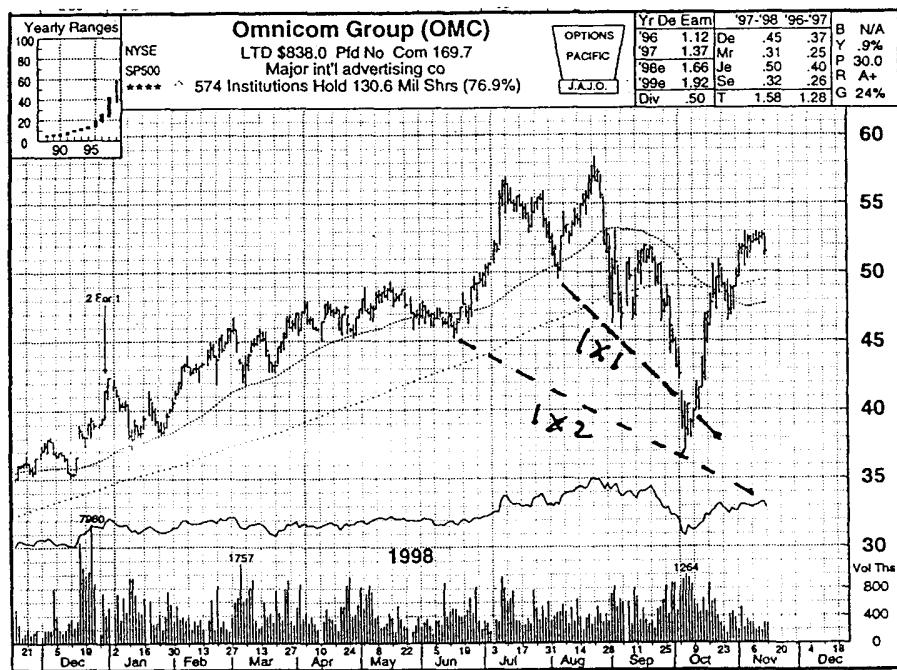
## Angles

The technique utilizes two differing angles from different tops or bottoms, and when they cross in the future the price will terminate at that intersection. These ideas are demonstrated in Charts #59 and #60.

*Chart 59*



*Chart 60*

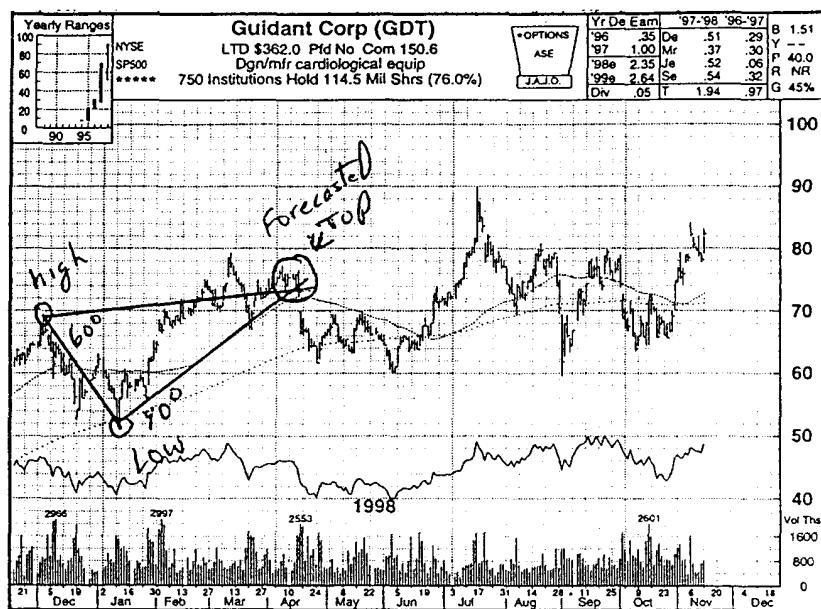


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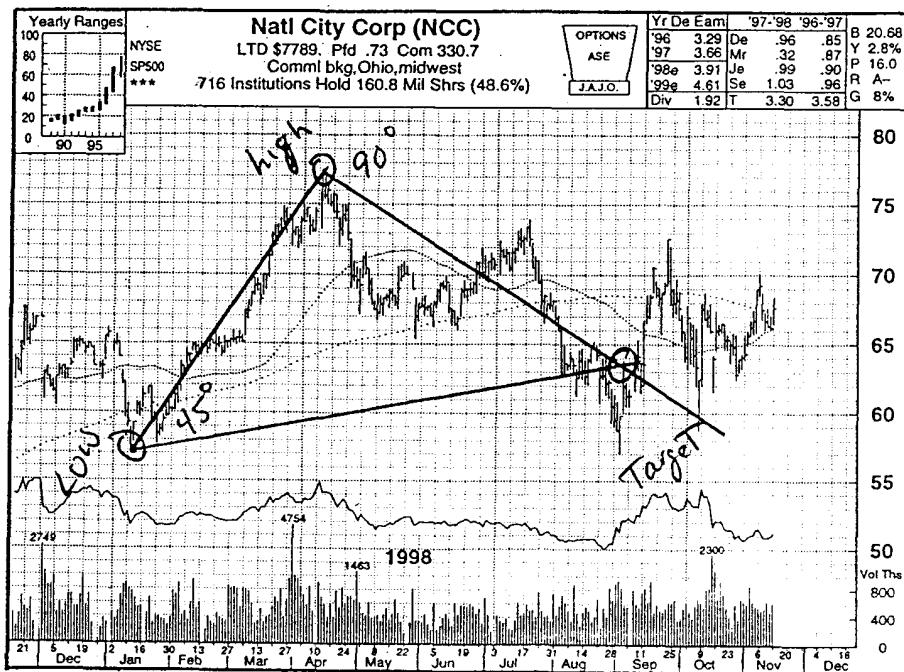
## Angles

Most angle methods are really a form of triangulation and the target area is defined by the intersection of the two differing angles. Gann angles such as 1x2, and 2x1 are often used as are 30 degree, 45, and 60-degree crossovers, but I find that axis adjusted 90 and 45-

*Chart 61*



*Chart 62*



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## *Angles*

degree triangulations work the best. You start by drawing a straight-line axis from a major low to high, or high to low, and that will be the side of the triangle. Standard angles like 90, 45, 30, and 60 are usually then applied to find the appropriate target. Gann's 1x1, 2x1 and 4x1 angles can also be used. Sometimes, however, you need to continue a second triangle to get to the final resolution (see Chart #60). Here again, other techniques are used in combination such as past cycle patterns, measured moves and just plain common sense. When the forecast is right there are usually several ways of doing the projection that all point to the same answer, so don't give up until you've found at least a few of them.

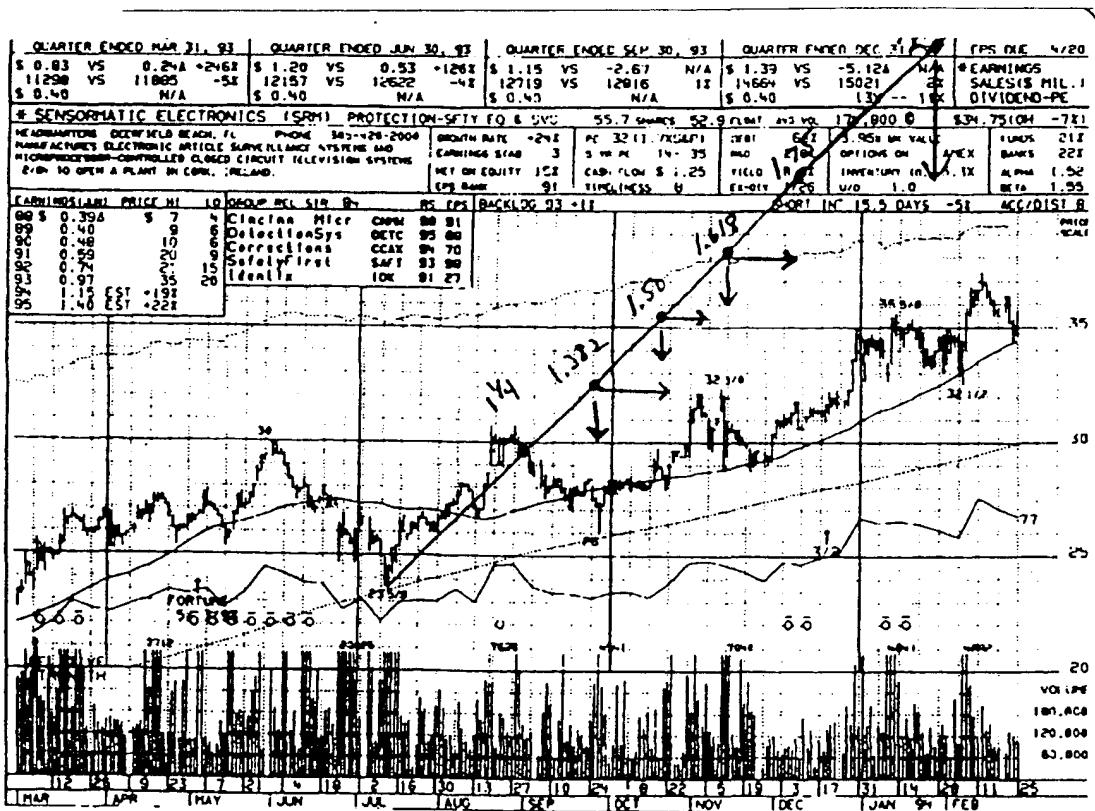
Although Charts #61 and #62 may look like the projection is made well into the move, as you study cycles you will learn that past cycles repeat similar price patterns. When you make these kinds of projections you will usually already have a prior pattern to work with that shows an advance or decline of "x" percentage over so many weeks. It is then a simple task to find an appropriate angle that gives the approximate same results and use that for the forecast.

On the following pages are some additional charts to study for using angles to determine cycle changes and price forecasts.

## Angles

Chart #63 is an example of a timing angle going up from a low of \$23 5/8, and as the angle intersects harmonics of that price, such as 1 1/4, 1.382, 1 1/2, 1.618, 1 3/4 etc., we see trend changes at that moment in time but we also find horizontal support and resistance levels. This clearly shows that all points are harmonically related.

*Chart 63*

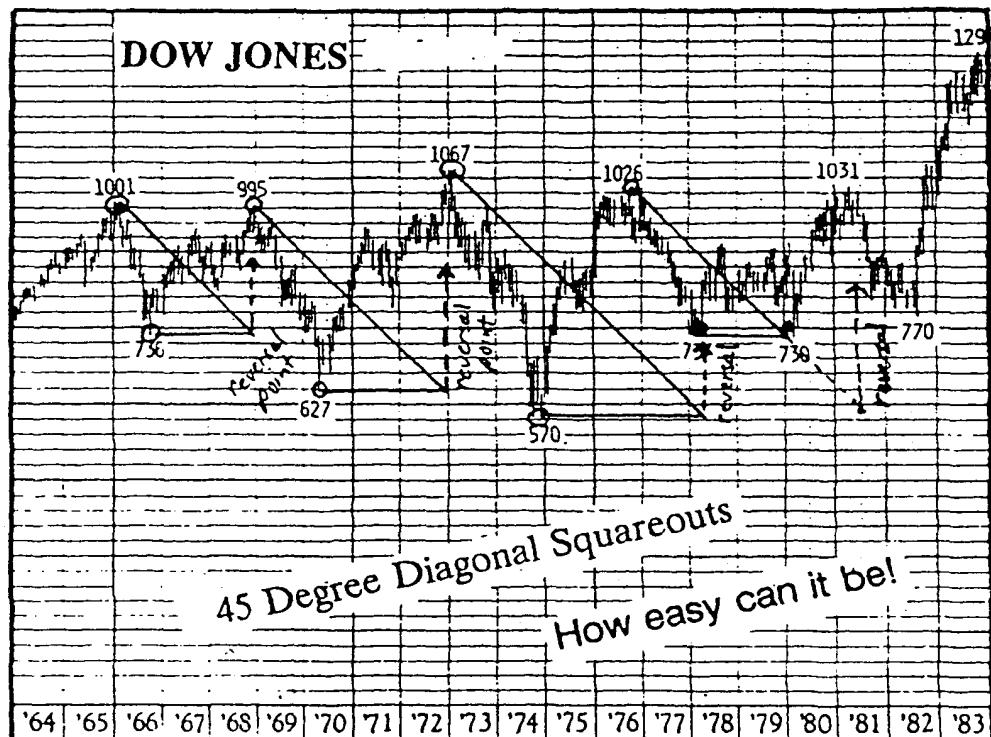


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## Angles

Chart #64 is a monthly chart showing a simple 45-degree trendline squaring out a top with a prior bottom and at that point another high or low is created. Since the scale of the chart is so large (monthly), the changes in trend are significant and the squareouts only occur every several years.

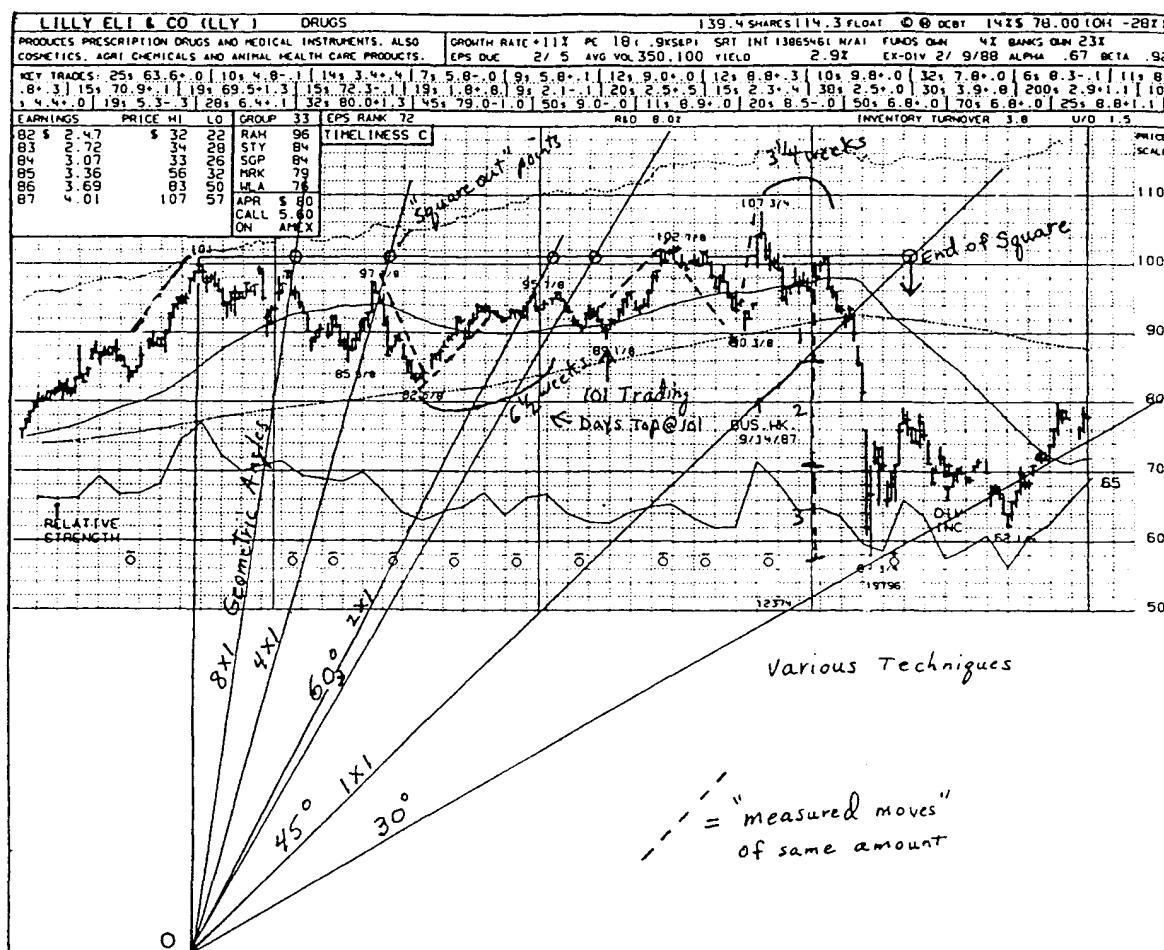
Chart 64



## Angles

Chart #65 shows geometric angles coming up from zero intersecting the first high, along with some other techniques.

*Chart 65*



## Angles

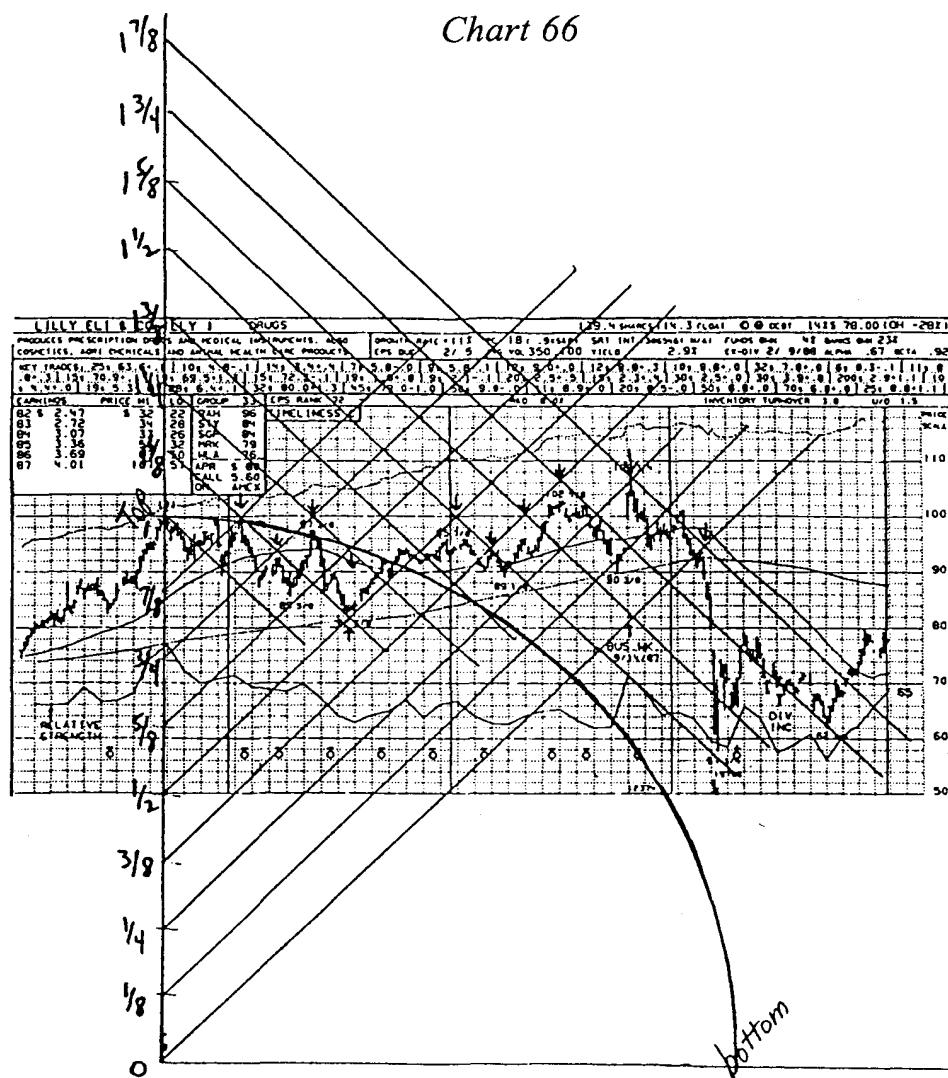
### SECRET OF FRACTIONAL HARMONIC TRENDLINES

*(Gann's secret of why Time and Price are the same thing!)*

This chart clearly demonstrates better than words the helplessness of the human condition and why people lose in the markets – reality is completely different than perceptions – i.e. news items, brokerage recommendations, etc. have no bearing on stock price movement.

See how the top near \$100 spins out support and resistance angles at 1/8 increments. The intersections of these angles (down and up) give rise to all reversals in the price pattern and cannot possibly be related to random news or recommendations.

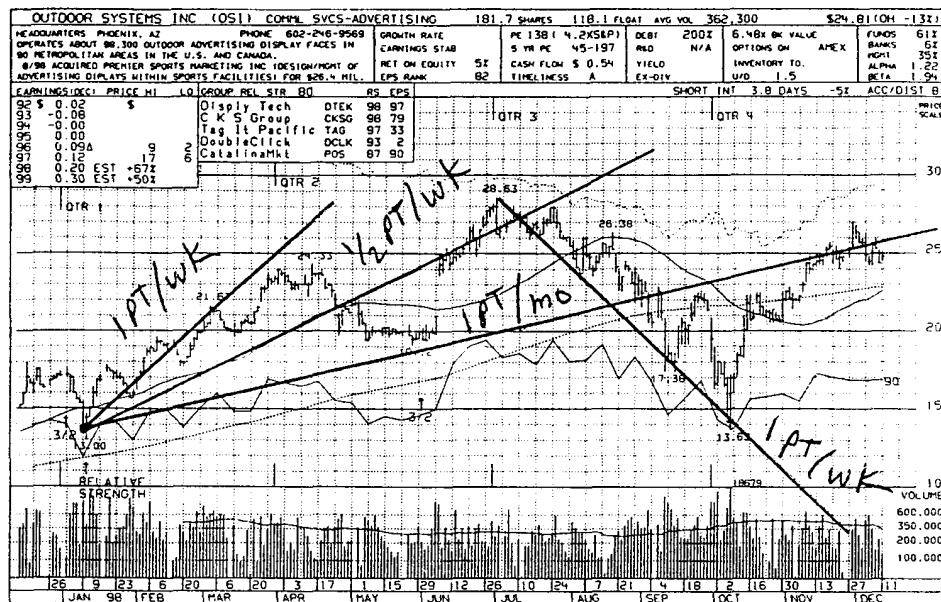
Human beings are controlled by mathematical cyclic emotional behavior – not rational choices!



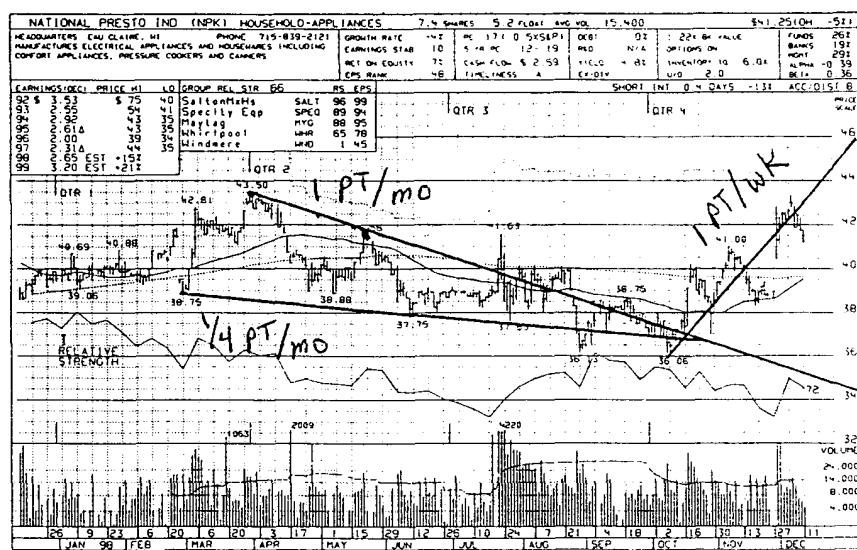
## Angles

We see in Charts #67 and #68 the traditional use of "Gann Angles" timing lines of so many points per day, week, or month. They keep track of the one to one correspondence between any high or low and the passage of time. When the price hits these angles, changes in trend usually occur, but they also usually require a time cycle coming out, or a planetary event at the time the price hits the angle. These are very good for long-term charts over several months, so that you can clearly see the true long-term trend.

**Chart 67**



**Chart 68**



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## Chapter 7

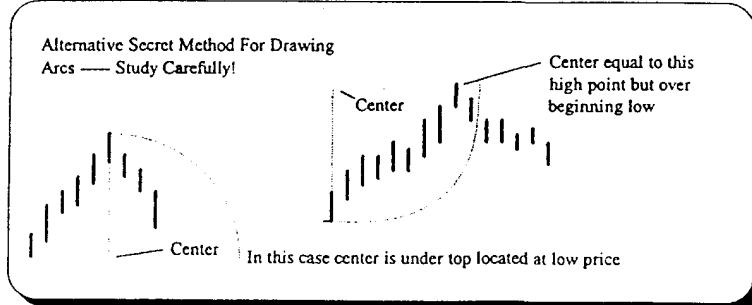
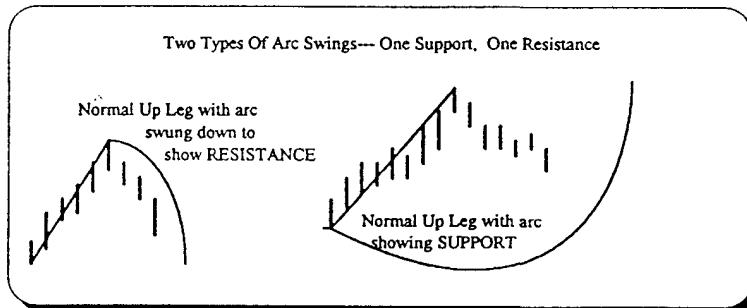
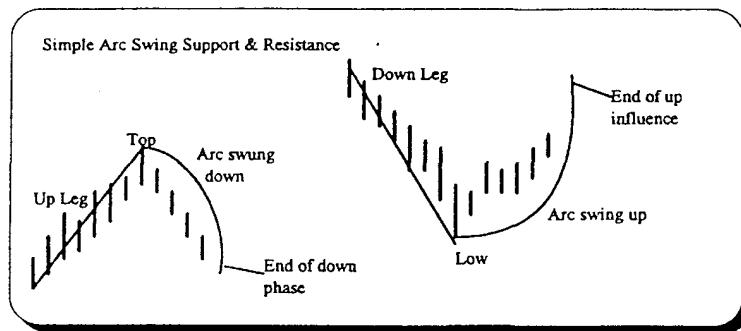
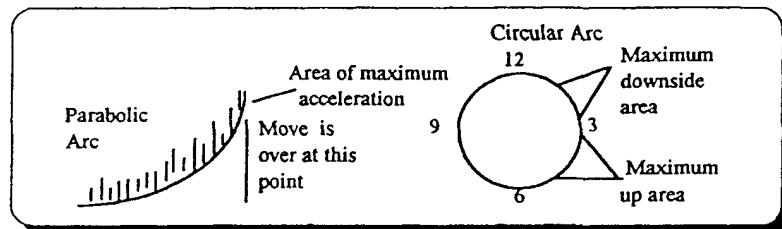
### **ARCS**

Angles are straight lines, like trendlines and timing lines, that help us keep track of time passage and price movement. They are like moving averages, but they are constant. Arcs are like trendlines, but are circular and *describe rates of change* that are increasing or diminishing. Parabolas are types of arcs as are various semi-circles and even full circles, and all of these can help us better analyze stock prices and time cyclic change. If you remember the last section on angles, you will recall that angles down to the zero price level represent culminations, or full squareouts of a price. They are used to keep track of the time and price movement since that high or low last occurred. Circular arcs do the same thing with more precision and can give us more information. An arc is nothing but a radius from a low to a high that is swung down forming a semi-circle. If a stock hits a high and goes down, we can draw a trendline down off that high and see if the price hits it, or wait for the line to get to zero. An arc can visually show us at each and every instant how the downward influence is being manifested and how much more time to a low. Arcs are the only method that can virtually guarantee that a time period will be a high or a low. Forecasting turns through squareouts and zero angles is easy, but only arcs will predict the outcome of a squareout. Arcs describe the human emotions of greed and fear through a visual medium. As an arc falls from a high to maximum straight down, all selling that will be done is being done. The acceleration of the decline along an arc is too powerful for people to resist and fear forces them to sell. Similarly when prices start to rise, they creep

## Arcs

at first, and then later move more quickly, until at the last phase there is an acceleration so strong that anyone who wants to invest will be forced in and will be invested. The areas of maximum fear and greed are the vertical portions of the arc's semi-circle and this can be

*Figure 3*



## *Arcs*

represented as sections on a clock. The downward cycle takes place from 12 to 3, while the upward would be backwards from 6 back up to 3 as shown in Figure #3. These areas, or sections, of each arc demonstrate increasing rates of acceleration, and when the vertical section is hit, maximum participation is assured. The real beauty of arcs, however, is that they predict highs and lows with very reliable probabilities. An arc crashing down will result in a low when it goes maximum vertical, and an arc going up will produce a high as it maxes out.

The previous are simple representations of arc influences on most price charts. The technique is to take a compass and putting the point on the low, swing an arc down from the high. This will give the downward influence and the expected time it will take to make the next low. As the arc goes vertical down prices will drop quickly. If the arc is interrupted, the stock is too strong for any kind of correction and will go higher. For the up arc put the compass point on the high and swing the arc up from the low. This creates an arc providing support and tells us that when the arc goes maximum vertical, a top will be reached. If the arc is penetrated to the downside then the stock is very weak and a new lower low is expected. Remember that in using any technique we want to verify the change in trend, so that if an arc goes maximum, predicting a high or low, we wait to see the signal reversal bar to get the technical buy or sell before we trade. It's also better if a time cycle count has come out, a trendline coincides with the arc, or a known support or resistance point is reached at the same time the arc maxes out.

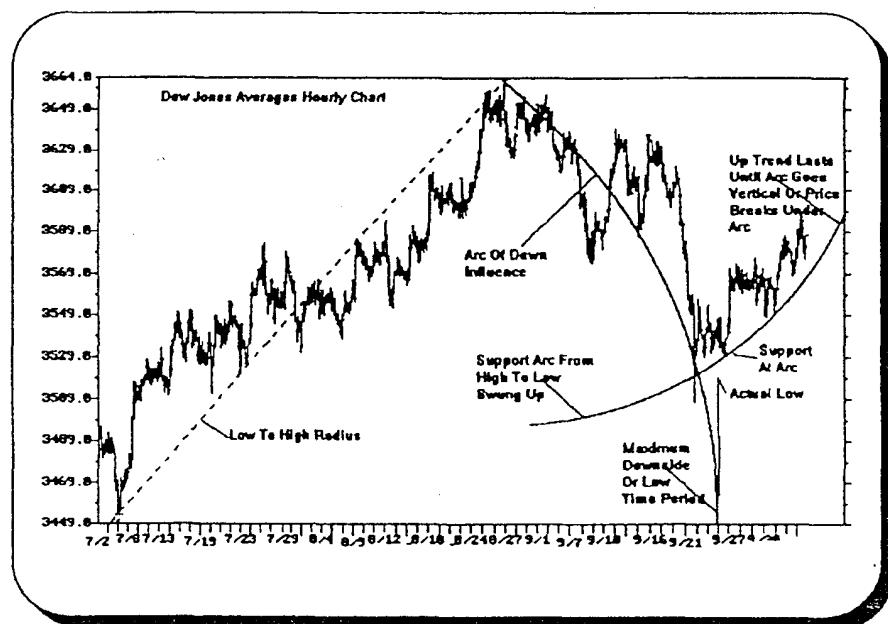
If you remember our theory that each and every point on a trendline is in proportion to a prior high or low and the passage of time, you will understand why arcs work. For instance, most technicians would look at a drop of \$10 in a stock and assume that a rally back to half of that, or \$5, would meet resistance at the midpoint. The fallacy here is that the midpoint is half the price, but it says nothing about time, and we know from our squareout theory that both time and price are the same thing. In other words, a stock can

## Arcs

go from \$50 to \$100 for a double and meet heavy resistance, but what about a stock that goes from \$50 to \$60 but takes several months to do it? Is not the time element somehow connected with resistance? If a stock goes up along a 45-degree angle, what about a stock that goes up along a 15-degree angle?

What circular arcs do is equalize the time factor into circular measure so that at any time and price placement on the circle there is equilibrium. When the price hits an arc, whether it's up \$10 in three days, or it's up \$5 in six days, resistance is achieved. The main point is a subtle one so study it closely. If a stock rises along an arc and then breaks below it, at that very point which may be several dollars up from the actual low, the price is effectively at a new low, lower than the original one! At first this doesn't make sense, but if you understand that the arc is a radius, and that radius was stretched from the high to the low and swung up, then if that radius is exceeded (by breaking under the arc), time and

Chart 69



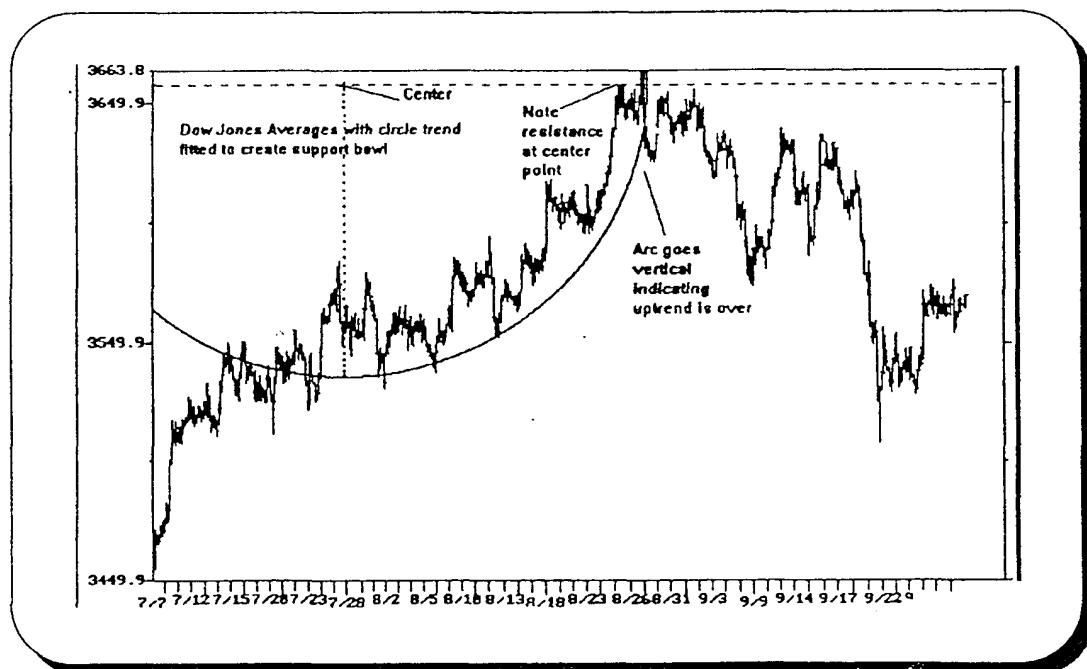
## Arcs

price movement has exceeded what it was at the actual low. The powerful implication is at that point which may be well above the actual low, we have conclusive evidence the stock is weak enough to break its time and price vector from the actual low and this implies a new low below the old just ahead! Some examples will help.

In Chart #69, the arc was swung down from a high to pinpoint the low, and then an arc was swung up from that low to show support and pinpoint a possible future top.

Chart #70 shows a trend fitted arc as opposed to a swing, but it still defines the top perfectly. Sometimes you have to trend fit arcs on long term charts to find where the origin actually is placed, but as long as the trend fitted arc hits the arc at three to five points, it will usually work. Chart #70 also shows that the "gravity center" or center of a big circle

Chart 70



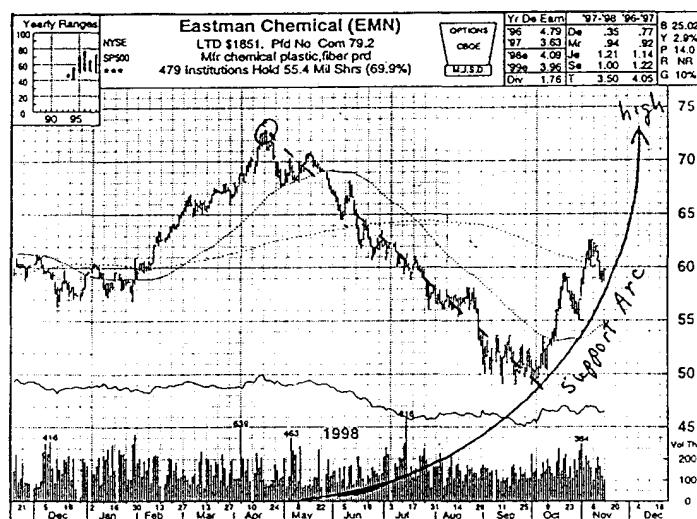
that the arc is a portion of, is the place where maximum resistance is found in terms of price. If a price exceeds the center point then it usually goes the full radius distance above that center.

## Arcs

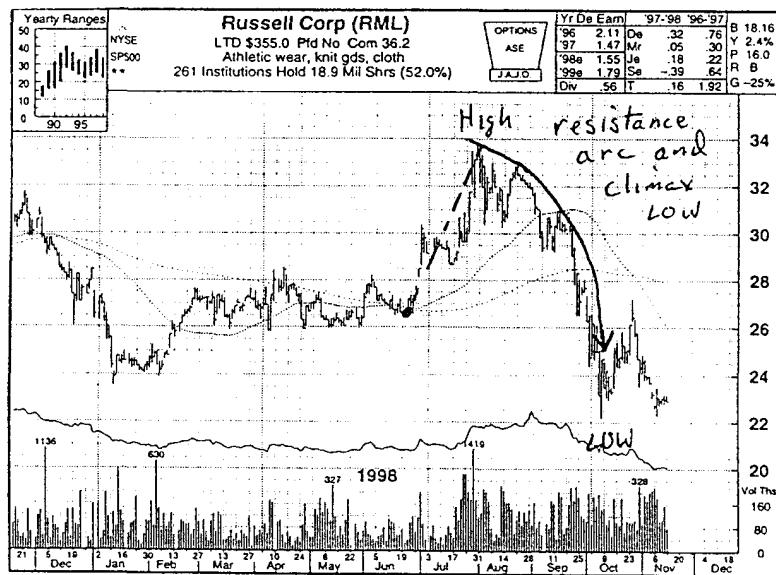
Chart #71 shows the typical support arc drawn from a high to the low and this gives us guidance during the intimidating initial rally after a big drop. The arc shows us exactly where support is and where the top is due. A break of the arc first would mean the downtrend has resumed.

In Chart #72 we see the down arc with the predicted climax low. Here, as in many violent plunges, the arc tells us when to cover shorts, but actually going long may require some common sense and momentum considerations as many "busted" stocks need time to

*Chart 71*



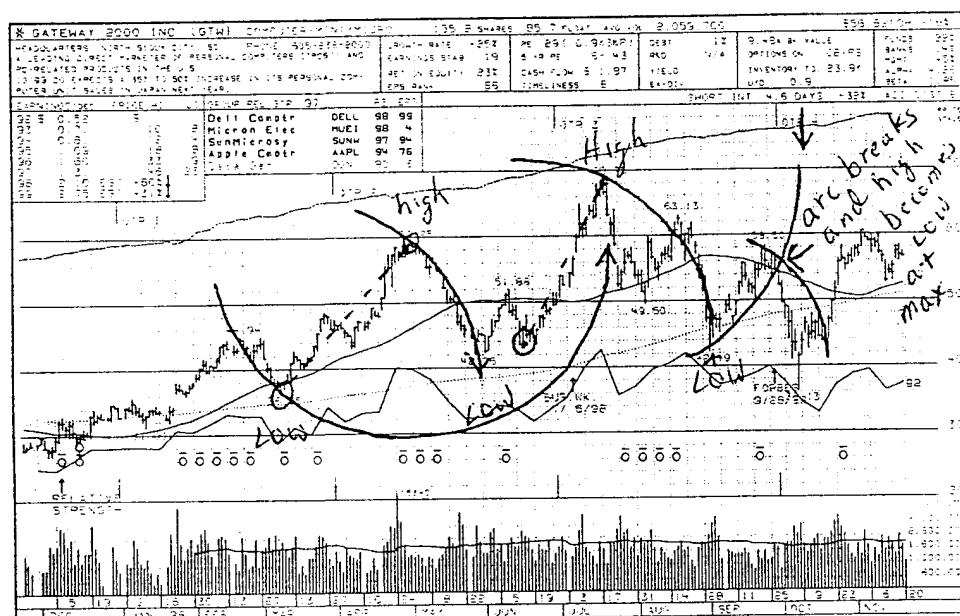
*Chart 72*



form bases, or test multiple bottoms. Support arcs can be drawn, but if there's no real upside momentum after a predicted low, it usually means a basing period and you would go to some other stock to trade for a while.

In the Gateway chart, Chart #73, we see many arcs and they all worked pretty well as to timing lows and highs and providing support or resistance. Note that on the arc from the big high, prices quickly fell then rallied only to stop dead at the downward sloping arc and then follow it down into the low. Arcs are usually good places to place stop orders for shorts or longs and just raise or lower your stop as you move along the arc up until the climax, when you exit the market.

*Chart 73*

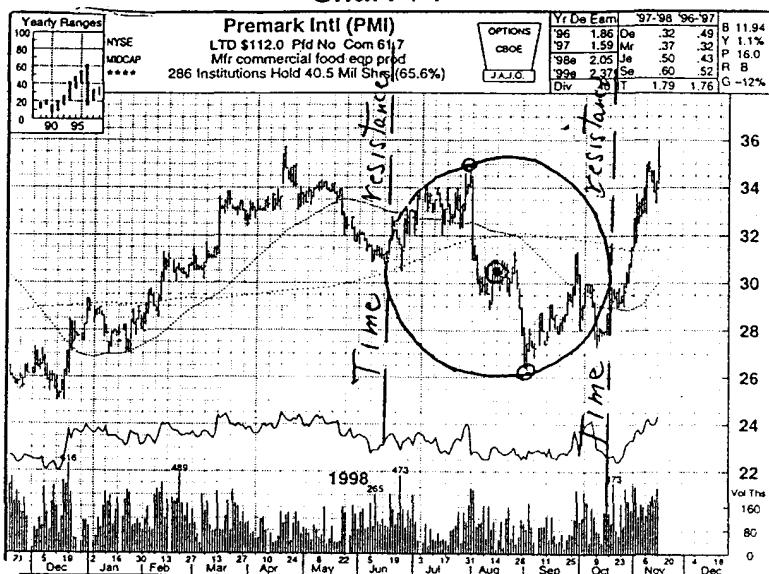


One of the greatest discoveries I have ever made was to notice that by using circular arcs you could see all the time and price equilibrium points for a stock. If at each point on a circle connecting a low to high swing, time and price are equal, then the sides and

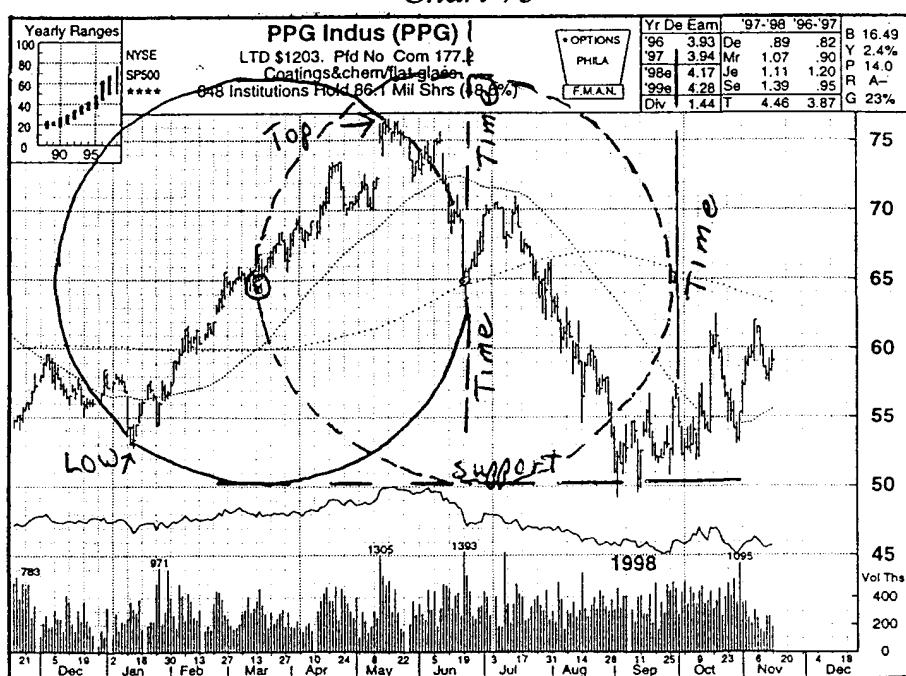
## Arcs

tops of arcs must show future support and resistance, even if that stock has never traded at those levels. Where the circle goes up or down maximally, you will find time resistance, or the ends of cycles generating changes. At the tops and bottoms of circles you will find price support and resistance. The circles can be drawn from the midpoints of a low to high swing as these next charts show, or they can be drawn from a low to high. In any event, the vertical sections of a circle show maximum momentum culminations and changes in trend,

*Chart 74*



*Chart 75*



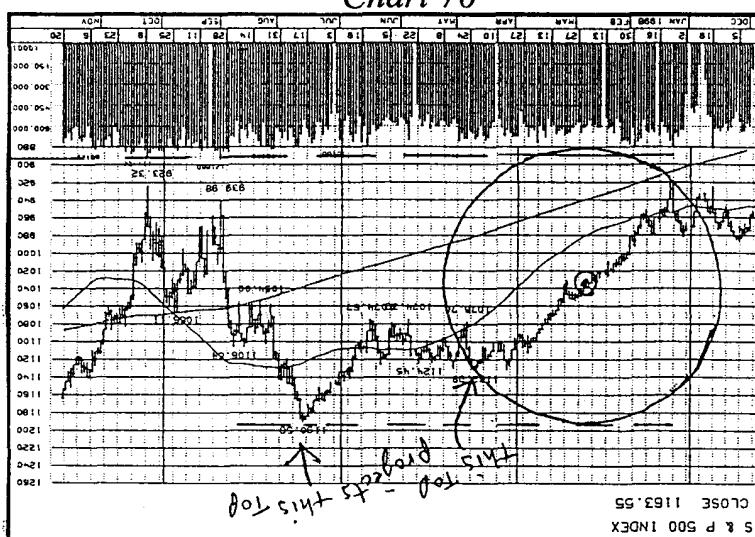
MICHAEL S. JENKINS COMPLETE STOCK MARKET TRADING AND FORECASTING COURSE

## Arcs

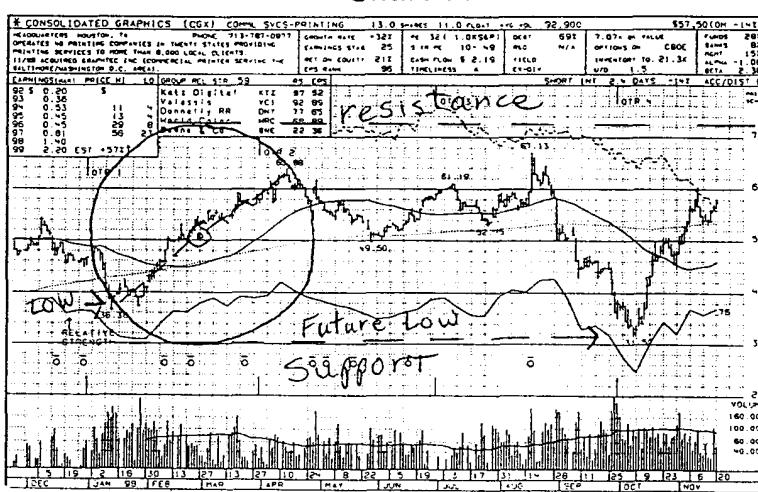
while the top and bottoms of circles show future support and resistance. Keep in mind that circles can be stacked up one upon another or sideways as a stock moves out of range. On my hourly charts I have successfully extended circles on Dow Jones swings into the future and they are accurate within an hour or two of the turn, or within 10 points of the high or low!

Time cycle culmination where the arcs went vertical is demonstrated in Charts #74 and #75. At those points the stock changed direction. Chart #75 shows two circles overlapping by extending the first circle radius to the "3 o'clock" point and drawing a second circle. Also note how the future low was exactly hit and forecasted by the higher first low.

*Chart 76*



*Chart 77*



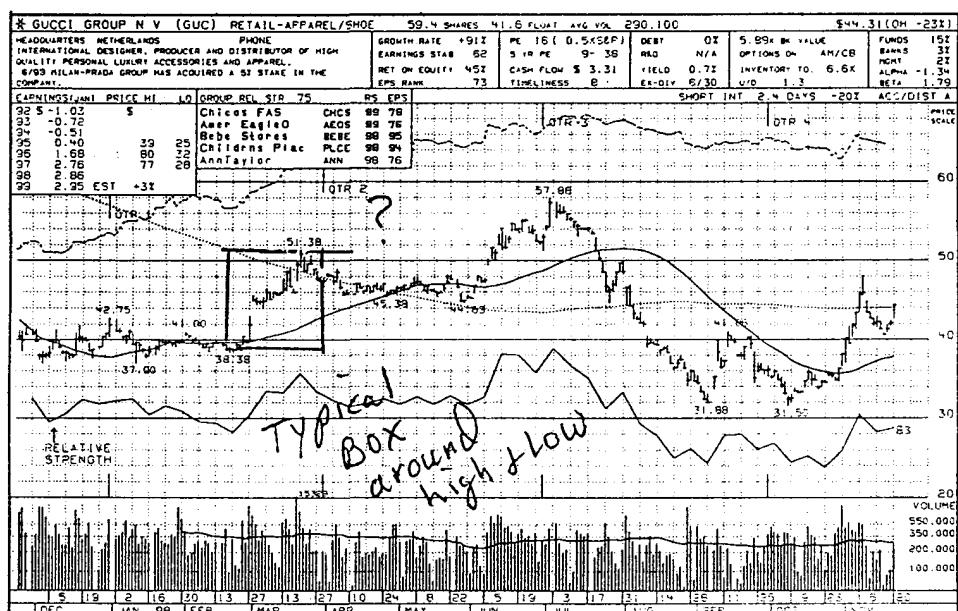
Charts #76 and #77 show tops of circles generating future support and resistance levels. Chart #76 is a daily chart of the S&P 500 and clearly shows how the low to first high circle accurately predicted the final high a few months later. Not only did it predict the high price, but the date too. This is not shown directly on this chart, but *if you draw in an overlapping circle in Chart #76, you'll see that the second circle went vertical at the high date and the top of the arc was the price!* You can't get any better than this. Prove it to yourself. Chart #77 shows the same technique, but forecasts a future bottom at an unforeseen level was generated from the first low.

In some ways, these circles resemble squares because we are using the “flat” tops and bottoms of the circle and the sides. The arcs show us direction and give us a better feel for the rate of climax than the drawing of a square would do. The real beauty of arcs, however, is shown in the next few charts where I reveal one of my greatest discoveries. This is a universal way to convert any chart to get exact time and price correspondences, and it can only be done with arcs. To appreciate this we must first look at the traditional way technicians measure prices, by measuring from a low to a high. They take the actual high or low number and take ranges, or expand the prices by multiples and fractions to get harmonics of the prices. Gann students take a similar approach. They draw a box around the high or low to make the square of time and price. From what we have just demonstrated, however, this is clearly wrong. By just using the actual price you only take into consideration the price element, not the time, and we know that both time and price are always in equilibrium. In order to draw a true square we must adjust the price on the chart for the time component. The prior arcs show this since they generate future highs and lows at levels not associated directly with prices, but from arcs drawn around prices. Chart #78 shows the traditional, often successful, box. Chart #79 shows the box enlarged by the arc and swung from the high back up to the arc’s top where the square is made. Not

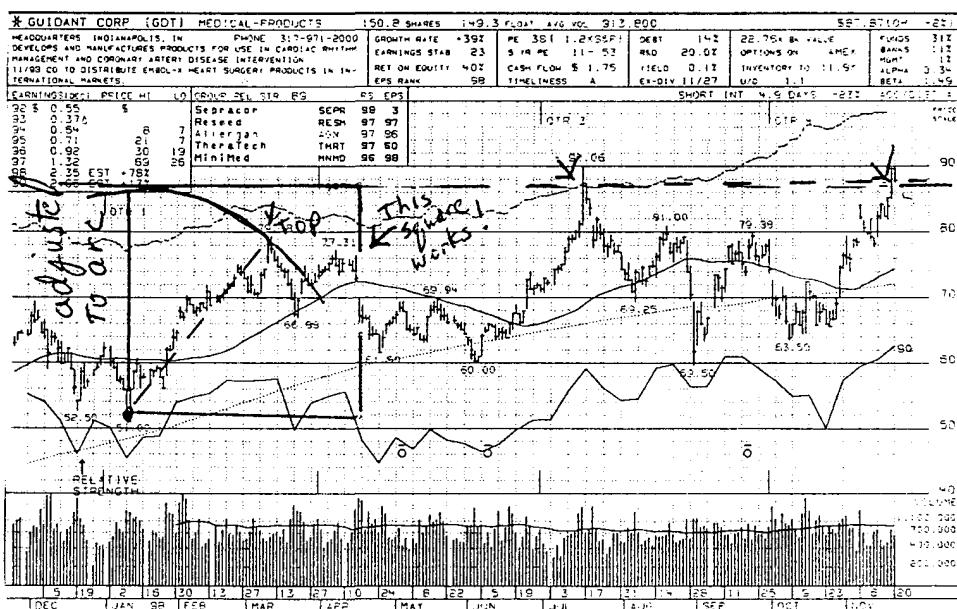
Arcs

only does it forecast a future high, but the end of the box now shows cycle turns accurately.

*Chart 78*



### *Chart 79*



## Arcs

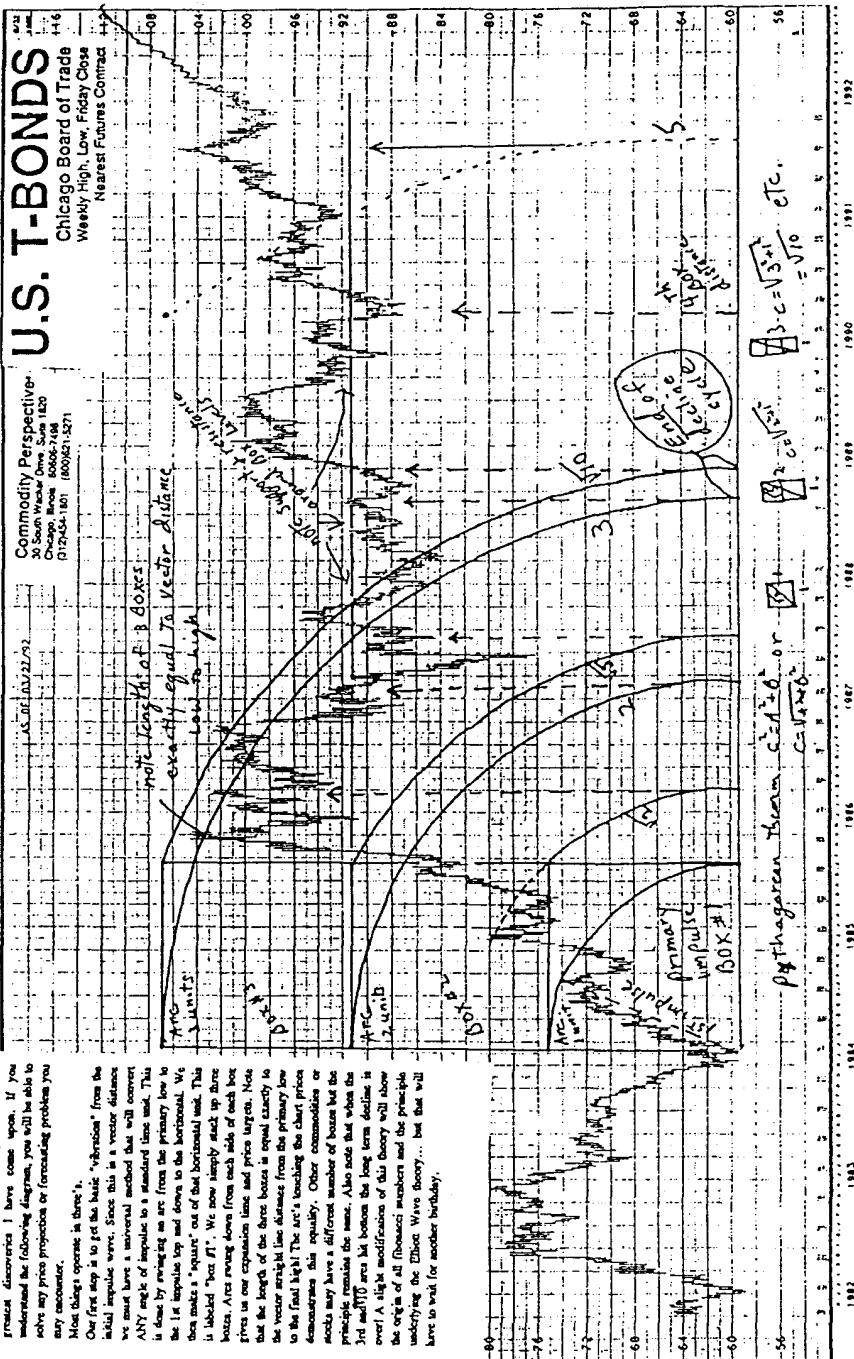
Stacking these “adjusted” boxes works very well. An elaborate example on bonds is shown in Chart #80. Remember this is from the *initial impulse wave up*. Everything else grows from that.

**Reprinted from Mr. Jenkins' Newsletter,  
Stock Cycles Forecast  
Volume 8, Issue 15 dated March 11, 1993  
Chart 80**

**Trader's Tip -"Simple  
Geometry"**

I have been fortunate enough in my life to have been born with the special visual faculty to “see” geometric shapes in nature and thereby get a glimpse of the divine movements of W.H.L. in action. On the occasion of my 40th birthday and the birth of my son this week, I wish to share with you one of the greatest discoveries I have come upon. If you understand the following diagram, you will be able to achieve any price projection or forecasting problem you may encounter. Note that it operates in three dimensions.

Our first step is to get the basic “vector” from the initial impulse wave. Since this is a vector distance we must have a universal method that will convert ANY angle of impulse to a standard time unit. This is done by projecting an arc from the primary low to the 1st impulse top and down to the horizontal. We then make a “square” out of that horizontal line. This is labeled “vect RT”. We now simply stack up three boxes. Arcs owing down from each side of each box gives us our expansion line and price targets. Note that the length of the three boxes is equal exactly to the vector straight line distance from the primary low to the first high! The arc’s connecting the chart price encompasses this equality. Other commodities or stocks may have a different number of boxes but the principle remains the same. Also note that when the 3rd and 4th are hit bottom and long term decline is over a slight modification of our theory will allow us to use all Fibonacci numbers and the principles underlying the Elliott Wave theory... but that will have to wait for another birthday.



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# Arcs

Chart 81

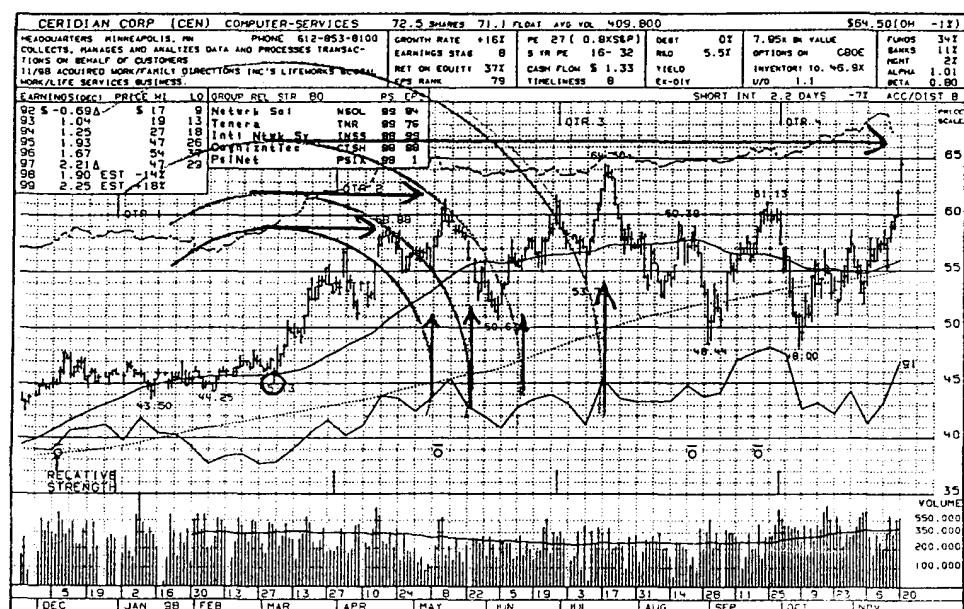
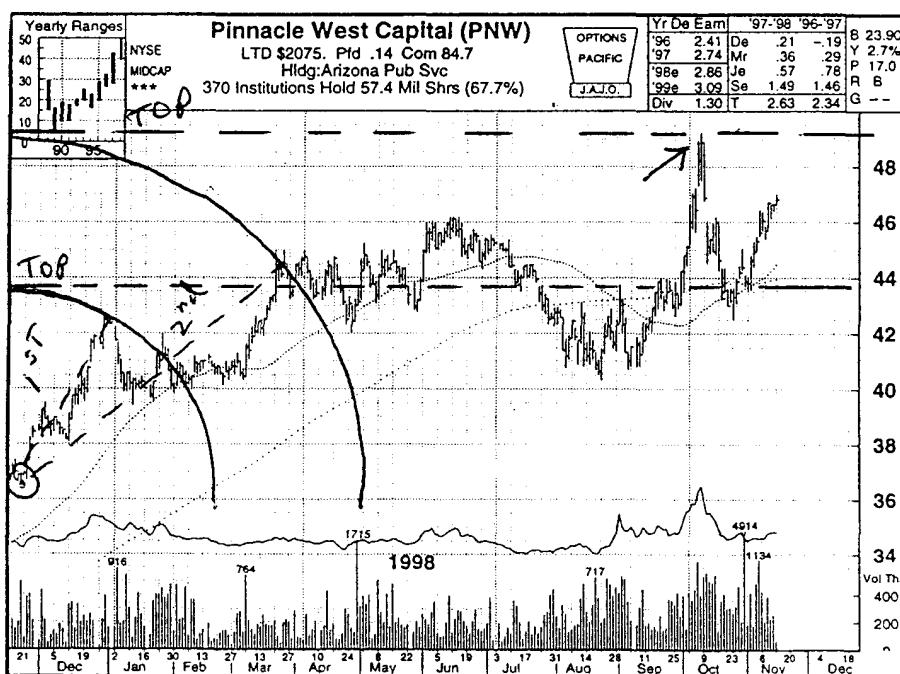
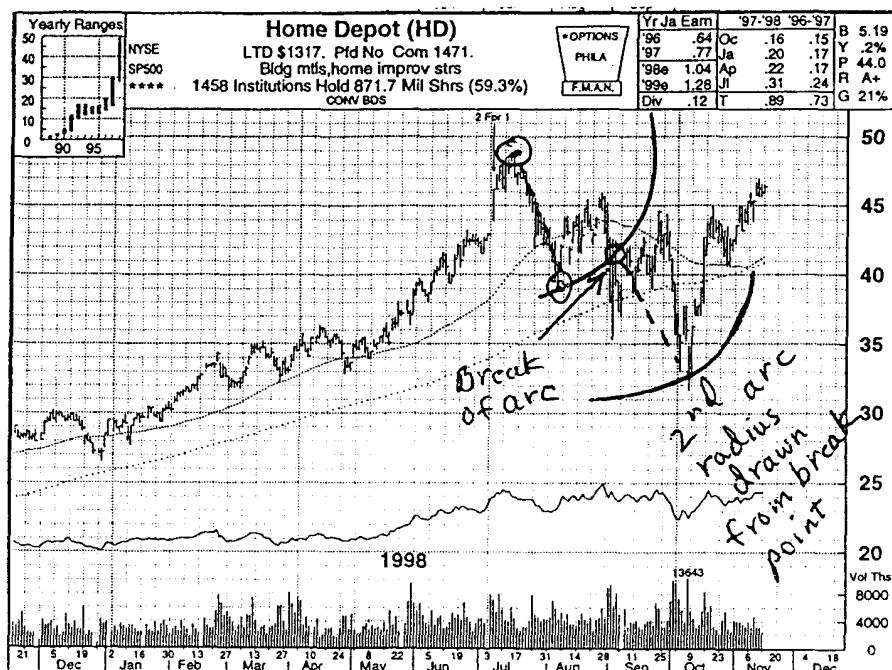


Chart 82



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**Chart 83**



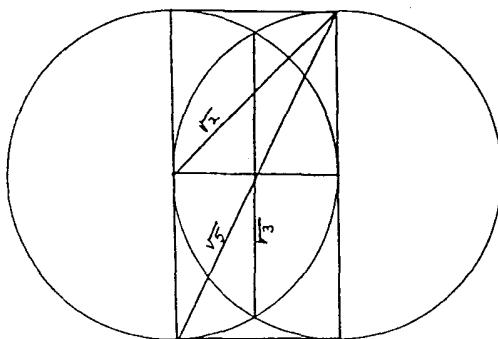
There are three examples of arc techniques in Charts #81, #82, and #83. Chart #81 shows multiple arcs drawn from successive price highs and downs, showing both climax low areas, and future resistance and support levels at the tops of the arc circles. Chart #82 is the same, whereas in Chart #83, we see how a second arc can be drawn at the violation point of a first arc to get the next area of support. This is an adaptation of the measured move idea, but in circular time and price terms.

The pattern in Figure #4 should become a common sight to you if you are a serious student. All numbers and proportions arise from the roots of 2, 3, and 5, and this simple drawing shows how to construct these ratios on any chart. The first step is to draw a circle and then move the compass to the 3 o'clock point and draw a second one intersecting the first. The vertical distance between the two circle intersecting points is the square root of

## Arcs

three. If you now draw a horizontal line connecting the centers of the two circles you create two boxes and we know the diagonal of a square is the square root of two, and since we have two boxes stacked on top of one another we can see that a diagonal from

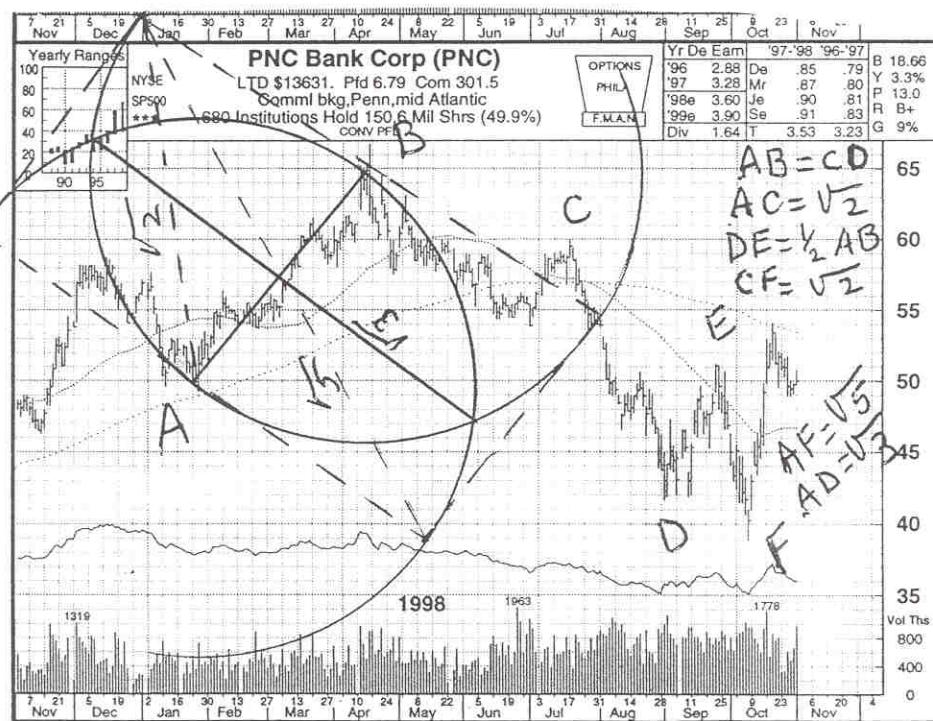
Figure 4



the bottom box up to the top box is the square root of five. From this simple structure we can now apply all kinds of measured moves to our charts relating to these sacred proportions. We first swing a circle around any major low to high or high to low to get our initial circle and then complete the diagram. We will then have these major chords in terms of our particular stock and we will find that all movements will be one or part of these numbers (like  $\frac{1}{2}$ ).

Chart #84 starts with an arc swung about points AB. Two squares are then constructed to get our square root of 2 and 5 distances and the square root of 3 comes from the perpendicular to AB. Please take a compass or ruler and measure the vectors between ABCDEF in all directions and you will see how this works. All movements are precisely measured; there are no random fluctuations in this stock!

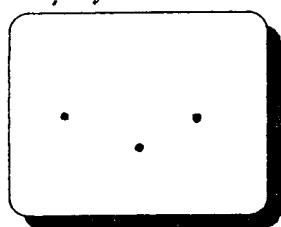
Chart 84



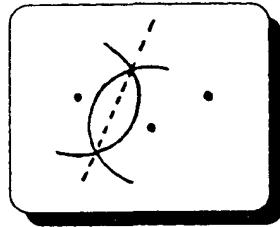
## Arcs

If you want to trend fit an arc, here is the proper method. First you must pick three points on your chart that you believe fall on the arc as shown in Figure #5. Then you swing an arc with your compass around the first two of your three dots as in Figure #6. Without moving your compass length you now do the same with dots 2 and 3. Lines connecting these swings will intersect at the center of a circle as shown in Figures #7 and #8. You then move your compass to that center point, adjust it to the length of a dot, and draw the circle as in Figure #9.

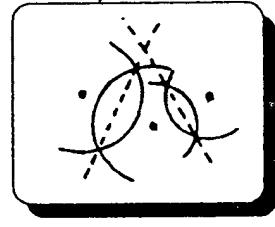
*Figure 5*



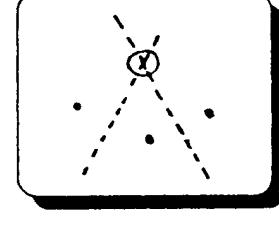
*figure 6*



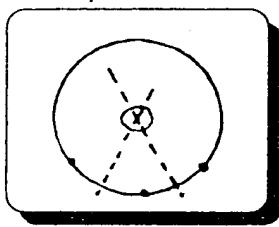
*figure 7*



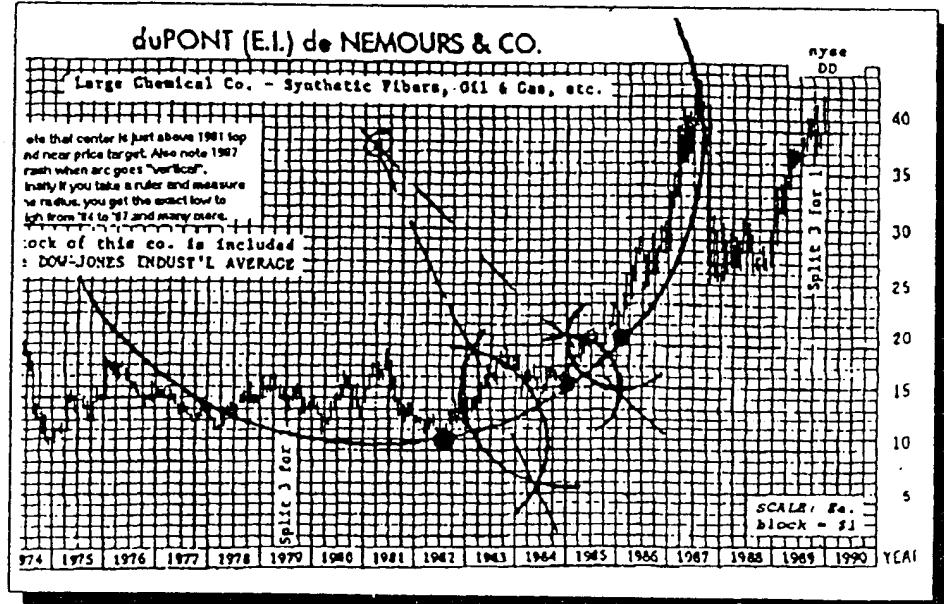
*figure 8*



*Figure 9*

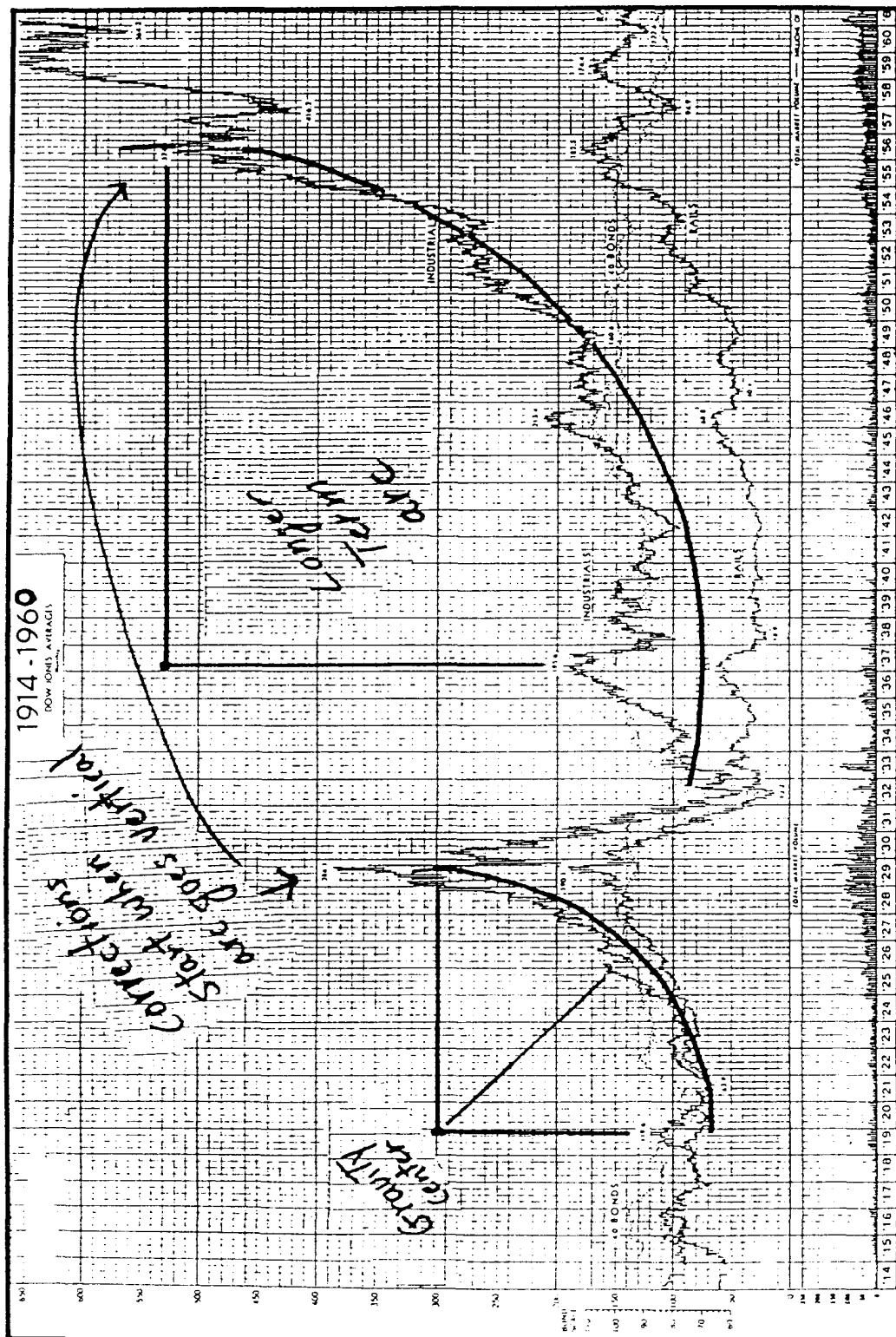


*Chart 85*



*Arcs*

Chart 86



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## Chapter 8

### SUPPORT AND RESISTANCE

When we trade stocks we need to know where to buy or sell them. Arcs, trendlines, and prior highs and lows tell us possible termination points, but we need more precise numbers to trade against. Proportions like one eighth, or one half, have always been used, but there are more universal systems available that apply to every kind of chart we may have to use.

The most basic is, of course, fractional harmonics of the price itself. Dividing the all-time high or low by eight has always produced good results and should be tried first. These incremental units in eighths are added to, or subtracted from, all swing highs and lows to project target zones. Eight is also used to divide time, for example, the 52 weeks in a year divided up into 6.5 week segments, which works very well for almost all stocks and market averages. A good forecast will encompass both a price target and time target, so that when we talk about resistance we will need to think about both time and price resistance. Any numbers we generate from circles, trendlines, or proportions can also be used as time elements, since time and price are interchangeable on a properly drawn chart.

The most basic number systems come from the universal truth that the circle is a fundamental principle and has 360 degrees. Three hundred sixty is one of the basic working numbers and subdivides into a number of other significant elements such as  $36 \times 10$ ,  $72 \times 5$ ,  $12 \times 30$ , and  $2.5 \times 144$ , to just mention a few found in all natural phenomena. To

## ***Support & Resistance***

handle any number we usually find its harmonics by dividing by 2 and 3. Since ancient times the circle was always divided into “trines” ( $360/3=120$ ) and “squares” ( $360/4=90$ ). Almost any number can then be generated from the basic building blocks of the circle divided by these fractions. The table in Figure #10 shows the basic divisions:

*Figure 10*

Each number is divided by 2 to get the next one.

$360/2=180$	$360/3=120$
90	60
45	30
22.5	15
11.25	7.5
5.63	3.75

These are the basic elements, but these are also additives, so that the complete number system would consist of each or any of these incremented by the other amounts in the table. To make it simple, note that 7.5 is 360 divided by 48, and many of these fractions like 15 add up to the 45, 90, 180 divisions by two, so that we can start with 7.5 and 11.25 as basic building blocks and then start adding. The table in Figure #11 shows the complete number harmonics of 7.5 and 11.25 up to 150 and active traders will note that these numbers are quite familiar since the vast majority of stocks trade around these levels every day. You may want to copy this chart and have it handy for your day trading.

## ***Support & Resistance***

*Figure 11*

Common number support and resistance levels:

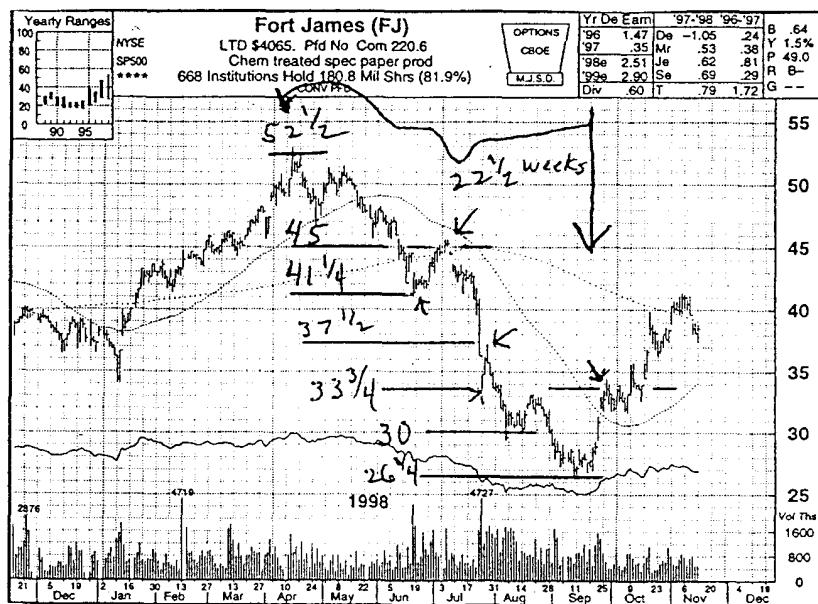
7.5	Add'l Numbers from W.D. Gann course he used
11.25	but not included here- he basically divided 360 by
15	1/2 1/3 1/4 1/8 1/16 1/32 and 1/64
22.5	5.625
26.25	16.875
30	27.875
33.75	
37.5	39.375
41.25	
45	50.625
52.5	
56.25	
60	61.875
63.75	
67.5	
71.25	73.125
75	
78.75	
82.5	84.375
86.25	
90	95.625
97.5	
101.25	
105	106.875
108.75	
112.5	118.125
120	
123.75	
127.5	129.375
131.25	
135	140.625
142.5	
146.25	150

## Support & Resistance

Remember, to use these numbers you merely take a major high or low and increment it, or decrement it, by these levels to find that particular stock's individual support and resistance. The natural levels are shown in the chart, but many stocks have their own particular levels and you must calculate them individually. For example, if a stock hits a low at \$9 you would start by incrementing 9 by 7.5 or 11.25. Those targets would be \$16.5 or \$20.25. You can also use the smaller increments like 3.75 or 2.81 on cheap stocks. As the stock goes up or down, you just add or subtract these numbers to project future levels. It is important to note again that this also applies to time, so that from any high or low date, you would look at 2.81, 3.75, 7.5 or 11.25 days or weeks later for a turn. These cycles don't work as well, but sometimes they offer the only clue to a stock's pattern. In the section on time and cycles I'll give you the most likely time cycle increments that are most effective in forecasting.

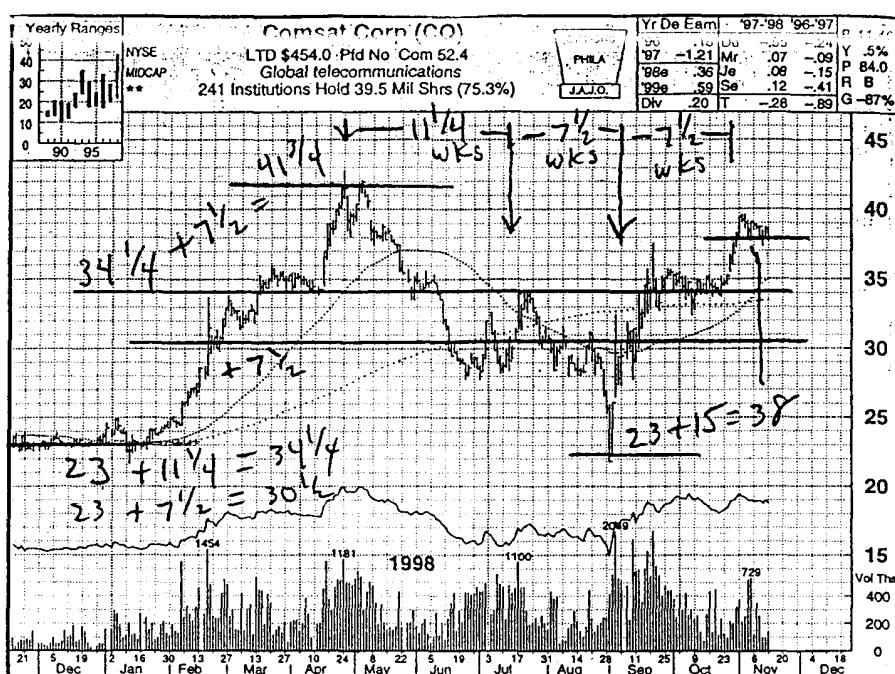
We see in Chart #87 a stock's high price topping right at a natural number of \$52.50. As you can see, the decline stopped at all the others on the way down and the time cycle length was also a multiple. Chart #88 is similar.

*Chart 87*



## Support & Resistance

*Chart 88*



Aside from the natural 360 base, there are some other systems that work well. One is that complete moves in stocks often go \$17.50 and the quarter harmonic of this number, or \$4.375, yields very good results. I often trade stocks at intervals of \$4.375.

Of course, the theoretically perfect harmonic of a stock should be related to its square or circle. As previously mentioned, at each and every point on a timing line or circle, the price of a stock and the time period from its high or low origin are at equilibrium. It makes a turn then because the time and price square out. In theory we should be able to find a number vibration that is unique to each stock and provides support and resistance. In studying the square that we draw around a stock's price, we can come to the conclusion that the *fundamental building block vibration of a square is the square's square root*. We now have our universal key to time and price. Each stock's high or low will create support and resistance in terms of time and price at the square root intervals of its individual historic highs and lows. Furthermore we should be able to increment those square root numbers and re-square them to grow our square as our stock advances. This in

## *Support & Resistance*

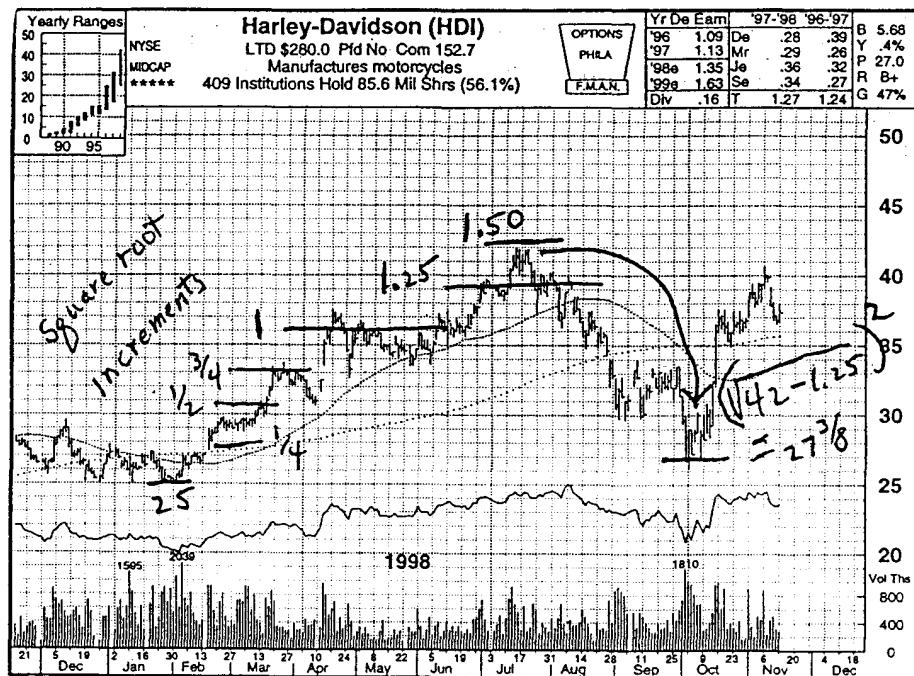
fact is what we do and has been one of my greatest applications of the Gann work to trading, especially day trading S&P futures or active commodities. It works as follows:

If a stock has a low at \$34, we first find the square root of 34, which is 5.83. We then increment that square root by .25 or  $5.83 + .25 = 6.08$ . We then square 6.08 to get 36.97, or about \$37, as our first minor resistance. Depending on the fluctuation we need, our increments can be larger or smaller but usually .25, .50, .75, 1, 1.25, 1.50, 1.75 and 2 are all we need. Two is the master cycle as will be explained shortly, and one is the next strongest. For intra day trading items like S&P futures I use 1/32 or .03125 as an increment. This very small increment usually gives the fundamental vibration measured move of the S&P on very quick scalps, and stops are entered just past these levels. For instance, if the S&P were near 1,180, the square root would be 34.3511, and adding .03125 gives us 34.38238. Re-squaring that we get 1,182.15 and the difference is 2.15 points as the fundamental vibration. If that's too big, use 1/64 instead of 1/32 to trade.

You may be surprised by your outcome. When used properly, every high and low during the day will be hit within 15 basic points the vast majority of the time! The basic technique would be to take the extreme high or low made in the first 30 minutes of trading and then increment or decrement that extreme price for the remainder of the day. One easy technique for those with computer screens is to graph the price using the price axis incremented by the calculated fundamental unit and start the grid at the low, or the low minus the fundamental. When that is done the price line axis on the graph acts as a natural barrier and can be traded against.

## Support & Resistance

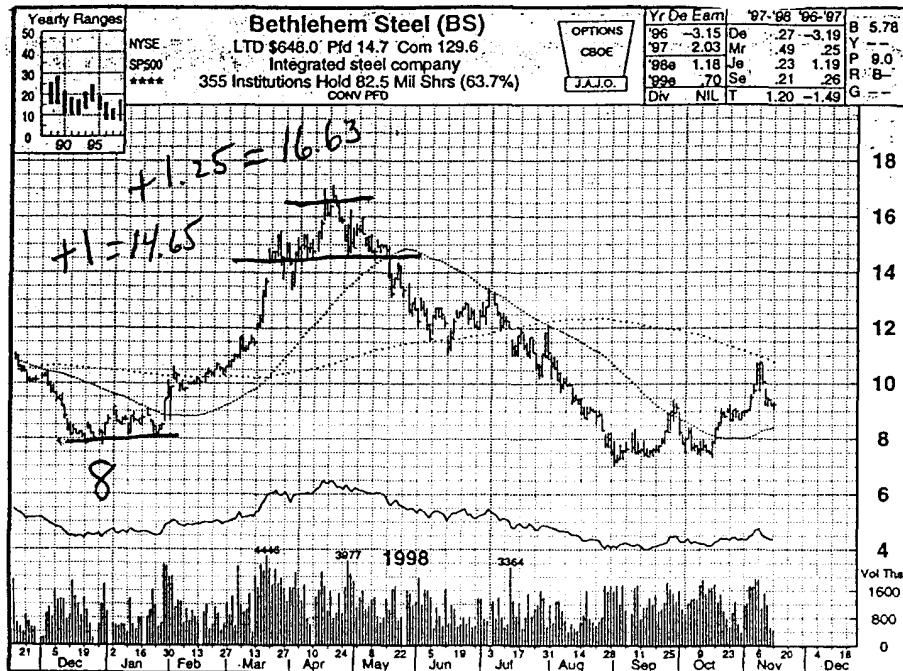
*Chart 89*



Most stocks will go one full unit increment, or two. A stock at 89 will drop to 71.125 ( $\sqrt{89}=9.434$ ,  $-1=8.434$ , re-squared =71.12). Very shallow corrections good for day trading react to the square root of the square root. If the above 1 unit drop of 17.88 is too large and might take three weeks or three months to be hit, we can use the square root of that (4.23) and buy the stock when it drops from 89 to 84.75. On my proprietary computer programs I use trailing stop filters of the square root of the square root of each high price along the advance to indicate a change in trend. Strong moves will barely touch the square root of the square root price and then turn up. For very strong stocks I use that point for *buying* into a correction with a sell stop.

## Support & Resistance

*Chart 90*

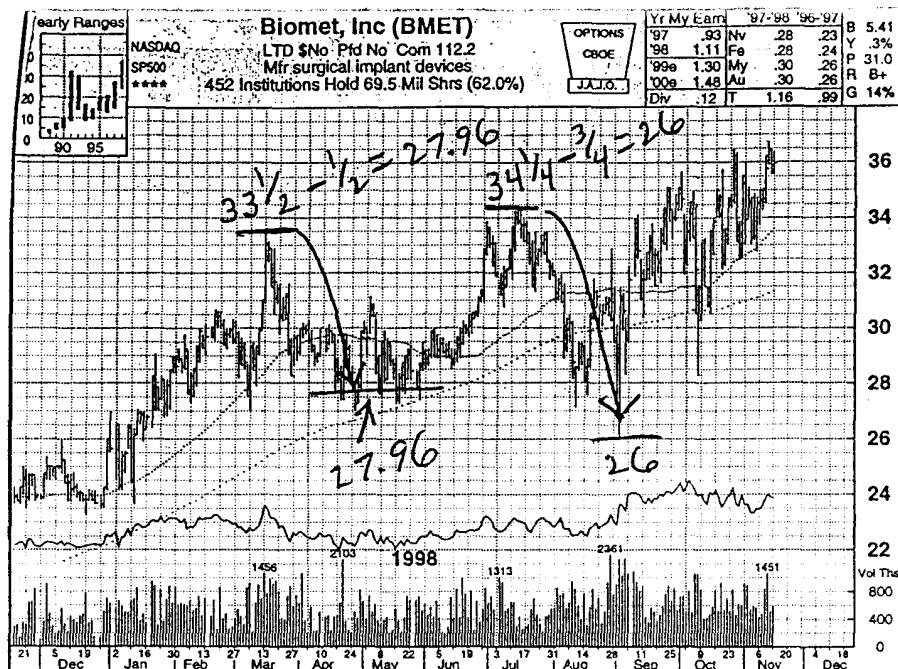


These square root number sequences have long been a closely held secret and for years, especially in the 60's and 70's, each bull and bear market not only ended on these natural squares from their origins, but they usually followed a Fibonacci sequence like 5 added to the low, or 3, or 8. In recent times with huge volatility moves these 3's and 5's are often squared themselves to get the increment. If you use the market averages in your forecasting these large square root increments can be helpful.

The squaring of numbers is readily seen in most charts, particularly the odd squares like 3, 5, 7, 9, 11, etc., with the even squares also showing up. For instance, after a low is

## Support & Resistance

*Chart 91*



made you will almost always find big turns at 3 weeks, 9 (3x3) weeks, 16 weeks (4x4), 25, 36, and 49 weeks. These squares of the natural integers are very powerful. On very long term monthly charts of the Dow Jones Averages, you will find most bull and bear markets terminating on a natural square number of months from one in the distant past. The reason this works is beyond the scope of this work, but it is based on natural phenomena. One "easy" method for keeping track of all cycles, but especially these natural squares, is to make a tape by cutting a segment off the bottom of the chart you are using and then tick off with a marker each natural square in days, weeks, and months. This should extend well into the future. You then run this tape back and forth across your chart, lining up the highs and lows and looking for "clusters" of natural squares in the future where big turns are expected. On August 24, 1987, I made a dramatic call on the market using this ticker tape method. While looking for the final top, I noticed a reverse order count down of a Fibonacci sequence from the past that placed zero at that point in time. Usually at big turns

## Support & Resistance

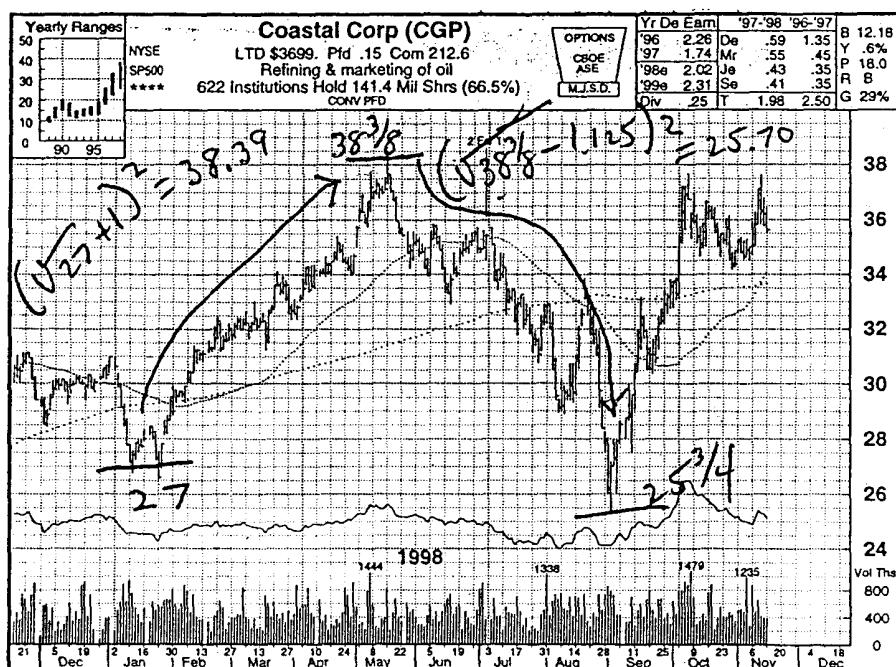
you will find these time cycle numbers, as well as price resistance numbers and arcs all coming out simultaneously.

The next section will examine the famous Gann Square of Nine which is quite similar to these ideas of natural squares and square roots, but it has been in use for a thousand years or longer.

On the pages that follow are charts that demonstrate various square root techniques from determining support and resistance and for use as trailing stops in trading.

In Chart #92 we have the square root of the low plus 1, re-squared, projecting the high, and that high minus 1.125 from the root projecting the low.

*Chart 92*



## *Support & Resistance*

Chart #93 is an hourly chart of the S&P futures showing a low and the square root of that low incremented by the Fibonacci ratios of .382, 1 and 1.382. The horizontal lines clearly show the natural resistance at these ratios.

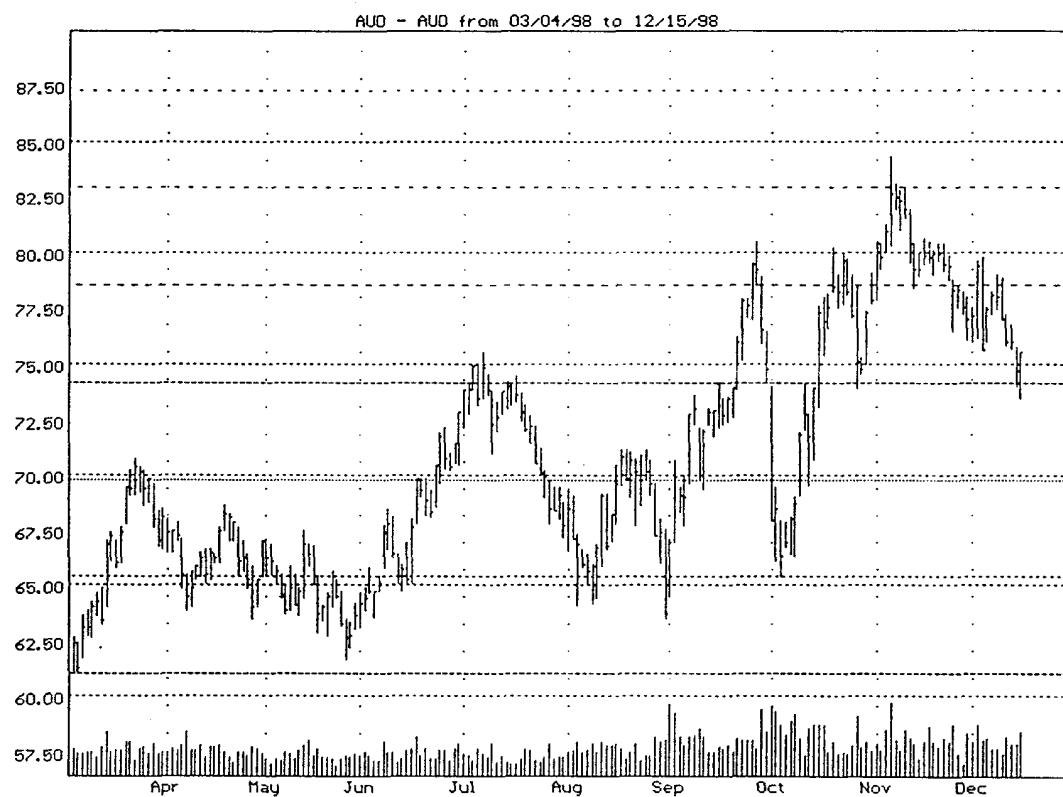
*Chart 93*



## *Support & Resistance*

Chart #94 shows levels of \$4.375 aggregating to major swings of \$17.50. This was a George Bayer idea from the 1930's and it still works today. On this chart it's a little hard to see since the lines for the price level are close to the \$4.375 lines, but you'll notice how the prices seem to bounce back and forth between these levels of natural support and resistance.

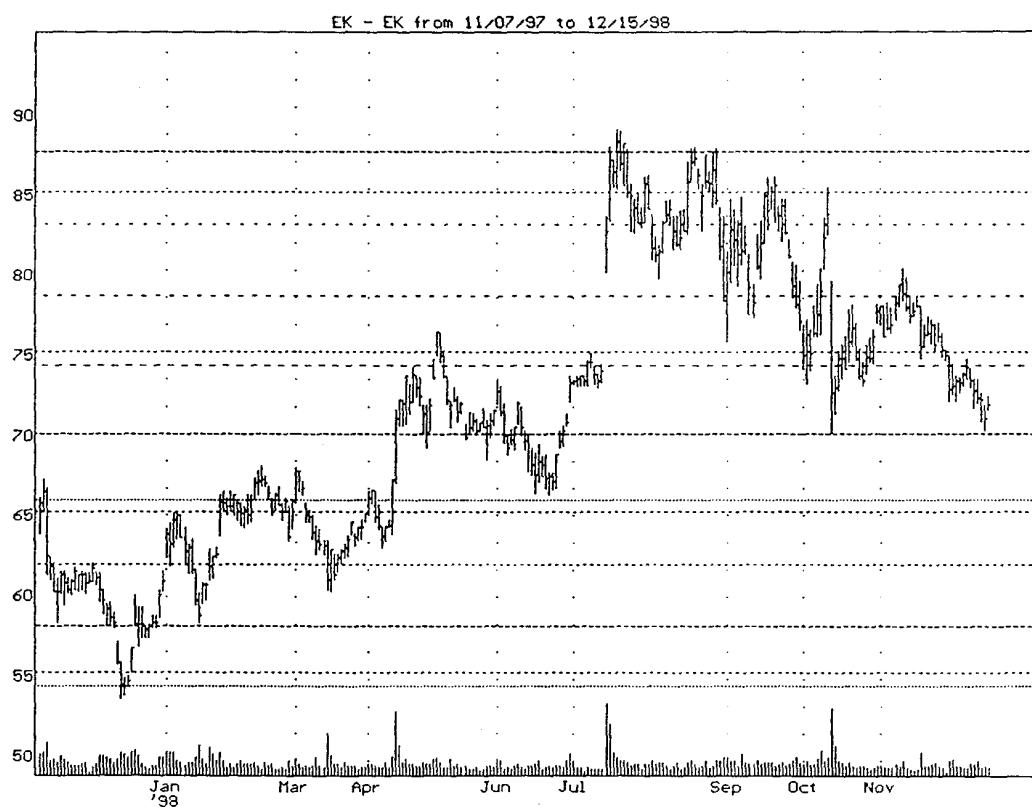
*Chart 94*



## *Support & Resistance*

Chart #95 is a daily chart of Eastman Kodak showing square root increments from the low level at the start of the chart. The increments are .25 and you can see the price bouncing around these support and resistance levels. The price scale is an even \$5 increment and the square root lines are the lines in-between those numbers. You may want to take a calculator and walk through the chart starting with the square root of that low near \$54 and taking its root and incrementing by .25, .50, .75, etc. and re-squaring to see the effect on the chart.

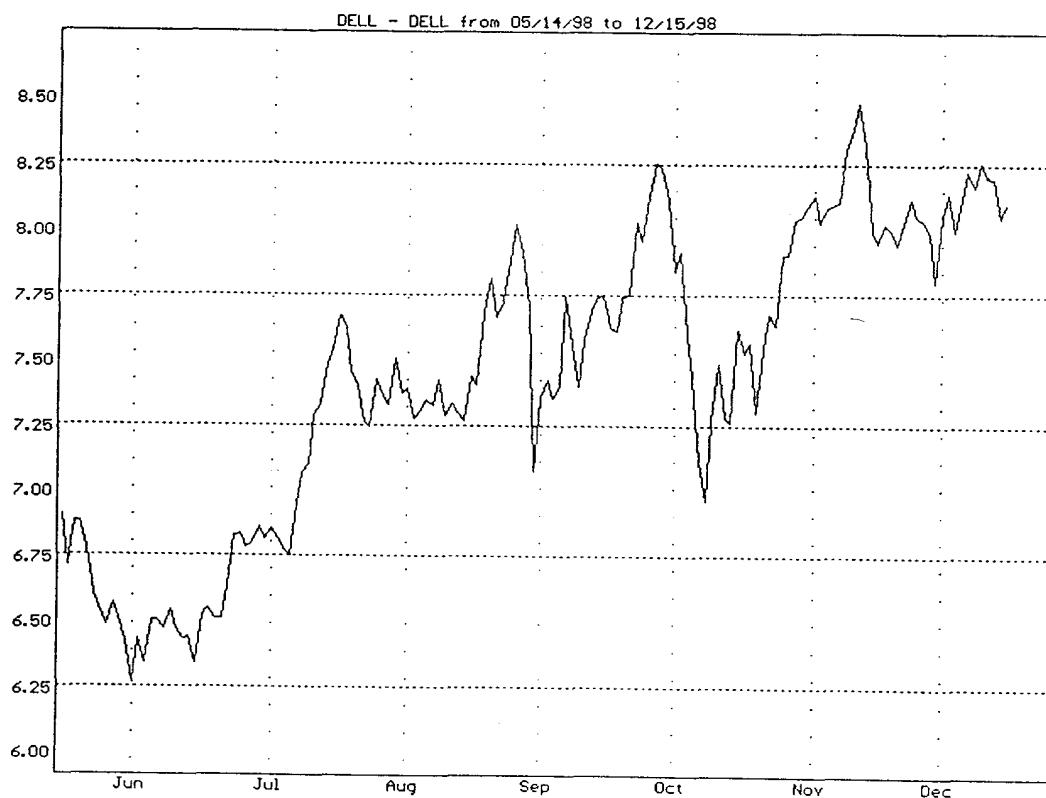
*Chart 95*



## *Support & Resistance*

One technique I use with my computer to avoid the clutter is to graph stocks by their square roots and not the whole price. This way you can easily see what root levels the stock is trading near, without any calculation on your part and you can count levels up and down. Chart #96 is a daily chart of Dell Computer in terms of square roots, and you can see the .50 root increments this stock trades in. You can also see at a glance that the low 6.25 is incremented by 2 full points to get to the top at 8.25. The one full point at 7.25 was a major support area indicating much higher prices.

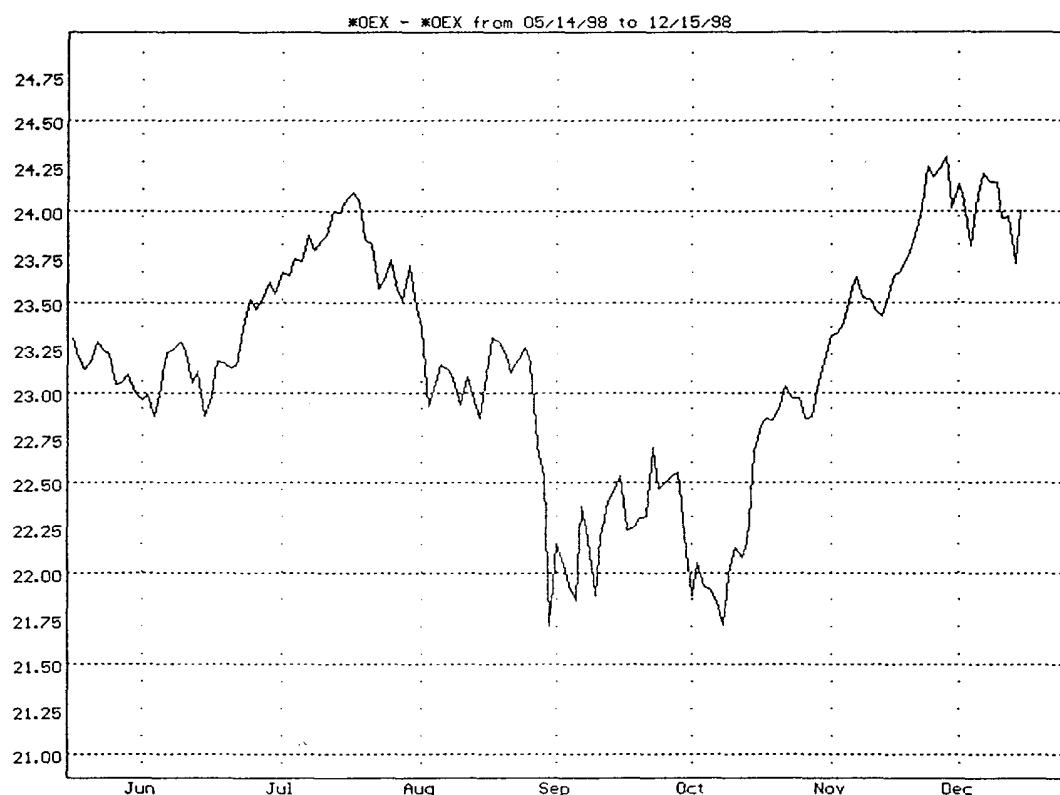
*Chart 96*



## *Support & Resistance*

The same technique used on the OEX where you see the .50 and 1.00 increments as major support and resistance levels is illustrated in Chart #97.

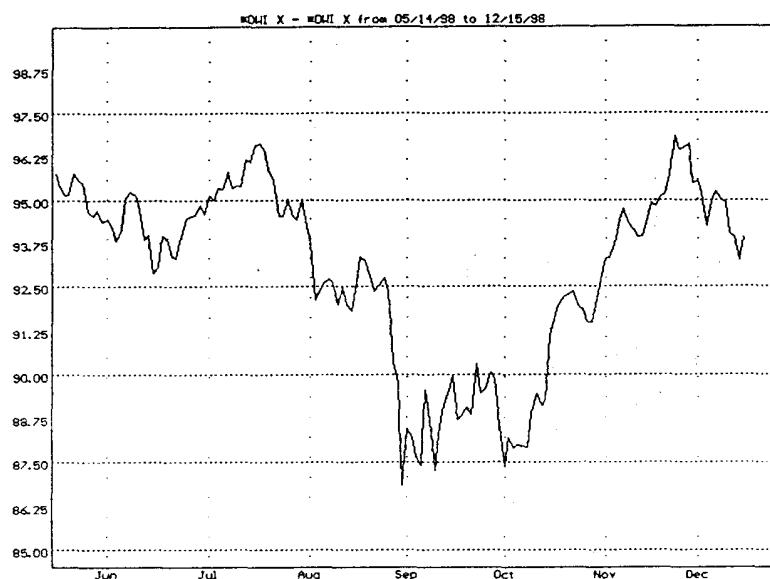
*Chart 97*



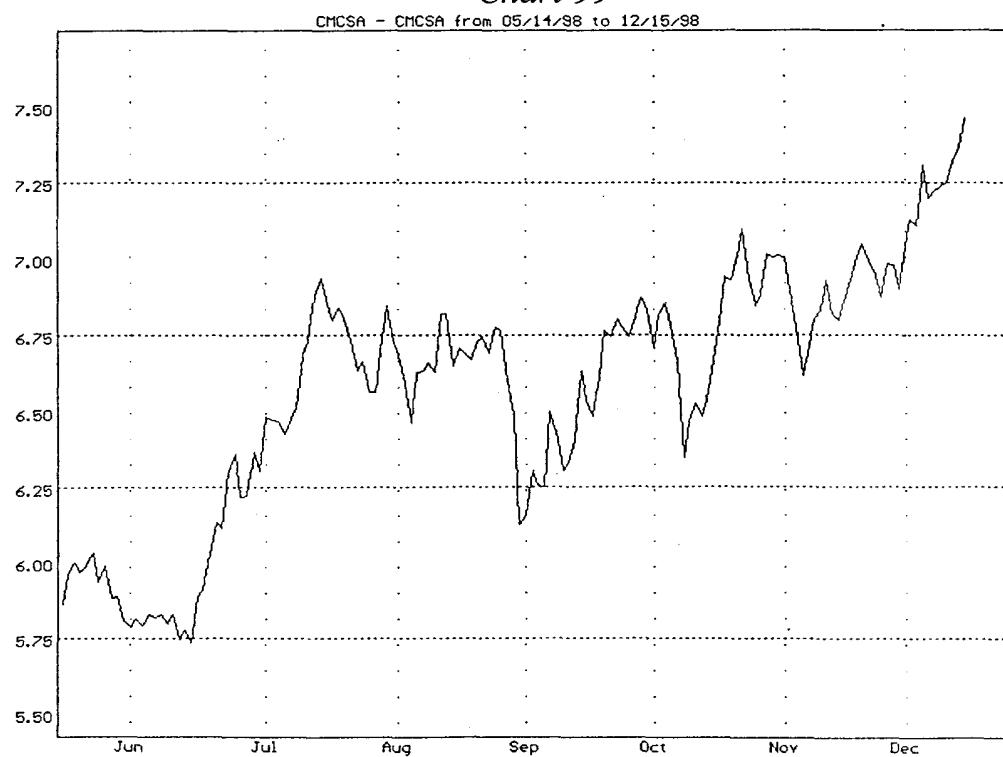
## *Support & Resistance*

Chart #98 and #99 show the Dow Jones and another individual stock pattern. All market movements revolve around square roots.

*Chart 98*



*Chart 99*

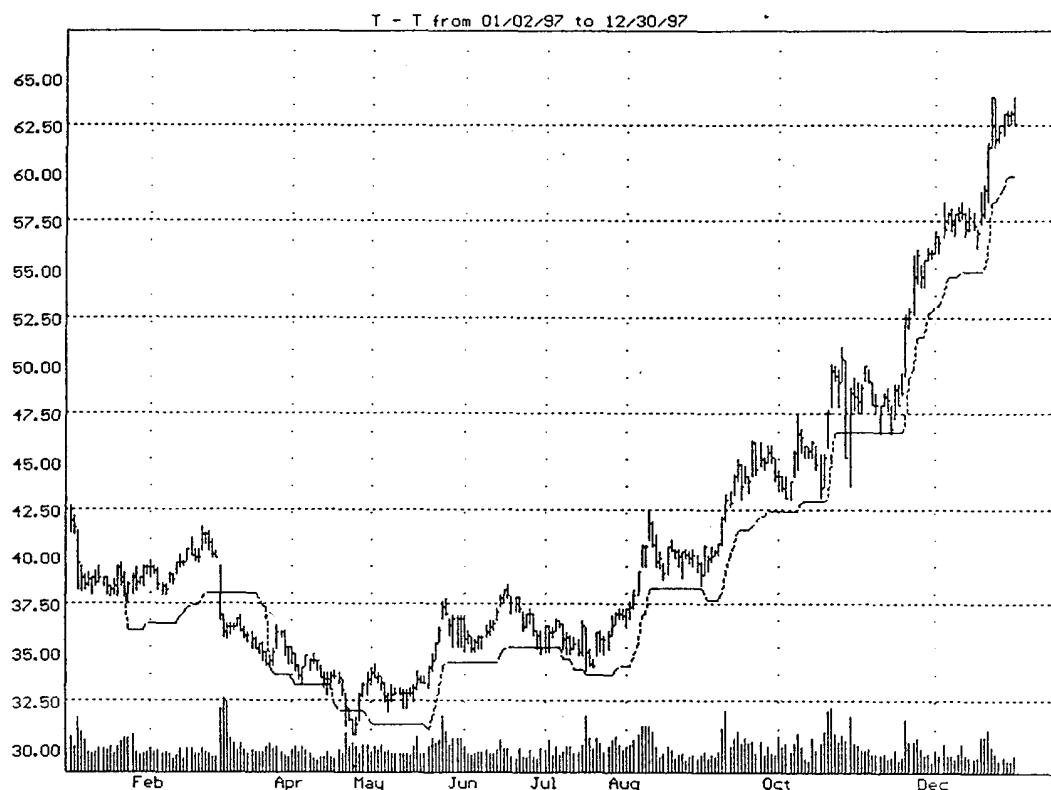


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## *Support & Resistance*

Chart #100 is an example of a technique I use for swing trading, and to find buy points in strong trending markets. A major correction might drop one full square root point, but usually the root squared twice is a good trailing stop to buy at. For example, a \$49 stock has a square root of \$7, but the square root of \$7 is \$2.65, which makes a very strong support level for bullish stocks. Chart #100 shows AT&T with such a trailing stop

*Chart 100*

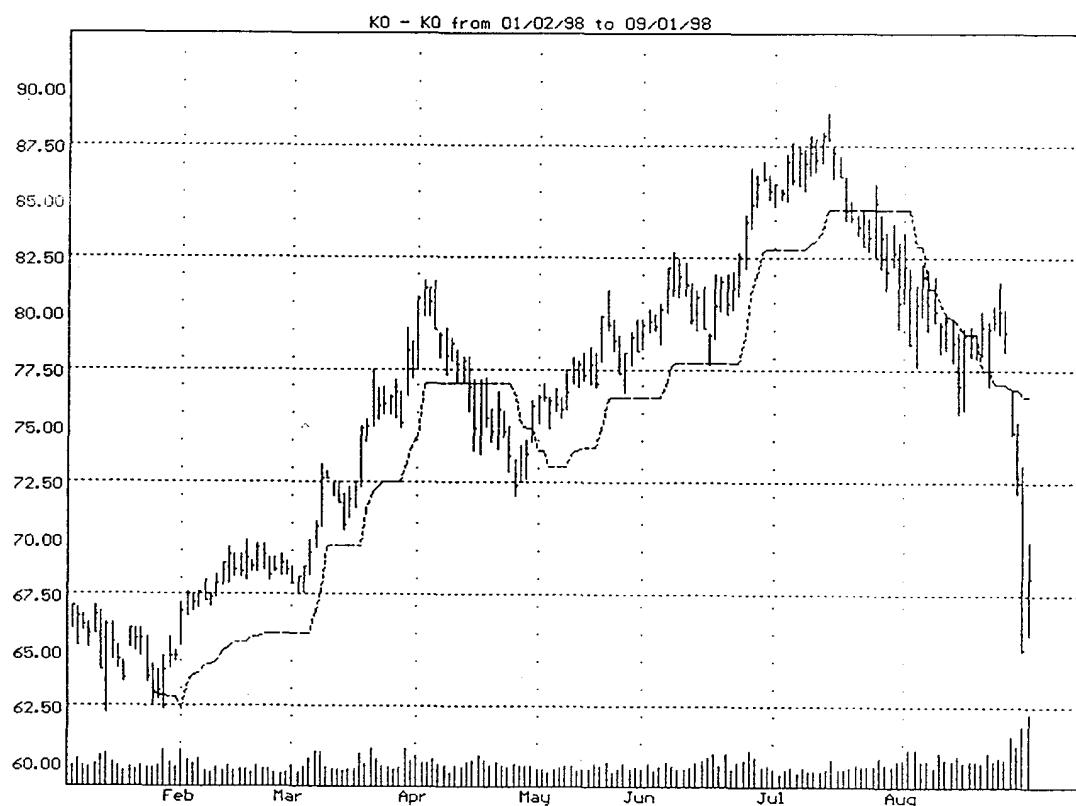


## *Support & Resistance*

line offset with 15 trading day lags (a normal 3.25 week cycle). The calculation is made from the highest high for the 15-day period. Note how the correction always seems to end just at that flat square root of the square root level during the 3-week cycle.

Chart #101 is an example of Coca-Cola with a trailing stop of the square root of the square root, where you can see what happens when it breaks under that level. It is almost always a correction period until you at least regain the 15-day stop average line. Also note that on the first violation, prices went exactly below the line as they had been above it, proving it to be a balancing pivot point.

*Chart 101*



## Chapter 9

### **GANN SQUARE OF NINE**

Part of every Gann course includes the so-called Square of Nine, which is a square of circular arrangement of numbers, with the first full square including the first 9 integers and number 10 starting the next square or circle. Going down the left hand diagonal is the square of odd integers (1, 9, 25, 49, 81, 121, 169 etc.), and going up along the right diagonal are the even squares (2, 4, 16, 36, 64, 100, 144, 196, etc.). The actual origin of this number wheel is unknown, but it has been used in the East for at least a thousand years. The important thing to note is that each new square starts at the *number after an odd square*. Look down the left diagonal (1, 9, 25, 49, etc.). These numbers form the end corner of squares and represent powerful resistance to stocks. If the stock's price goes higher it breaks into another square and usually an explosive move results that ultimately moves around the wheel until the next odd number. This lends itself to a good strategy of seeking out stocks that approach natural odd squares to either short on failures, or buy on breakouts. Also, note that there is a tendency for high priced stocks to move faster than lower priced stocks because of the distance between each corner of the square. The full square's length is the increment of 2 added to the square root of the number, since as we have seen, each new square starts at the next odd number and odd numbers are separated by 2. In other words the square root of 9 is three, and two added to three is five, and five

## Gann Square of Nine

*Chart 102*

Jun 21													
	133	134	135	136	137	138	139	140	141	142	143	144	145
	132	91	92	93	94	95	96	97	98	99	100	101	146
	131	90	57	58	59	60	61	62	63	64	65	102	147
	130	89	56	31	32	33	34	35	36	37	66	103	148
	129	88	55	30	13	14	15	16	17	38	67	104	149
	128	87	54	29	12	3	4	5	18	39	68	105	150
Sept 23	127	86	53	28	11	2	1	6	19	40	69	106	151
	126	85	52	27	10	9	8	7	20	41	70	107	152
	125	84	51	26	25	24	23	22	21	42	71	108	153
	124	83	50	49	48	47	46	45	44	43	72	109	154
	123	82	81	80	79	78	77	76	75	74	73	110	155
	122	121	120	119	118	117	116	115	114	113	112	111	156
	169	168	167	166	165	164	163	162	161	160	159	158	157
Dec 21													

squared is 25, the start of the next square after the number 9. This characteristic of this particular kind of chart made it a calculator of square roots and squares in ancient times. To find any number directly above or directly below any number you just take the square root and increment or decrement it by 2 and then re-square. If you take the number 46 found below the numbers 1, 8 and 23, and take its square root you get 6.78. Add two for 8.78 and re-square and you get 77 the next number directly below 46. If you add one to the square root or 7.78 and re-square, you get 61, which is the number directly opposite and above 46 on the other side of the square.

## *Gann Square of Nine*

Previously we used increments of square roots like .25, .50, .75 etc., to increment prices and we now see the origin of that method. If 2 will take you all around the full square, and 1 the opposite side, then .50 will go 90 degrees around, and .25, 45 degrees around. One and a half will take you 3/4 around. If you visualize these squares as the face of a clock, then from 12 to 3 is an increment of .50 added to the square root, 1 is 6 o'clock, 1.5 is 9 o'clock, and 2 comes back to twelve. These are 90-degree rotations, a powerful angle, but we also use 45 degrees and the 45-degree rotation is the root incremented by .25.

Most traders who follow Gann never understand this root stuff, but merely use the square to trade stocks or S&P futures off the numbers. I must admit that I myself often grab the chart when the futures are moving so fast you don't have time to calculate anything. They do usually stop dead in their tracks at all the corner points and especially the four "Cardinal" points that are the points of the compass of North, South, East and West. Those axis lines on the Square of Nine are particularly important and tie into the seasons of the year with number theory. Originally the chart was constructed for astrological purposes, and in ancient times the cardinal signs stood for the four seasons of the year. Each season was started with the Sun's entry into an astrological sign. Today those signs are Aries for spring, Cancer for summer, Libra for fall and Capricorn for winter. This Gann square was more of a circle, or wheel, and is still referred to as a Gann Wheel. The East point or 3 o'clock, was the starting point and represented 0 degrees Aries on March 20-21, at 6 a.m., which is the first day of spring and the start of the natural calendar, or the astrological one used in horoscopes. Counter clockwise and 90 degrees up or at 12 o'clock was the first day of summer, June 21. The West point at 9 o'clock was September 23 at 6 p.m. for the first day of fall, and the bottom at 6 o'clock was December 21 at 12 midnight for the first day of winter. The hours come from the astrological hour rulerships that start at sunrise (6 a.m.) on the first day of spring. By setting these dates and times to this

## *Gann Square of Nine*

number system, you can find seasonal changes in the markets and also calculate the number of days between events. Each 15-degree segment represented approximately 15 days and possible market turns. Our calendar is a solar one with each day of the week representing one degree of movement of the Sun. Some months the Sun moves more slowly than others and that's why some months need 31 days to go 30 degrees. On the Gann wheel the following dates represent the seasonal 15 degree movements of the Sun: March 20, April 5, April 20, May 5, May 20, June 6, June 21, July 7, July 22, August 8, August 23, September 7, September 23, October 8, October 23, November 8, November 23, December 7, December 21, January 5, January 20, February 5, February 19, and March 5. These aren't always 15 calendar days apart, but they are 15 degrees of the Sun's movement.

As we noted when we looked at the harmonics of 360, 15 is a fundamental unit of resistance and its harmonics of 30, 45, 60, 75, 90, etc., can all create turns in the market. Using the Gann Wheel you could line up dates of past highs and lows by circling the dates, or the actual numbers in the squares, and at future dates that were offset by one of these 15 degree harmonics, you would expect to find change. In other words, if the market hit bottom on the first day of spring on March 20th, 45 degrees later on May 5th, or 180 days later on September 23rd you could expect a turn. Similarly, if a stock made a high or low at \$69 on the March 20th line, then major seasonal turns would occur on these seasonal dates and the prices would be 67, 65, 63, 61, 59, 57, 55, 53, 51, 49 or going up, 71, 73, 75, 77, 79, and the important odd square 81. These numbers are taken off the wheel at 15-degree rotations. In this example the positions are merely \$2 for each segment, but in the situation of a high priced stock or a market average, the movements are quite a distance. If the Dow Jones sold at 9,300 then a full circle would be 390 points ( $9,300+2$  square root), so that a 15 degree segment would be 16 points ( $390/24$ ), or 32 for 30 degrees and

## ***Gann Square of Nine***

97 points for 90 degrees. Most Gann calculators or wheels use plastic overlays with these 15-degree angles, as well as others etched on them. The overlays are tacked to the center of the wheel where they can be rotated to align with the dates listed on the perimeter of the wheel. For example, if a stock or market tops on an off seasonal date like January 12th, you could rotate the angles to that date and the other spokes on the plastic acetate would then pinpoint the correlating 15 degree harmonics dates, and related numbers on the wheel. As shown in the prior section, I prefer to take square roots and increment them myself, rather than spin a wheel. The wheel is more graphical though, and makes it easier to keep track of a history of many highs and lows by circling the actual numbers on the wheel. When a future number comes back to the same spoke, then another high or low is indicated.

I might note here that there is some debate about how the Square of Nine spiral begins. In the following examples, the number 2 starts at 9 o'clock and goes up. Other charts in more of the astrological tradition have the 2 start with the first day of fall and then go up counter-clockwise. There are also charts with spring labeled at the 9 o'clock point rather than 3 o'clock. In both methods, as long as the spirals are consistent and the odd squares go down and the even up, they will give the same answers, but the seasonal dates can differ.

In theory, bull and bear markets expand and contract in proportions and numbers that are related. If a low starts on a Cardinal Cross number like 40 then it is most often the case that future final highs and lows will fall along the same horizontal axis, so that the number could be 69, 106, 53, 86, or 127. This is why the angular relationship of the Gann Square of Nine is so important. You can graphically see those angular relationships among the numbers and the dates.

Another interesting feature of the Gann square is that not only are the numbers on

## *Gann Square of Nine*

the wheel important for support and resistance, but those same numbers are time factors from prior highs and lows. For example, if a stock tops at \$40 it may simultaneously be 19 (number on axis with 40) weeks from a past high or low, or 69 (also cardinal cross number) months from another. There is usually both a time and price relationship working at the same time.

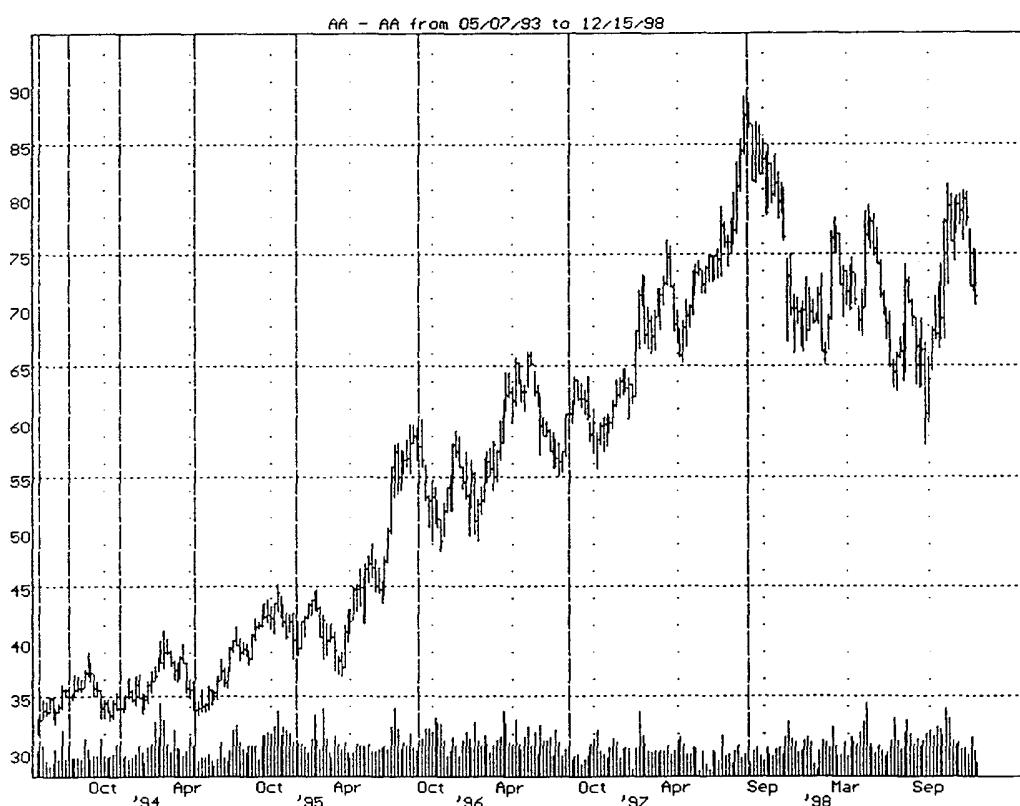
One approach to the square that works well is based on my previous statement that bull and bear markets begin and end on natural squares and in terms of time are natural square (9, 16, 25, 36, 49, etc.) time periods apart. What usually takes place is that if a high or low is suspected, you go back in time along the main axes, especially the odd square one and find an anniversary month that had a high or low. If this is February you would look in the months of February, but back a number of years equivalent to the number on the square axis you're on. You then see the exact date of that year in the part where the top occurred and see how far off it was from the prior natural square on that same axis. The top this time will usually be off by that same amount. For instance if you are 81 months from an anniversary top, go back both 49 months (next odd square from 81) from today, and 49 months from 81 months back (130 months back), and look at that high for confirmation of the current top projection.

Although most traders are familiar with the Square of Nine as a price predictor, its actual function is more of a time period projector. Since it is based on natural squares and we know prices spiral out in a square fashion from an origin point, you usually take the spokes of the Gann Wheel and use the numbers on those spokes as days, weeks, and months from an origin point. Past highs and lows are circled on the wheel to make it obvious which spoke a particular stock or commodity trades in. The following charts of weekly squares will demonstrate this use.

## Gann Square of Nine

Chart #103 is a weekly chart of Alcoa. The vertical lines are the numbers in the Square of Nine at the 225-degree spoke (or 315 degrees if you start March at 9 o'clock like some wheels do). This is the odd square spoke and the numbers run 9, 25, 49, 81, 121, 169, etc. On this chart those numbers represent *weeks* from a major low and as the chart clearly shows they scored major hits each time they came out.

Chart 103



This is a simple example of natural squares in weeks creating turns in the market. You would also notice, if you were to do some sleuthing, that the price the stock hits on

## Gann Square of Nine

the date of those time spokes is also another number on the wheel that is a harmonic of that spoke. In the Gann method you always want to look for both time and price relationships at all turns. Chart #104 is a weekly chart of Dupont on the 45-degree spoke (5, 17, 37, 65, 101, etc.) and Chart #105 shows J. P. Morgan on the 225-degree spoke.

Chart 104

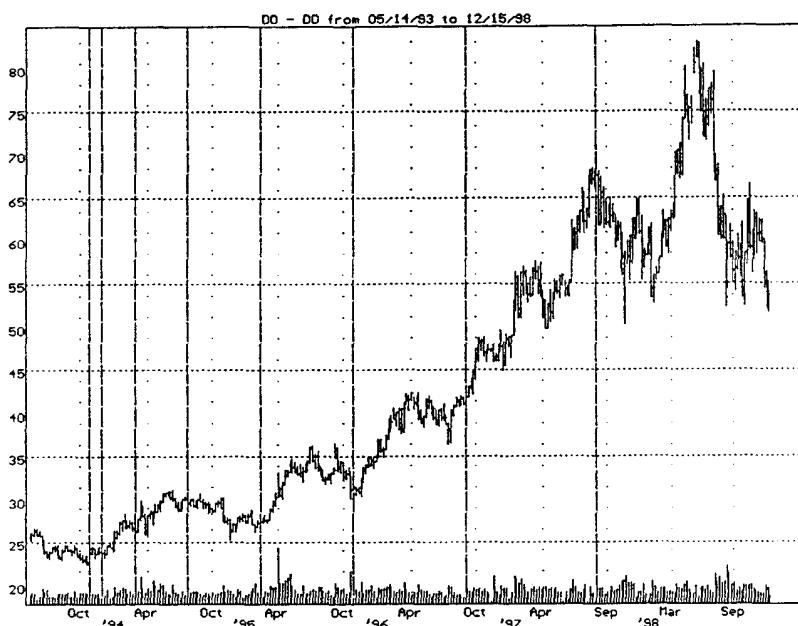
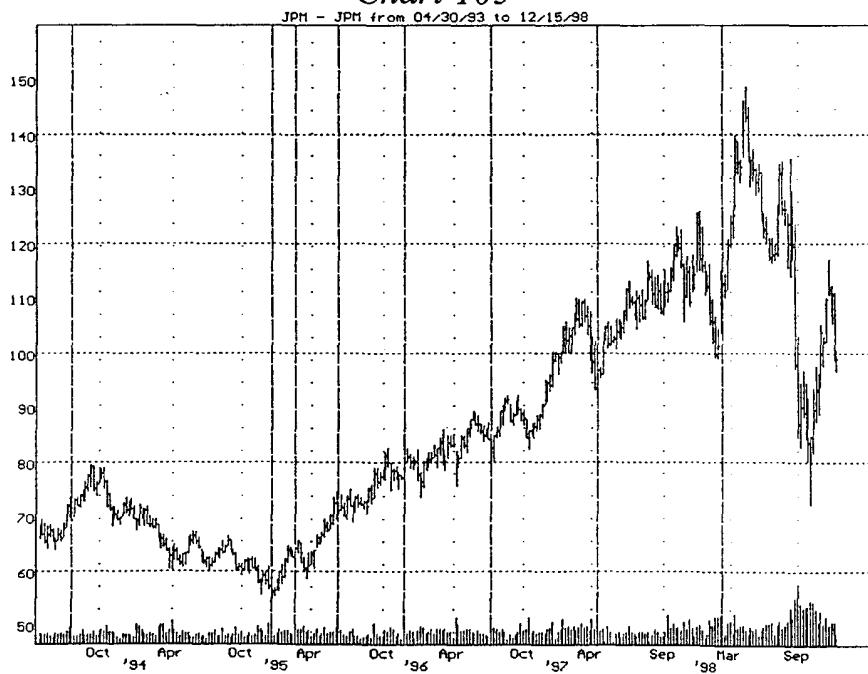


Chart 105

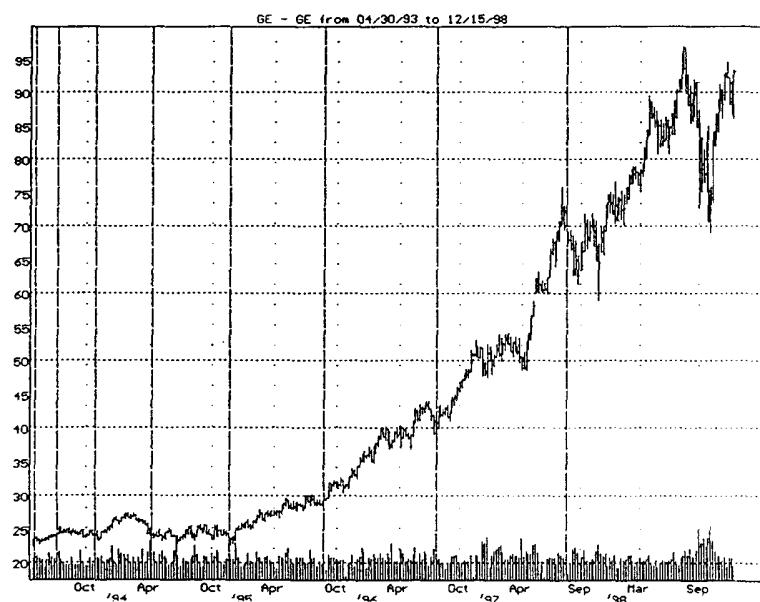


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## Gann Square of Nine

We see General Electric in Chart #106 and Boeing in Chart #107 with both on the 225-degree spoke. As you can see, this method is very accurate – within a week, for predicting major turns, although you do have to do a little work in deciding if they are lows or highs on the date of the turn.

*Chart 106*



*Chart 107*



## *Gann Square of Nine*

Instead of the traditional presentation of the wheel format, some Gann enthusiasts use a grid format, so that the rows, which represent angles, are easier to read as in Chart #108.

*Chart 108*

spoke	1	2	3	4	5	6	7	8	9
0	2	11	28	53	86	127	176	233	298
45	3	13	31	57	91	133	183	241	307
90	4	15	34	61	96	139	190	249	316
135	5	17	37	65	101	145	197	257	325
180	6	19	40	69	106	151	204	265	334
225	7	21	43	73	111	157	211	273	343
270	8	23	46	77	116	163	218	281	352
315	9	25	49	81	121	169	225	289	361

Incidentally, this chart has March at 9 o'clock with the 45 degree spoke (3, 13, 31, etc.) shown instead of those numbers on the 135 degree angle as shown in the big chart in this section. It's just easier to present a table with 0, 45, 90 etc., angles in a row, so that the March row in this table is 45 degrees and the March in the other would be the 180-degree row in this table. It really doesn't make a difference as long as the 45-degree harmonics are in line. In the table format note the number of the square, numbered across the top (1, 2, 3, 4, 5, 6, 7, 8, 9). A second and third table could be continued below with 10, 11, 12, ... squares across the top. The numbers going down the squares increment by the value of the square number at the top, so in the number 4 square that starts with 53, the numbers are incremented by 4.

## Gann Square of Nine

A table, seen in Chart #109, is also used with this method and is generally accurate, but not always. It shows *what to expect* (high or low) at each spoke depending on whether the cycle started with a high or low (example charts shown were started with lows).

*Chart 109*

	Start chart at LOW	Start chart at HIGH
0 degree	expect a low	expect a high
45 degree	high	low
60 degree	low	high
90 degree	high	low
120 degree	low	high
135 degree	high	low
180 degree	high	low
225 degree	high	low
240 degree	low	high
270 degree	low	high
300 degree	low	high
315 degree	high	low

In the next section we'll look at some of the astrological origins of Chart #109 and how Gann used planetary longitudes to determine prices on the spokes of these wheels.

I might also add here some brief observations about these Gann Squares, since there are many courses devoted to them. First, the square shown previously is certainly not complete. You would normally fill in all the numbers and keep going around the square until you get into the thousands. If you're trading the Dow Jones at 9,000 or more, rather than fill in all those numbers you would first go up and down the cardinal crosses to get a

## Gann Square of Nine

starting point. For instance, the North vertical cardinal cross runs up at 4, 15, 34, 61, etc.

To find the equivalent number near 9,000 just take the square root of 9,000 (94.87) and subtract it from the square root of your last number, in this case 61.  $94.87 - 7.81 = @87$  for the square root increment. Knowing that each number directly above another must be offset by two, we can use 86 or 88 as the increment. We then take the square root of 61 (7.81) and add 86 and re-square to get 8,800 for the number directly above 86. If we use 88 the next number up is 9,180. This means a full cycle at this level is about 380 Dow points (9,180-8,800), or 95 for each 90-degree rotation. The other cardinal points can be found similarly, or you can just increment the root (8,800) by .25 and re-square for each subsequent corner.

If you use odd priced commodities or futures you may want to construct squares based on their full price increments. For instance, Treasury bond futures trade in 32nds of a point, so if you use the Square of Nine, think in terms of 32nds per number. An example would be a price of 118 9/32. You first convert the full number of points in this case 118, so that you have  $118 \times 32 = 3,776$ , then you add the 9 to get 3,785. You then look up 3,785 on the wheel and go around in terms of 32nds. Better yet, you would construct a square of 32 just like the square of 9, but the first full square would have 32 in it with the start of the next square 33. It may take some juggling of angles to set up 32nds, or 18ths or any other number, but once you have it, it's good for life.

The principle of the Square of Nine applies to all numbers, but this actual square is based on the natural 1 to 9 numbers. The best way to use the technique is to construct a *specific square* for the all time high or low price for the stock that you trade. If the all time low was \$17, first put 17 in the center where 1 is located, start the first eight digits in the first square going up (i.e. 18, 19, 20...25) then the next square begins. If you use an all time high, you circle down. It's a lot of work but it really gives good results and you can perhaps quickly adapt an excel spreadsheet to do the work for you. You may also draw a

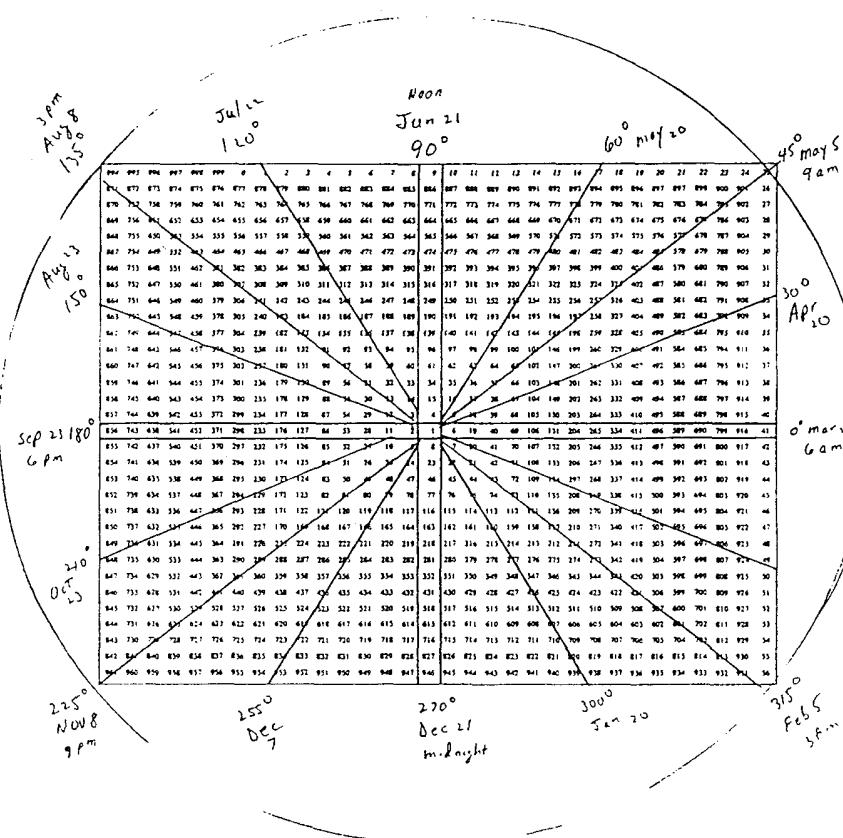
## Gann Square of Nine

circle around the outer square corners, add angles, and work the days of the year around the large perimeter.

The Square of Nine was not the only Gann square. Others that he used were based on the same principles, but the first circle, instead of ending at 9, went to 12, 24, or 36. Others also used 6 and 7 as keys, but the 9, 12, 24, and 36 are the most universal because of their 360-degree harmonics. Remember, the whole concept is to relate angular degrees to numbers laid around a circle. The reason he did this will be explained in the next section, but first we'll do a practical example so you can see how to use it. Most traders use the wheel for numbers, and if a stock or S&P future hits the corners of the Square of Nine you always get reversals, or at least major support or resistance. This works, but it's not really what it's all about. Remember, it's a square calculator, and as I've mentioned before and throughout this course, you will see examples of natural squares in days, weeks, and months being put on charts to call market turns.

Chart #110 is the typical representation of the Gann square of Nine with the March 0

*Chart 110*



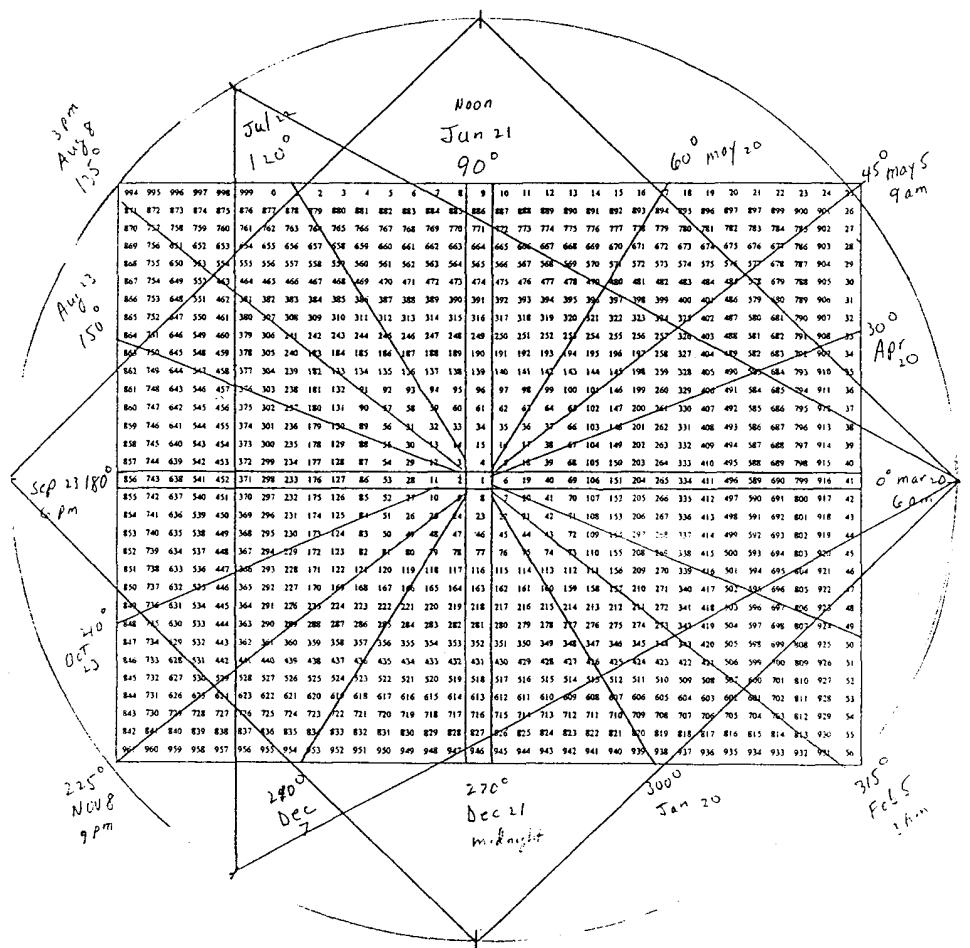
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## Gann Square of Nine

degrees on the right. Not shown are the degrees 0-360 along the outer wheel circumference and the triangle and square that are movable and pinned to the center. The corners of the square and triangle start at the outer circumference on the date in question and the remaining corners of the square and triangle point to other dates with their sides intersecting prices within the chart that should be hit on those indicated dates. This is shown in Chart #111.

Chart #111 shows the addition of the square and triangle pointing to March 20 or 0 degrees. Normally, you would set these dials to any date, and at the place where *the angles intersected prices within the numbered square*, you would expect a high or low to occur.

*Chart 111*

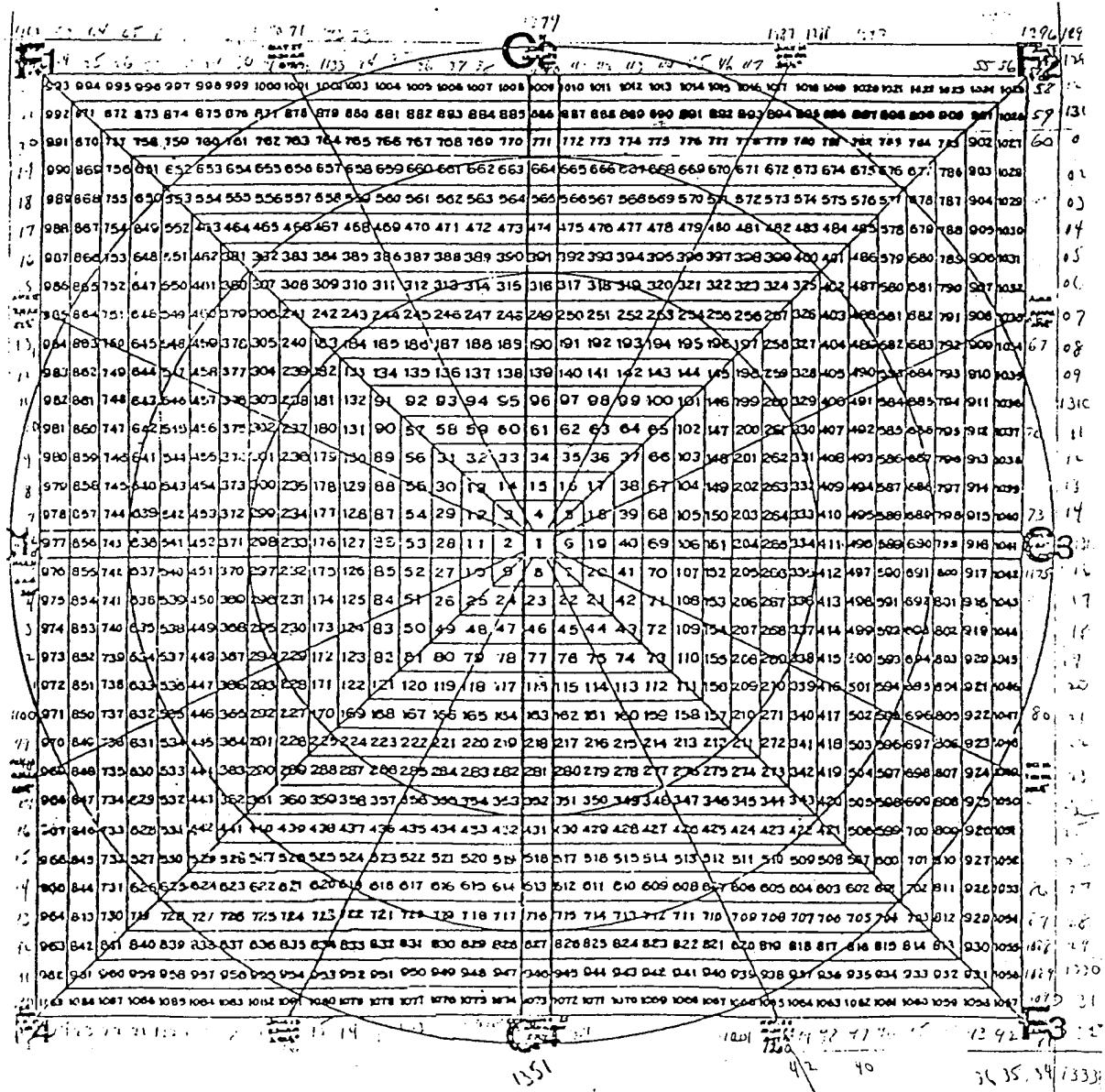


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## *Gann Square of Nine*

## ORIGINAL GANN SQUARE OF NINE

*Chart 112*



## ***Gann Square of Nine***

As I finish this course in the second week of January 1999, the market has just hit a major high and dropped some 600 points in three days. What was the significance of this? The top was over a weekend, so Friday, January 8th was the closing high at 9,643 on the Dow Jones, and Monday, January 11th the Dow closed at 9,620. You could try either date, or use an average for the calculations, but as you will see, it won't make that much difference. The first thing you need to do is keep track of time in terms of days, weeks, and months.

To keep track of time a spreadsheet could work, but personally programmed in basic, a small program that reads a file containing all the major highs and lows since the 1880's. The program then starts with the first date and then goes through the integers squared for days, multiplies that by 7 for weeks, and multiples days by 30.437 for months. As it squares these time periods, it checks to see if the answer falls between two dates I input, such as January 1st to January 15th. If so, *I know a natural square cycle* from that prior high or low, is coming out this week. When I input January 4th to January 20th, I got this printout:

Date came out	Integer squared	Squared period	Past high or low	Description of cycle
1/05/99	17 x 17	289 months	12/06/74	"Watergate cycle"
1/05/99	64 x 64	4096 days	10/19/87	"crash"
1/08/99	57 x 57	3249 days	2/15/90	"Japan crash"
1/11/99	37 x 37	1369 weeks	10/16/72	"Final fling low"
1/11/99	49 x 49	2401 weeks	1/05/53	exactly backwards
1/12/99	72 x 72	5184 weeks	09/05/1899	100 yr cycle

## ***Gann Square of Nine***

Since our top was January 8, or January 11, we see from the listing above that those two dates are “live” in terms of natural squares, and we would look up the charts for those years to look for similarities. I’ve mentioned before that every day a cycle is coming out, and the big moves are just clusters of many coming out together. We need to use our Square of Nine and circle these numbers to see what we get. We see immediately that these numbers (49, 17, 37, 72, 57) all fall along the corner axis on the square, therefore they are all harmonic, and we see that the ones with a top on the 11th (37, 49) fall on the odd square line. This is a very important line, since the odd squares are the breakpoints on the Square of Nine, so we look further. The price on the 11th was 9,620 and time and price must come together if the wheel works. Going up the right side of the wheel, along the series 5, 17, 37, etc., we need to know if 9,620 is near this angle. As mentioned previously, a number directly above another number in the Square of Nine is offset by 2. That is, the square root of 37 plus 2 re-squared is 65, the next number. If 9,620 is on this angle, it will be an exact multiple of 2 added to the square root of any of these numbers. So the square root of 37 is 6.08 and we add 92 to get 98.08 and re-square to get 9,620! That means 9,620 is on the same axis, the dates line up, and the price is a match, so look for a reversal in trend that will probably follow the number of days and percent from the prior time periods such as 1953 or 1972.

## Gann Square of Nine

*Chart 113*

Jun 21													9620
	133	134	135	136	137	138	139	140	141	142	143	144	145
	132	91	92	93	94	95	96	97	98	99	100	101	146
	131	90	57	58	59	60	61	62	63	64	65	102	147
	130	89	56	31	32	33	34	35	36	37	66	103	148
	129	88	55	30	13	14	15	16	17	38	67	104	149
	128	87	54	29	12	3	4	5	18	39	68	105	150
Sept 23	127	86	53	28	11	2	1	6	19	40	69	106	151
	126	85	52	27	10	9	8	7	20	41	70	107	152
	125	84	51	26	25	24	23	22	21	42	71	108	153
	124	83	50	49	48	47	46	45	44	43	72	109	154
	123	82	81	80	79	78	77	76	75	74	73	110	155
	122	121	120	119	118	117	116	115	114	113	112	111	156
	169	168	167	166	165	164	163	162	161	160	159	158	157
	Dec 21												

This example, Chart #113, is only one solution to the problem, but it shows a possible use for the Square of Nine in terms of time cycles and prices lining up. We'll come back to the astrology of the Square of Nine in the next section, but I know many of you Gann "groupies" want to know more, such as, what is it? Here are my speculations. First, I'm reasonably certain that this is a picture of the Great Pyramid of Giza viewed from the top down. As a Mason, Gann knew the occult significance of the Great Pyramid, and how it is the only structure on Earth that incorporates all the history of religion and numbers and mathematics in its form. The Pyramid not only solves the age-old problem of squaring the circle, but also squares the triangle and uses the phi and pi ratios at the same

## **Gann Square of Nine**

time. The circle inscribed within the pyramid's base, plus the circle that squares the base, is the distance from the Earth and the Moon. Therefore, we have a structure that incorporates the distances and radius of the Earth, Moon, and Sun, with the perimeter the exact number of days of the year. The slope of the pyramid is 1/7 of 360, or 51.51 degrees, which creates a right triangle with a square root of phi ratio of 1.27 and a hypotenuse of 1.618. Most of the other relationships of the Pyramid are planetary and the Gann square shows various circles (see Original Gann square chart) that "square" the squares. These circles appear to represent orbits of planets, since the circles intersect 225 (Venus), 361 (Earth) and 625 (Mars?). The first orbit could also be the master planet Uranus (7x12), since 361 is the square of 19, which is the distance of Uranus from the Sun compared with the Earth, and 19x19 is 361, so that this orbit "squares" the earth. The first full cycle of the Square of Nine ends with this 19 square, or 361, and on the chart you'll see that the first circle is inscribed within that square. Nineteen is a special number, the sum of 7 plus 12, which are the 7 days in the Bible, and the 12 tribes of Israel, and 7x12 is the length of Uranus' orbit, or almost exactly 84 years. Gann loved to use the number 7 in everything and Uranus spends 7 years in each sign, but 1/7th of the circle is 51.51 degrees (right triangle), which sets up the Fibonacci ratio (triangle sides 1, 1.27, 1.618). There is very strong evidence that Uranus is the ruler of the United States, since every 84 years since the time of Columbus in 1492, there is a major event in U.S. history.

The first big circle that hits 361 or 19x19 is also the only square that has 72 numbers in it (361-289), so there is a direct one to one translation of 5 degrees per number ( $360/72=5$ ). All the other squares have fractional translations.

When you put the square and triangles overlaying the Square of Nine, you construct Ptolemy's monochord diameter. This is the side of a hexagon and Gann students know well how important the hexagon chart was to Gann. The monochord diameter of

## *Gann Square of Nine*

120 creates a radius of 60, and  $60 \times 60$  is 3,600. The square bisects this chord at 60 and the trine cuts that chord at the musical fifth. The trine also sets up an inscribed hexagon (equal to the radius) as it rotates around the circle. Where the angles of the square and the trine cross, you find musical harmonics in the Square of Nine and major time and price changes in stocks...but that's another course.

## Chapter 10

### **GANN'S ASTROLOGICAL METHODS**

Gann believed in numerology and astrology. The two are not the same. A Numerologist espouses that numbers are alive and carry with them a sort of magical power. We believe the same when in a religious ceremony we name our children or change a name due to illness. The numbers that relate to the letters in a name grant powers to the individual. The Hebrew alphabet is entirely interchangeable as to numbers and letters. That is a key to the Bible in that the words are numbers and vice versa. Gann used numbers to predict stock prices but he felt the energy was also coming from the planet. In particular he believed in a theory that had been around since the early 1800's, that in the eclipse cycle of the sun and moon, they act as large electromagnets and as the eclipses take place electromagnetic radiation fluxes on the earth, and that people buy and sell stocks according to the energy released. Most of Gann's writings were disguised through the use of angles and buzzwords like "cycles" that stood for planetary movements. It is not my purpose to teach you astrology here, as that would take several books, but I will mention the basics well enough so that you will understand the Gann method and will be able to do research on your own. We will go through some of the basics that you'll need to know in order to comprehend the theory and put it into practice. If you're a skeptic and do not believe in astrology, all I can say is take the time to read through the material and then make up your mind. It's been my experience that after 30 years of trading the markets, and

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20 years of studying astrological methods, only the astrological material is worthwhile. This course, however, concentrates on basic principles that will help you to make money, whether or not you truly understand the origin of square roots, astrology, or trendlines, etc.

The Bible states that there are twelve tribes of Israel, and twelve Disciples of Christ, and these represent the twelve signs of the zodiac. The zodiac (circle of animals) is a circle drawn about the earth following the sun's path (ecliptic) that is divided into twelve 30-degree segments. Each of these 30-degree segments, or "houses," rule an area of life like health, money, marriage, career, etc. As planets pass through these areas as they circle the earth, the energy of the planets manifests, in accordance with the strength and "rulership" of the particular planet. The zero or starting point has been set at Greenwich, England for reasons too esoteric to explain for this work. This is the same longitude system shown on any map which starts 0 degrees at Greenwich. Each 30 degrees is a sign of the zodiac, but on maps in our time system we have 24 hours in a day and the earth (sun) makes a circle in one day, so that each hour of time is 15 degrees ( $360/24\text{hr}=15$ ). This is why the Gann square has 15-degree segments that can be used for hourly trading. New York City is 75-west longitude from England so the time difference is 75 divided by 15 degrees, or 5 hours difference.

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The names of the twelve houses of the zodiac are as follows along with their symbolic rulers and meanings:

<b>Sign/Degree</b>	<b>Symbolic Meaning</b>	<b>Planetary Ruler</b>
Aries 0-29	Who You Are, Health, Temperament	Mars
Taurus 30-59	Money, Business, Wealth	Venus
Gemini 60-89	Communication, Transportation	Mercury
Cancer 90-119	Property, Mining, Exploration	Moon
Leo 120-149	Speculation, Advertising, Amusements	Sun
Virgo 150-179	Army & Navy, Labor, Food, Health	Mercury
Libra 180-209	International Relations, Partnerships, Law, Spouse	Venus
Scorpio 210-239	Taxes, Death, Foreign Finance, Portfolio Mgmt	Mars
Sagittarius 240-269	Courts, Religion, Shipping, Insurance	Jupiter
Capricorn 270-299	President, Career, Business Conditions	Saturn
Aquarius 300-329	Ideals, Bonds, Policies, Good-will	Saturn, Uranus
Pisces 330-359	Secrets, Limitations, Jail, Hospitals, Research	Jupiter, Neptune

Most of the above concerns symbolic interpretation and is not necessary for first principles in stock trading. Later you will see that it makes a big difference whether Jupiter is in the second money house or Saturn is. For now, you just need to be able to observe what happens when a planet goes from one sign to another to see a change.

In the previous chart most of the planets, except Uranus, can be seen with the naked eye and the days of the week are named after them. They are, in order of the weekdays: Sun, Moon, Mars, Mercury, Jupiter, Venus, and Saturn. Saturn is the last one visible with the naked eye, and Uranus wasn't discovered until the last two hundred years.

After Uranus come Neptune and Pluto, which were only discovered in the past one hundred years. These have effects on the market, but the ancients couldn't see them, and therefore the older writings don't mention them. All seven planets out to Saturn, which can be seen with the naked eye, have a joint orbital period of 60 years, at which point all seven again return to the same zodiac position. Therefore, the 60-year cycle was always considered the "Master" cycle. I might add that Uranus, the next planet after Saturn, has an orbital period of 84 years. This seems a strange coincidence since there are 12 signs of the zodiac, and the seven previous planets would each get to spend a year in each of the twelve signs by the time Uranus next comes around ( $12 \times 7 = 84$ ).

Many traders start off studying astrology by getting an ephemeris and looking up the planets to see when the planets are making contact, or have angular differences, or are just changing signs. An ephemeris is simply a thick book that contains planetary listings and is available in most bookstores or libraries (although it may be in the occult section). Most are computer-generated listings showing each date from January 1, 1900, to January 1, 2000. The updated ephemerides for the next century are coming out now, but you'll need the old one to study past market movements during this century. They cost about \$15-\$18, and of course, you can also buy computer programs to run on your own computer. An example of a typical ephemeris page is shown in the charts. It should be noted that there are at least three types of ephemerides that you would use as an astrologer in the stock market. The most common is the "Geocentric" or *earth centered* that is the standard for 90% of this type of work and for all horoscopes. The "Heliocentric" is *sun centered* and shows planetary positions as viewed from the sun. This shows the earth as a planet, but does not show the moon. You need the heliocentric positions since the planets always go around the sun in a circle and their orbital periods are quite precise. Conjunctions between planets in heliocentric terms can only *occur once* each orbital return, whereas

with geocentric coordinates the planets appear to go backwards (retrograde) and forwards (stationary direct) for up to nine months at a time and you may find multiple conjunctions of the same planetary pairs. This is why Gann had a rule that a stock could make a double or triple bottom, but the fourth time it always went through. Two planets frequently conjunct three times then they usually go on their way. The third type of ephemeris is the Sidereal ephemeris, which is used in India, and is based on a geocentric *fixed star system that places the zodiac where it was about 400 AD*. Our modern day system is about 24 degrees ahead of this, so that when Saturn is at zero Aries in our geocentric tropical system it is only about 6 degrees of Pisces in the geocentric Sidereal system. Note that both tropical and sidereal systems are earth centered or geocentric, and not heliocentric. Interestingly, all three systems produce excellent results even though the placements are quite different.

Planets are useful for stock trading purposes because their orbits are precise and as they return to the same orbital location, stocks frequently work out the same patterns they did in the past. To the uninitiated this is not noticeable, since many of the time periods are of great lengths like 84 years or 30 years and most traders don't have old stock records. The orbital periods of the planets are as follows:

Sun	365.25 days
Moon	29.5 days
Mercury	88 days
Venus	225 days
Mars	687 days
Jupiter	4,332 days (11.86 years)
Saturn	10,759 days (29.46 years)
Uranus	30,706 days (84.07 years)
Neptune	60,199 days (164.82 years)
Pluto	90,801 days (248.6 years)

If the stock market followed these simple orbits it would be easy, but in reality it is combinations of planets that are important. We are incapable of completely knowing the influence of the planets, since we can think in only two or three dimensions (like planetary pairs). In reality there is a simultaneous attraction by gravitational forces on each and every planet all the time, and at all big stock market turns you will find multiple aspects between all the planets in multiple dimensions. Try conceptualizing a twelve dimensional structure and you can see the human limitation. Planetary pairs in two dimensions, however, do work very well and are well worth studying. My personal philosophical approach is to use the energy "footprints" the planets leave behind on charts. Regardless of how hard it may be for the human mind to comprehend the intricacies of all the planets, the complete system produces arcs and trendlines and patterns that repeat. If we can identify one or two pairs of planets, we can analyze the pattern in the charts and still come up with a good interpretation by looking at the past pattern when the two were similarly situated.

To understand how Gann used all this, you need to know how to calculate planetary conjunctions and combination aspects. The word "aspect" simply refers to an angle between two planets such as 30 degrees, 60 degrees or even 17 degrees. In theory each and every aspect from 1 to 360 degrees means something, but by and large we stick to the 15 degree harmonics of 15, 30, 45, 60, 75, 90, 105, 120, 135, 150, 165, 180, ...360.

We call the 0 aspect the conjunction, the 30 degree the semi-sextile, the 45 degree the semi-square, the 60 the sextile, the 90 a square, the 120 a trine, the 135 the sesquiquadrate, the 150 an inconjunct, and the 180 the opposition. The 0, 45, 90, and 180 aspects are considered bad, while the 30, 60, and 120 good.

When two planets come within an orb of influence of one of these aspects, things usually change. Stocks also change directions when individual planets change sign, or go from one zodiac sign to another, or when planets go retrograde, or return direct.

In order to watch for planetary pairs, such as combinations between Jupiter and Saturn, we need to note their differing orbital speeds. In the chart previously shown Jupiter had an orbital period of 11.86 years and Saturn 29.46 years. Jupiter is faster, since it takes less time to complete one full orbit of the Sun. These periods are based on earth years of 365.25 days per year. The question that presents itself is this: what is the period of time between conjunctions (0 degree aspect, or both at the same longitude) of Jupiter and Saturn? This combined periodicity is called the synodic period. You can calculate synodic periods by subtracting the ratio of one over each separate orbital period and subtracting each from each other ( $1/P_1 - 1/P_2 = 1/\text{combined}$ ). The resulting fraction is then divided into the number one to get the combined frequency. For example, Jupiter's period is 11.86(4,332 days) and Saturn's is 29.46(10,759). The ratios are  $1/11.86$  and  $1/29.46$ . One divided by 11.86=.084317 and one divided by 29.46=.033944. Subtracting one fraction from the other we get .0503727. Dividing this number into 1 we get 19.852 years, or 7,251 days. This means that every 19.852 years, or 7,251 days from each Jupiter/Saturn conjunction, there will be another one. The other aspects will also repeat with that frequency, but not because of differences in their placements in the orbit. Obviously, this is the 20-year cycle and you should be able to just mark off on your chart paper every 20 years to see the result, but it's not quite so simple. This is due to the retrograde positions of both planets in the year in question, and they could go back and forth, yielding one to three (rarely more but sometimes) conjunctions that year. Those conjunctions could give all highs, all lows, or a combination of highs and lows on each date. Of course the heliocentric (Sun centered) conjunction occurs only once and that's the one you want to locate for pure timing purposes and long range forecasting.

In astrological terms when we talk about "cycles" we really mean planetary periods. This has always been a secret buzzword among knowledgeable traders. The famous

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ten-year cycle is largely the Jupiter/Saturn cycle of 20 years, since you can only have angular separations between planets of up to 180 degrees and then you repeat, since 179 degrees is the same as 181 degrees. Another harmonic of the ten-year cycle is that it is 120 months, and Saturn moves at approximately one degree per month on the average, therefore it goes 120 degrees in ten years. Gann often talked about angles of one point per month. This was a veiled message in which he meant the average Saturn movement. Listed below are several well-known cycles and some of their causes:

Cycle:	Possible cause:
5 years	90 degree Jupiter/Saturn
7 years, 7 1/2	Uranus 30 deg., Sat 90 deg.
10 years	180 Jup/Sat, 120 deg Sat
12 years, 12.46, 12.78, 13.81 years	Jupiter, Jup/Plu, Jup/Nep, Jup/Ura
15 years	270 Jup/Sat, Mars, 180 Sat
20 years	Jup/Sat
30 years	Saturn
33 years	Sun
33.42 years	Saturn/Pluto
35.87 years	Saturn/Neptune
45.362 years	Saturn/Uranus
60 years	3x Jup/Sat, also 1 <sup>st</sup> 7 planets return
84 years	Uranus

Most traders who use astrology simply take a major high or low and write down the planetary positions on that date both geo and helio, and then calculate when in the

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future individual planets or combinations will form with those degrees. You could spot Saturn at 14 degrees Aries at a market high and watch for 14 degrees of all the other signs, or you could work on pairs like Jupiter and Saturn being separated by 17 degrees, or any other separation they made at a high or low, and watch when they move apart 15, 30, 45, etc. degrees from that 17 degree origin, or in other words when they were 17+15, 17+30, 17+45 degrees apart from the origin. This works all the time, particularly with helio positions. Others cast horoscopes, but I find the subjectivity of that too difficult to teach others until they have had several years experience. If you do cast a horoscope, use the first day of actual trading when the buying and selling start, and not, as is commonly thought, the date of incorporation. The examples at the end of this section give some astrological methods to follow.

Gann believed the subconscious or unconscious mind of the masses somehow kept track of planetary positions. We know many animals relate to moon cycles, and even women's menstrual cycles are lunar cycles, so it could follow that some innate biological system keeps track of planetary energies. To Gann's way of thinking people knew exactly where the positions of the planets were, and converted those positions into prices. For instance, suppose some trader is sitting at his desk watching IBM trade all day. If the planet Saturn affected IBM and Saturn was located at zero degrees Cancer, or 90 degrees into the zodiac (see chart for degrees), then the trader would start trading IBM at a \$90 price. As Saturn increased one degree the price of IBM would go up \$1. Similarly, if a planet was located at 14 Aquarius (314 degrees into the circle of 360), then the price could be \$314 or \$31.40, or \$3.14 for possibly, wheat. Gann found that planetary positions translated into prices in a direct proportion to their longitudes and moved point for point. The difficulty was that not all translations were dollar for degree, but some involved fractions. Proportions were the key. Sometimes the minimum movement of a stock of an

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eighth (before the recent change) was related to a degree, so that it took 8 degrees to move the stock \$1. The universal constant was the fact that all circles have 360 degrees, like the zodiac, and the price range of the stock or commodity should be translated into that 360-degree range. Sometimes that took the form of the range between the life of contract high and the life of contract low to be equivalent to 360, or the long-term high and low of a stock being divided into 360 segments. An index like the Dow Jones would be in complete cycles of 360, so that at current levels near 9,000 we would have 25 full cycles of 360 ( $360 \times 25 = 9,000$ ). This past summer, on July 17, 1998, the market topped at approximately 9,358. My hot-wire listeners heard me forecast for a few weeks that this would be the final high on that date and at that price for the following reason: 9,358 is 25 full cycles of 360 or 9,000 and 358 left over. That 358 in zodiac terms is 358 degrees or 28 degrees Pisces. On that date the great bull planet Jupiter was located at 28 degrees Pisces and furthermore, that night it was dead stopped, stationary in the sky, going retrograde. It did a very similar thing at the final high in August 1987. I knew for a number of reasons that as Jupiter went "backwards" at 9,358 the market would reverse and do the same. The rest is history. Many may ask why Jupiter and not Saturn or Mars? Well the answer is simple but slightly more complex to explain. It has to do with prior highs and lows and multiple harmonics from the past. For instance, Jupiter was the "trigger" on this July 17<sup>th</sup>, but exactly 8 years earlier there was a solar eclipse and the market topped prior to the Gulf War. The planet Venus makes an exact return to the same degree every 8 years, and was at the same position in 1998 and in 1990 at the final high. There were several other combinations, but we want to return now to our study of the Gann Square of Nine, or the square of 24, or square of 36. These are all astrological conversion dials.

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Our first step is to convert the degrees of the zodiac to numbers or dollars so we have:

Deg:	1 <sup>st</sup> Cyc	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Aries	0-29	360-389	720-749	1,080	1,440 ETC
Tau	30-59	390-419	750-779	ETC	ETC
Gem	60-89	420-449	780-809		
Can	90-119	450-479	810-839		
Leo	120-149	480-509	840-869		
Vir	150-179	510-539	870-899		
Lib	180-219	540-569	900-929		
Sco	220-239	570-599	930-959		
Sag	240-269	600-629	960-989		
Cap	270-299	630-659	990-1019		
Aqu	300-329	660-689	1,020-1,049		
Pis	330-359	690-719	1,050-1,079		

The table is self-explanatory but you simply start another cycle after 360, 720, 1,080 etc. You can make a large spreadsheet on excel or such, or just subtract the number 360 from your number until the remainder is in the first column. If your stock is 84, it's 24 Gemini (30+30+24); if the Index is 1,180, it's (1,180-1,080=100) 10 degrees Cancer. If the Dow Jones is 8,950 (8,950-24x360=310), it's 10 Aquarius.

To use this you take your number and convert it to a zodiac position and look in the ephemeris to see if anything is at that location. If not, try an aspect to that location like 30, 60, 90, or 180 degrees away. Using the Gann wheel, you spin the plastic overlays of a square and a triangle to point to the outer circle with the days of the year (degrees of the

zodiac), and the other corners of the square and triangle will show you the other degrees along the outer circle that may be the cause. For instance, if you set the triangle point to 17 degrees (April 7-8<sup>th</sup>, 17 Aries) then the other trines will be  $120+17=137$  and  $240+17=257$ , and those dates are 17 Leo on August 10, and 17 Sagittarius on December 10<sup>th</sup>. The square points are 107 degrees and 197 degrees and the dates are July 10<sup>th</sup> and October 11<sup>th</sup>. These other dates are important, since if the current date is a high or low it will most likely make an angle to a prior date of another high or low which would fall on one of those calculated dates. Since this may be confusing, let's try some examples. Your stock appears to be topping and you want to check it out. The stock's price is \$30 and today's date is November 1, 1998. You look in the ephemeris and see under November 1, 1998 that Saturn is exactly square Neptune at 29 degrees Aries 30 minutes (there are 60 minutes to a degree, i.e. 30 min is  $\frac{1}{2}$  degree) and Neptune is 29 Capricorn 30 minutes. This tells us that a major astrological event is taking place that day at about \$30 (29  $\frac{1}{2}$  Aries) and therefore a major change in direction would be warranted (hard angular aspect between two major planets). To go further you would look up the last aspect between Saturn and Neptune and see if your stock reacted to it. As mentioned earlier, most traders just want to make a quick buck so they will look up the ephemeris page for the current day and note any major planetary aspect, planets changing sign, or unusual degree locations from prior highs or lows in history they may have noted or have circled on the Gann wheel. This exercise will usually prepare them for the day, and since most turns come out within 5 minutes of the expected aspect, they are quite ready to watch the tape at that time and just go with the trend after the aspect hits, or planet changes sign. In theory, if planets work this way (planetary positions convert to price levels), then after an aspect of change occurs the long-term trend should start to deviate. On major indexes and averages like the Dow Jones that are made up of many diverse stocks this change in trend is often very subtle and

the prices may not move much for a day or two. The basic rule to follow is this: mark on your charts the closing price of the Dow Jones, or your individual stock, on the date of the planetary aspect. If over the next day or two the price trades above or below that price level, you go with that trend, putting a stop just above or below the price on the date of the aspect. That new trend will usually stay in effect until the next major planetary aspect, which could be days to weeks away. Even if you can't find a specific price correspondence between a planet and a price on a given date, know that the combinations of the planets are indeed summing up to that price that day, and until that price is regained the trend has changed as the planets have moved on.

If planets were being translated into numbers by the unconscious minds of the masses so that Saturn at 90 degrees represented \$90, then we should be able to plot on our chart paper a line moving each day with the longitude of Saturn for that day. We could then watch the stock go up and down following that line. As the stock's price hit the line, changes in trend would manifest just like a trendline, and that line would either become support if found below the stock's price, or resistance if found above. The real key, however, to spotting change in trend was not just the line of Saturn, but what would happen when Saturn made an aspect like 30, 45, 90 degrees etc., with another planet. If Saturn was at 90 degrees and Mars was moving faster going at a rate of 1 degree per day, while Saturn was 1 degree per month, at some date the Mars line would go up and cross the Saturn line. That crossing point would often pinpoint the stock's price projection for that date and its price. The aspect between the two planets would change the energy at the moment of contact, and the stock's cycle would change and the stock would change direction. Gann kept his charts by hand and overlaid all price charts with these planetary lines of longitudes. The only difficulty here was the translation of degree of longitude for each dollar of price. On slow moving planets like Saturn it might be one dollar of each quarter

degree, while with fast moving Venus it might be 25 cents in price for each degree. Once you found the fit, however, it would be consistent for years to come on that particular stock or commodity. Gann preferred commodities like wheat, since only one or two planets were needed, while with stocks you have hundreds of differing industrial groups and many different ruling planets. Sometimes Jupiter doesn't do anything for a stock and only the Sun and Mercury do. Sometimes it is Uranus and Pluto. The combinations are endless and that is why you should specialize in a handful of stocks that you know well and work out the planets that rule them.

Years ago, I discovered that Motorola only moved to combinations of Venus and Pluto (see Chart #144), and all I had to do was track those aspects, especially the trines and sextiles, for very big moves. In addition, when Venus was exalted in the sign of Pisces, things really went wild! The key here would be to know the stock moved to the cycle of Venus and Pluto, and to look for upcoming dates when those planets would be in aspect, and then translate those longitudes into prices to get the stock's target price. That translation could be done on the Square of Nine wheel, or another Gann square, but the best approach utilizes many different disciplines that give the same result. The best of these would be to simply look at the chart of Motorola for the last time those two planets were at the same aspect and see if the chart pattern was similar. It often was the case, and if the exact price levels weren't repeating, the same percentage moves up or down from recent highs and lows would be evident and could be projected onto the current case.

Now I know many of you who are unfamiliar with this will be skeptical, so I will now go through a full planetary cycle of Jupiter and Saturn as Gann would. There are numerous other aspects, time periods and sign changes that are significant, but these are not included in this course. I'll point out some techniques for further research, but for now I really just want to cover the fundamental principles.

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I mentioned earlier that the 60-year cycle was the master and also that all 7 planets come back to the same signs every 60 years. The 60-year cycle is the third 20-year cycle of conjunctions of Jupiter and Saturn, and these are mentioned numerous times in the Bible as being the keys. Jupiter and Saturn have three 20-year conjunctions in like quality signs and then they move on to another group. At the 60-year interval most of the qualities like Air, Earth, Fire, or Water would be the same and the market's characteristics would be similar. Much could be said about the "Great Mutation" of 240 years duration wherein Jupiter and Saturn have 12 twenty-year conjunctions and complete a full cycle, but I'll leave that for your research. The last one occurred in 1842 and is good until the year 2082.

Throughout the Bible you'll find many references to time periods that are multiples of the Jupiter (Jehovah) Saturn periods, such as 20, 40, 60, 120, 240, 360, 480, 800, 840, 900 etc. and these are meant to point out significant astrological events. In stock trading, the primary swings are usually Jupiter and Saturn in combinations and this is what causes the big economic cycles in the economy. Other combinations are Jupiter or Saturn with Uranus, Neptune, Pluto, or the Nodes of the Moon. To demonstrate this technique we will look at the Jupiter Saturn conjunction of 1921, and the resulting 1929 crash and Great Depression.

To start our lesson we review the first postulate of all cycle work; know where the cycle starts from to project the cycle forward. Many beginning traders use a cycle such as 10 years, and just look every 10 years from every high and low, indiscriminately, thinking the cycle will come out. This sometimes works, but it's strictly hit or miss. In astrological forecasting the cycles always start at the conjunction or zero aspect between two planetary pairs. To further simplify things we will use the helio conjunction at first, as there's only one of these and can be no debate about what period to start the count from. The geocentric conjunction often has three different starting points and all give good results, but one starting point is much easier to keep track of. The helio conjunction of Jupiter/Saturn for the 1920's occurred on August 23, 1921 and would be operative until the next one in 1941. The degree of the Zodiac was 27.2 Virgo (.2 means 2 minutes or 2/60 in decimal). The charts on the next few pages show the Dow Jones and the location of each