

## A Summary of

# W.D. Gann's Techniques of Analysis and Trading

### Psychological Framework

#### Master yourself

- Do not overtrade
- See if your trade is based on hope or logic and systems developed by you

#### Trading strategies

Have different strategies for the four situations:

- Bull market  
Bull market top i.e. reversal from bull to bear market phase  
Bear market  
Reversal phase from bear to bull market

#### Importance of number 3

Majority of moves will generally occur in time period of three - days, weeks or months.  
Never trade in the direction of the trend on its third day.

#### Tops, bottoms and consolidations

- Tops usually take time to form. Spike tops are less common compared to spike bottoms. Tops are marked by extreme movements in medium and small stocks. They will rise by even 20% in a day. These are called blow offs. Because of this short-selling on extreme top is risky.
- Divergences will appear at the top but they cannot be used for timing the trade. Time cycles shall indicate when the actual reversal will start.
- In bull market watch for a correction which is greater in both price and time than the previous corrections in the move up. (Opposite in the downmoves).
- Highest probability of support is that the corrections in the uptrend will all be very close to equal.
- Swing objectives - add the range to move to the top of that move to find out the target for the next upmove or reverse in the bear market.
- Square of numbers and 50% of the difference between those squares are significant support and resistance, but cannot be traded by themselves.

Gann says that there can be nine mathematical proofs of any point of resistance

1. Angles from top and bottoms
2. Angles running horizontally i.e. the previous tops and bottoms
3. Time cycles (vertical angles) (Press a short sale if there are three or four days of sideways movement after a high day and this is followed by a down day with high volume where low is lower than the low of the sideways movement and when this coincides with expiry of time cycles)
4. Crossing of important angles originating at zero
5. Crossing or coming together of angles from double or triple tops or bottoms
6. Crossing of double or triple tops or bottoms
7. Past resistance/ support
8. Volume of sales
9. Squaring of time and price.

Weak stocks will generally not rally until either a test of the first bottom or a higher bottom is made by the market. (That is why AD line is a lagging indicator and generally moves up in the third wave)The third move trying to break the consolidation top/bottom is the most important. If it fails, a fast move in the other direction may be expected.

False breakouts from consolidation result in very fast moves. False breakout occurs when a move outside the consolidation zone fails to sustain in the following week and where the price has not gone beyond three points above the top. These false moves start with high momentum.

A breakout from a three-four day consolidation in a very narrow range results in sharp three day move.

Faster moves start from third or fourth higher bottom. It will be strong move if there is space between the third or fourth bottom and the previous top.

Trend and trend following techniques: In fast advancing markets, in the last stage of the campaign, reactions get smaller as stocks work to higher level, until the final run has ended. Then comes a sharp reaction and a reversal in the trend. Same happens in the bear market. Once you are convinced that a trend is in force, do not wait too long to go with the trade. Early in the trend buy/sell a stock which is already strong/weak. Fast moves generally come from bear market bottoms. These moves usually run three weeks up, then move sideways three to five more weeks, and then accelerate followed by another sideways movement. Under fast moves the first signal to trend change is overbalance i.e. reaction gets larger compared to the earlier ones, specially in the fifth wave. Watch the changes in momentum of price - is the market/stock gaining less points in more time? If the market is trending up, then it should go up more time than it goes down. And vice versa.

Any reversal pattern should be seen in conjunction with the time cycles. Do not pay attention to the financial press.

Use simple trading filter of not entering the market on the third day of the move.

## The Cycle of years : Seasonality

Watch for significant days in solar year - Dec. 22, March 21, June 22, Sep 21/23 etc. and days on important angles from these days e.g. 15 days from Dec. 22 i.e. Jan 5-6, Feb 5, May 6, July 7, August 8 etc.

**Important count of days:** Significant changes in trend may take place on the following days from the significant highs/ lows - 30, 45, 60, 90, 135, 150, 180, 210, 225, 315, 330 and 360.

**These are calendar day counts:** Trading day counts are 11, 22, 33, 45, 56, 67, 78, 90, 101, 112, 123, 135, 146, 157, 168 and 180. True understanding of cycles are obtained from the calendar days.

**Important count of weeks:** 13, 26, 39, 45, 52, 78. 7 week period is considered as death zone. Important count of months - 6, 12, 144.

**Geometric Charts, angles and price squares:** 365 days is an important cycle of one year. In a circle there are 360 degrees which very nearly correspond to this cycle. In other words, one day is equal to one degree of the circle that the earth makes around the sun. Hence the significance of the important divisions of the circle (into angles) on the chart. These angles are 45, 90, 120, 135, 180, 225, 240, 270, 315 and 360.

Dividing a line parallel to the 90 degree division of the circle we get a square. Divisions of this square gives important angles on the charts.

There are two kinds of cycles: Time cycle or natural cycles and cycles derived from the significant prices.

And these cycles will have important divisions on 1/8, 1/4, 1/3, 3/8, 1/2, 5/8, 2/3, 3/4 and 7/8.

Thus the 30 year time cycle will be divided into important probable turning points as follows:

1/8 - 3.75 years

1/4 - 7.5 years

1/3 - 10 years and so on.

The significant time cycle/squares are **Square of 52** on weekly charts. Use it on important high/low as well as on those points which start a 90 day cycle. Also two squares or a cycle of two years can be used. Inner squares (squares formed within the square) and outer squares (squares of the same size placed adjacent or diagonal to the square) should also be seen when price moves into the same.

**Square of 90** is also important - in the same manner as square of 52 on weekly charts and monthly charts.

**Square of 12** is important.

**Multiples of 9** are also important to watch.

**Square of 144** is the most important square for use on monthly charts. These cycles have influence on price in terms of absolute numbers in addition to the time cycles they signify. It means that a movement of 144 point in a stock is important by itself.

The further divisions of time and price are derived from this master chart as follows:

$$144 * 144 = 20.736.$$

The important divisions are

**Division Days Weeks Months Years**

1	20.736	2.962	682	56.8
1/2	10.368	1.481	341	28.4
1/4	5.184	740	170	14.2
1/8	2.592	370	85	7.10
1/16	1.296	185	43	3.55
1/32	648	93	21	1.77
1/64	324	41	11	0.89

Weekly and monthly time cycles are the most important cycles.

- In the short term, watch 3.5 day i.e. the 3rd / 4th day from the important top / bottom for change in minor trend. It may become a beginning of a major trend.
- Reactions will often last for two or three weeks. Therefore watch 14th day and 21st day along with the 7th day from the important top/ bottom. Out of these 14th is the most significant and 21 the next. (Note that 14 is very close to 13 and 21 is Fibonacci number itself).
- 1/16 of the year is 23 days. Watch for this too.
- Square of 7, 49 is very important for change in trend.
- Watch for a change after 42 days (2x21), but the change may not occur until 45th-46th day. (I have noticed that on many charts of A group stocks 42 day or near about fixed time cycles are important. These numbers, very close to each other, gives some flexibility in analysis, Fibonacci numbers plus minus a few days).

On yearly charts, 90 year, 60 year, 30 year, 20 year, 10 year, 7 years and their multiples and 5 year cycles are important to watch especially the simultaneous end/beginning of these cycles.

1/3 years from any top/bottom when combines with 1/2 or 1/4 years from any other top/bottom becomes very important. 1/2 of the year is the very important - same as the half of the range/high. Anniversaries, however are the most important. 39 weeks and 17 weeks and 35 weeks are also important.

The cycles derived from prices are based on High, Low and Range (i.e. difference between high and low). The most powerful is the square of the range. The absolute number at high, low or that of range is assumed to be forming a time cycle with so many days, weeks or months. In other words, a high at 60 means a time cycle of 60 days/weeks/months. All the division as mentioned earlier will be applicable to this cycle.

Thus a cycle derived from prices will have two axis - Vertical price axis and horizontal time axis. Significant changes can be expected at important divisions of price or time. But the most significant changes should be expected at the angles made by combining the two. These angles are made on the square of the price. Here *square does not mean price raised to the power of two. This is the geometrical square where the length of one side is equal to the price. The square is drawn down from high and up from low.* The square of range can be made down from top or up from low. In a square of high at say 60, drawn on daily graph will have its corners at the following four points - 1) at the price (at 60) 2) at the price (at 60) 60 days away in future i.e. 60 on price axis 60 days to the right on the time axis from the day on which the price has reached 60. 3) at zero on price axis just below the high and 4) at zero 60 days to the right of point 3.

If the price moves down one point each day the price will reach to the point 4, i.e. 0 on the 60th day. This action is called squaring off of the price. The angle of fall will be 45% on the square. This is also referred to as 1x1 angle i.e. fall of one unit in one day. In same fashion we can draw angle 2x1 i.e. fall of two units in one day and so on. The most significant angles are 2x1, 1x1 and 1x2. These angles are drawn from point 1, 3 and the mid-point between 1 and 3 and the mid-point on 2 and 4.

Crossing over of the angles drawn on the square are considered probable turning points. Angles from 50% mark should always be seen.

When the price breaks below 45% angle line it signifies a weak position and indicates a decline to the next angle. If it again crosses the 45% angle it is said to have regained its strength. At the crossover of these angles distance from the base i.e. the day of high/ low is important. Larger the distance, more powerful the trend is likely to be.

1/2 is the most important level. This is the centre of gravity. If the price falls below this level and bounces back to touch this level again, on the first such occasion it is good set up to shortsell. If the price comes to 50% of high and 50% in time, it may be a high probability buy which may result in 3 months fast move up on the weekly chart.

The third time against any support or resistance zone is the dangerous time. The 1st, 2nd, 3rd, 4th, 7th, 9th and 12th squares are the significant squares of lows but all should be monitored. (i.e. the price levels at 2,3,4,7,9,12 times the low).

- The first year of a decade is the year to look for a bear campaign to end and bull market to begin.
- The second year, is a year of a minor bull market or a bear market rally.
- Year three is the start of bear year, but the rally from the second year may run into March or April, or if the second year is a decline, the decline from the second year may run down and make bottom in February or March of the third year.
- Year four is to be a bear year, but it ends the bear cycles and lays the foundation for a bull year.
- Year five is the bull year, the year of ascension.
- Year six is a bull year in which the bull campaign which started in the fourth year usually ends in the fall.
- Year seven is a bear year (but note that 1927 was at the end of a 60 year cycle and that there was no decline).
- Year eight is a bull year. Prices start advancing in the seventh year and reach the 90th month of the decade in the eighth year. This is very positive and a good advance usually takes place in this year.
- The ninth year of the decade is the strongest of all bull years for bull markets. The final bull campaign culminates in this year after an extreme advance, and the prices start to decline. The bear market usually starts in September to November.
- Year ten is a bear year. A rally often runs until March or April, then a severe decline takes place until November or December, when a new cycle begins and another rally starts. (Look for such cycles in the Indian indices).

In a strong rally the lows of the reaction end above the top of the previous rally. The duration of the quick counter trend moves is three to four days on the indices and three to five days on the stocks. A movement exceeding the fourth day indicates the trend may go into a consolidation or reversal whereas reversal is higher top and higher

bottom compared to the previous day or vice versa. Bar reversals at cycle ends are extremely important points for reversal in the trend. A stock or commodity can correct more than four days and then continue the trend. This next correction (countertrend) in time will likely be seven to ten days.

- Smallest complete cycle is 5 years.
- Minor cycles are 3 years and 6 years.
- Always watch for change in the 59th month.
- Bull or bear campaigns seldom run more than 3-3.5 years up or down without a move of 3-6 months of one year in the opposite direction, except at the end of a Major cycle, like 1869 and 1929.
- Many campaigns culminate in the 23rd month.

The purpose in trading is not to make pick exact highs and lows. The purpose is to make money. Always have a plan. The opportunities are many in the markets, and you will miss many. But do not worry or fret about missing an opportunity, as another will be along shortly. Trade from a plan and do not react to the markets. Knowledge, discipline, courage and hard work are the requirements of skilful trading.

Time taken by planets for revolution around the sun:

<b>Planet</b>	<b>Years</b>	<b>Days</b>
Mercury		88.97
Venus		224.70
Earth	1	365.26
Mars	1.88	686.98
Jupiter	11.86	4.331.98
Saturn	29.46	10.760.60
Uranus	84.01	30.685.50
Neptune	167.69	61.285.25
Pluto	247.69	90.465.38