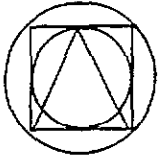


NEWSLETTER # SIX

November, 1991



AUSTRALIAN
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COMMITTEE

Your Executive Committee comprises,

Charles Balas	- President	(02) 522 5220
Dawn Bolton-Smith	- Vice President	(02) 969 7615
David Hunt	- Secretary	(02) 238 7856
Christopher Carr	- Treasurer	(02) 436 3202
Charles Alexiou	- Public Relations	(02) 2515033
Merril Armstrong	- Committee Member	(02) 282 3555

Our Immediate Past President Charles Alexiou has rejoined the Committee as Public Relations Officer after a well earned rest. Welcome Back!!!

Newsletter Edited and Published by DW Hunt & C Balas.

YOUR COMMITTEE PART 2

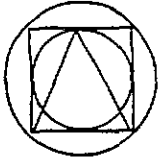
PRESENTING: Christopher Carr

Christopher is a relative newcomer to the world of technical analysis. The last couple of years have been a steep learning curve.

He started out as an academic historian and taught for a number of years at university level. Later he became involved in small business ventures with a number of partners. His involvement in the stock market started as a rather casual hobby. The full time professionalism came later.

He uses Computrac, which he considers to be a useful generalist system. After evaluating a number of trading styles, he considers Gann's to be the best. He intends to remain a serious student of Gann trading.

Christopher is an associate of the Securities Institute of Australia, having completed the graduate diploma course.



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PRESIDENT'S ADDRESS

Fellow Analysts,

Our Association has certainly been expanding in leaps and bounds recently. Attendances at our recent meetings have been excellent with informative guest speakers sharing their experiences and knowledge with us all.

There were some excellent ideas and suggestions put forward during "Directions 1992" in our October meeting. Our membership base is a store-house of information and knowledge, and it was pleasing to see the many original and interesting ideas put forward on the night. Many of these suggestions will contribute to more lively and diversified meetings in the future.

There has been increasing interest in our Association from interstate, particularly from Victoria, Queensland and Western Australia. New members have included analysts from Melbourne, Sydney and country NSW. We have now reached and surpassed our 55 member target and with your help we will easily accomplish the next Fibonacci 89.

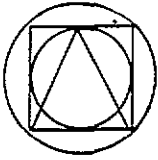
Our Newsletter is distributed to IFTA (International Federation of Technical Analysts) of which ATAA members are automatically affiliated with. IFTA is represented by over 23 countries spanning the globe with a membership base of over 1600. We will be publishing some of the articles from our affiliates in the future. Contributions, on any topic, from members for the ATAA newsletter are always welcome and encouraged.

Well, 1991 is drawing to a close and there are many challenges ahead for 1992 and beyond. The plethora of trading systems, software tools etc coming on the market will no doubt assist analysts but also add to liquidity and increased market volatility in the future, bringing with it new opportunities and new ways of analysing markets and market behaviour.

In all trading ventures it is worth remembering the axiom, "Patience is bitter but it's fruit sweet."

On behalf of your Executive Committee, I wish to extend to you and your families a very happy and prosperous 1992.

Charles Balas,
President.



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MONTHLY MEETING CALENDAR

Please note these meetings in your diary.

- 1 November Meeting: November 18 1991
Location: State Library NSW
Method Night: MACD
Discussion Leaders: Merrill Armstrong
Chris Carr
- 2 ATAA Xmas BBQ: December 15 1991 3pm
Location: 21 Young St, Sylvania
Details: Food Supplied BYO drink
Cost: ATAA members & family free
RSVP PLEASE SO WE CAN CATER ->>> 522 5220 or 545 2605
- 3 February Meeting: February 16 1992
Location: State Library NSW
Topic: A> Creating a Trading System
B> Portfolio Management
Presenter: Phillip York, QBL
- 4 March Meeting: March 16 1992
Location: State Library NSW
Topic: Knight Ridder Profit Centre
Presenter: Tom Scanlan
- 5 April Meeting: March 20 1992
Location: State Library NSW
Topic: Elliot Wave
Discussion Leader: John Gajewski CBA

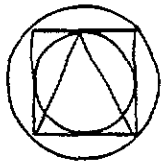
In addition we will be holding a Point & Figure workshop lead by Colin Nicholson early next year.

Meeting details:

Time: 5.30 for 6.00pm
Day: 3rd Monday of each Month (except Dec & Jan)
Location: Council Room
Level 1 Old Building
State Library of NSW
Macquarie Street, Sydney

Information:

David Hunt (02) 238 7856
Charles Balas (02) 522 5220



MOVING AVERAGES NEED NOT BE SIMPLE

Will Slatyer

A moving average can smooth out the daily fluctuations and according to the number of days which make up the average, can produce a gentle undulating line.

There are a number of methods of formulating moving averages.

Conventional - which is calculated by adding the daily prices for the number of days required, and dividing the sum of those number of days. The "n" average for each subsequent day is made by deducting the price for day "n-1" from the aggregate, adding today's value and dividing by "n".

Average Modified - which deducts the moving average instead of the daily price "n-1". Weighted Moving Averages - which adds weight to recent data to make averages more relevant to today's market.

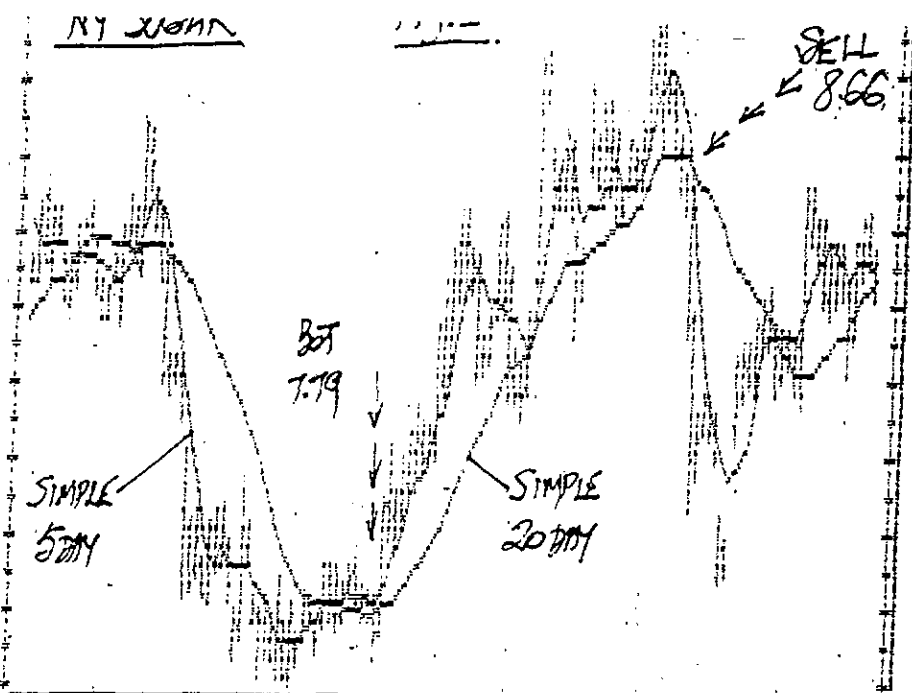
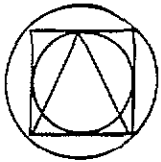
Exponentially Smoothed Moving Averages - which uses a World War II mathematical technique for tracking aircraft and projecting their position by geometric progression.

Different systems are shown in Fig 1. These different forms of averages are described in Perry Kaufman's book "Commodity Trading Systems and Methods" (P.J. Kaufman -Wiley).

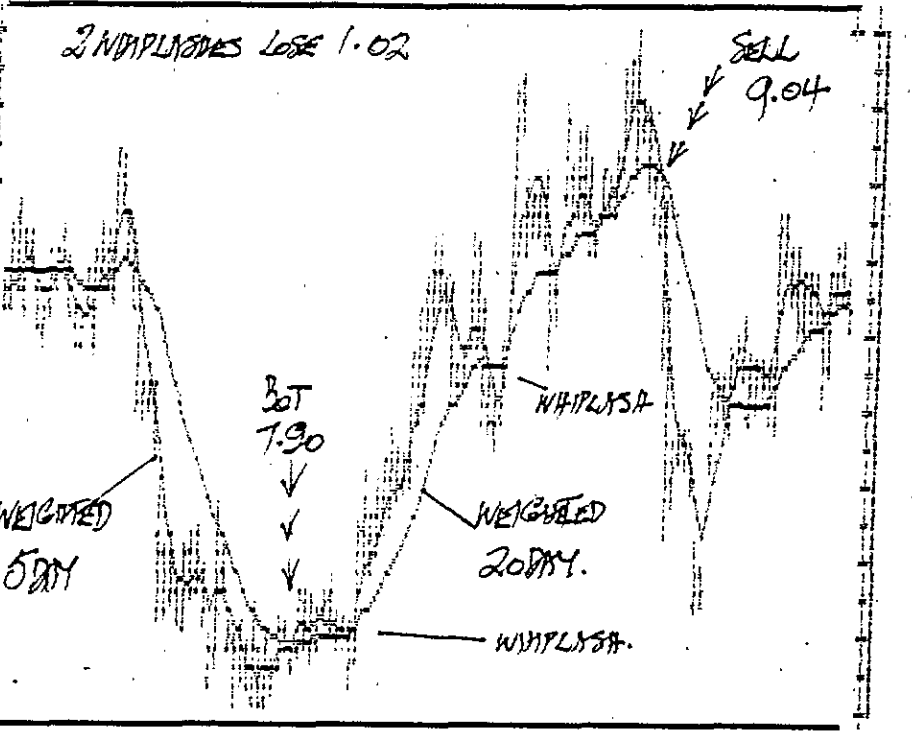
When I first looked at moving averages in the sixties I did not have the guidance of a Kaufman, and was attracted by the way that a combination of two moving averages produced an unequivocal buy or sell signal that could be demonstrated to my wool buying colleagues. Number crunching showed that a combination of 10 and 50 day moving averages produced good buy and sell signals for Australian greasy wool.

The philosophy of hedging commodities, which I still use in finance and investment, is to speculate in the commodity, and use futures to hedge the risk of sudden turns in the market.

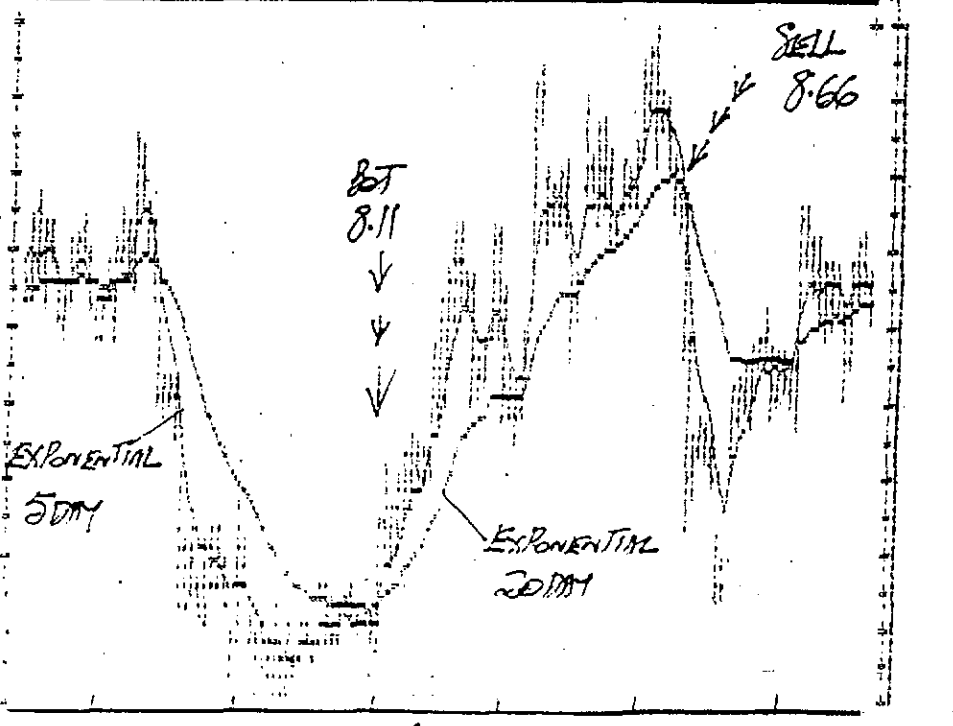
In the early seventies wool boom I found that I had to modify the averages combination to 5 and 20 to achieve good results. Later, when in the broking industry, I was to find that the 5 and 20 day combination was successful in trading cattle futures but particularly in Bank Accepted Bills which the SFE introduced in 1978. It was only when gold speculation became popular in the late seventies that I found that trading simple moving average combinations need steel nerve and a long pocket in volatile markets.



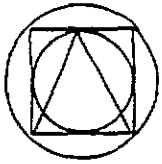
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Optimise

The fact that different average combinations worked for different commodities, led me to the belief that different combinations were needed for changing circumstances. With the introduction of the personal computer in the eighties, I was able to arrange a program which optimised moving average combinations to arrive at the right combination for the current market in each SFE market.

It is worth mentioning that I don't believe in optimizing over a long time period such as two years. This simply produces a combination that on average has been successful for two years. It is likely to cut out the most profitable combination in strong runs, because that combination was unsuccessful in a slow moving market. I tend to use a maximum of 90 days in the program but to optimise often.

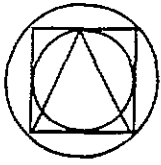
Fine Tune

Even with optimised moving averages the combination is still what occurred in the past. In an endeavour to improve results I looked at shortening the averages when an indicator which I called pressure (similar to a Relative Strength Indicator) rose to high levels. This meant that the longer an unbroken bull run lasted the shorter the moving average combination became.

An example would be to start with 5/20 but shorten to 3/9 after long bull run (Fig 2).

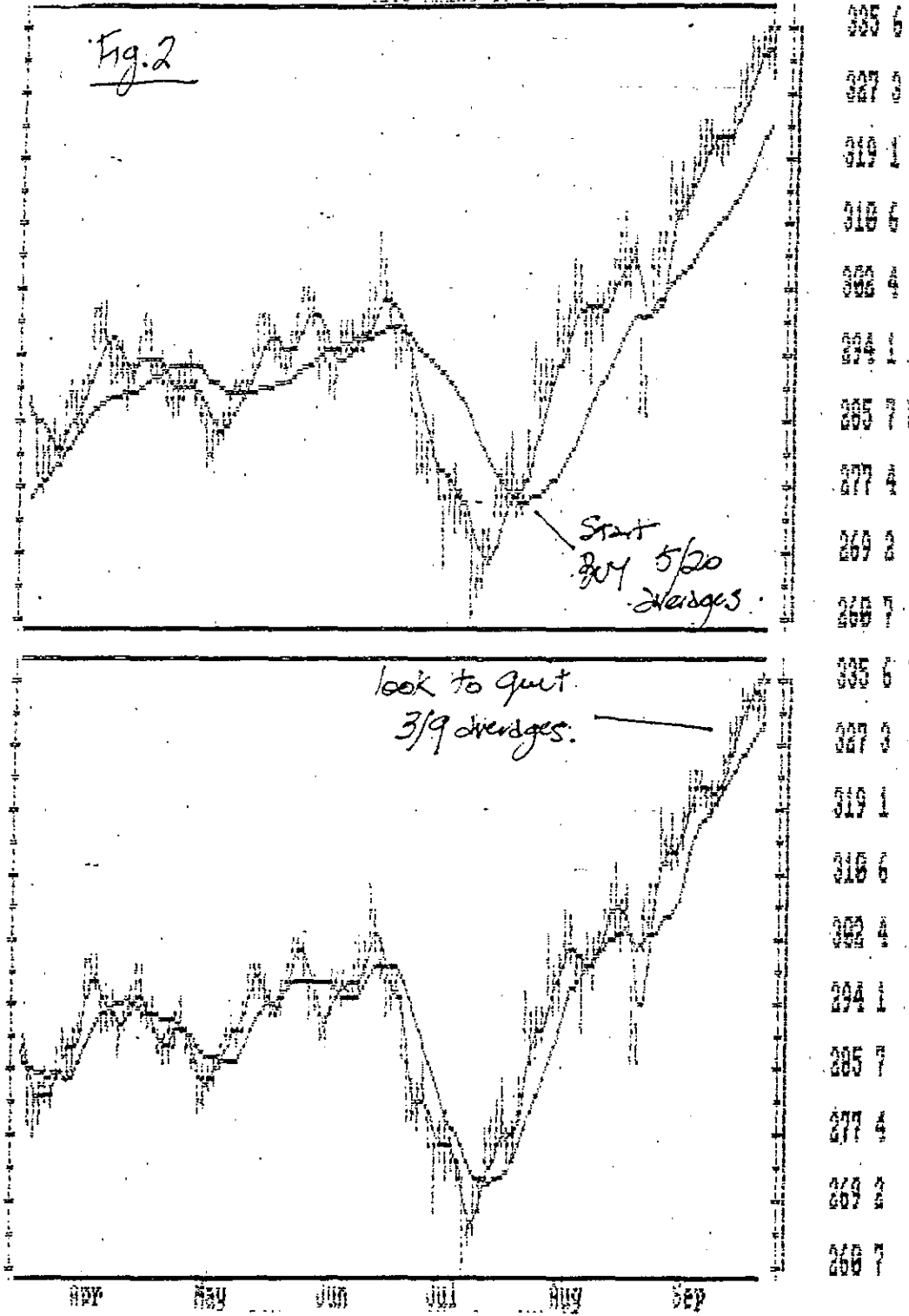
Filter

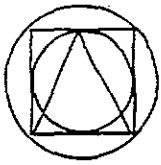
The combinations still produced whipsaws - that is loss producing quick buy/sells which deplete capital and upset hedgers. To cut down on whipsaws I introduced filters to the moving average crossovers. This is best illustrated using an oscillator which is the difference of two moving averages. The normal moving average crossover occurs with the oscillator at zero. I ignored the zero crossover point but moved the buy/sell signal to the point where the oscillator had reached a percentage of the price. I introduced different buy/sell signals for quitting a position, and taking a new position in the opposite direction, on the basis that one should not simply reverse positions in most markets (See Fig 3).



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CBOT WHEAT 89/91





Boom Profit Take

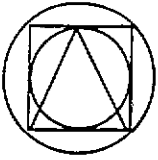
When I tested this moving average system on the gold fix from the days of \$35/oz. through the gold boom and bust, I found that I needed to add another factor for booms and busts. In exponentially moving markets my shortened combination still missed a lot of profits on reversal from a peak or trough. I introduced a rule which quit the market on a reversal of the oscillator by a certain number of points, after the oscillator had reached extreme levels. I also had to find a method of re-entering the market when the peak proved to be false and this was achieved by using previous oscillator levels (See Fig 3).

The resultant system, which in 1983 I still calculated by hand, kept individual trade losses contained but allowed profits to soar. The system never made a year on year loss between 1965 and 1983 on the gold market despite the range \$35-\$850/oz.

In the 1980's I needed a system to hedge currencies, so I employed a programmer who was a trained actuary, to computerize the system. The only change that was made to the basic gold system was the use of a mathematical formula to calculate the buy/sell signal at the close of the business day instead of waiting until the next day opening to take action.

Since 1985 I have given hedge advice to clients on diverse markets such as Swiss franc, New Zealand dollar, Australian dollar, New Zealand interest rates, Australian interest rates, US interest rates, cotton and gold. As any experienced trader can tell you, cotton and the Australian dollar are two of the most treacherous markets because of sudden sharp movements. The results of advising a cotton producer in hedging his export crop combining Australian dollar and cotton hedges illustrate the success of the system.

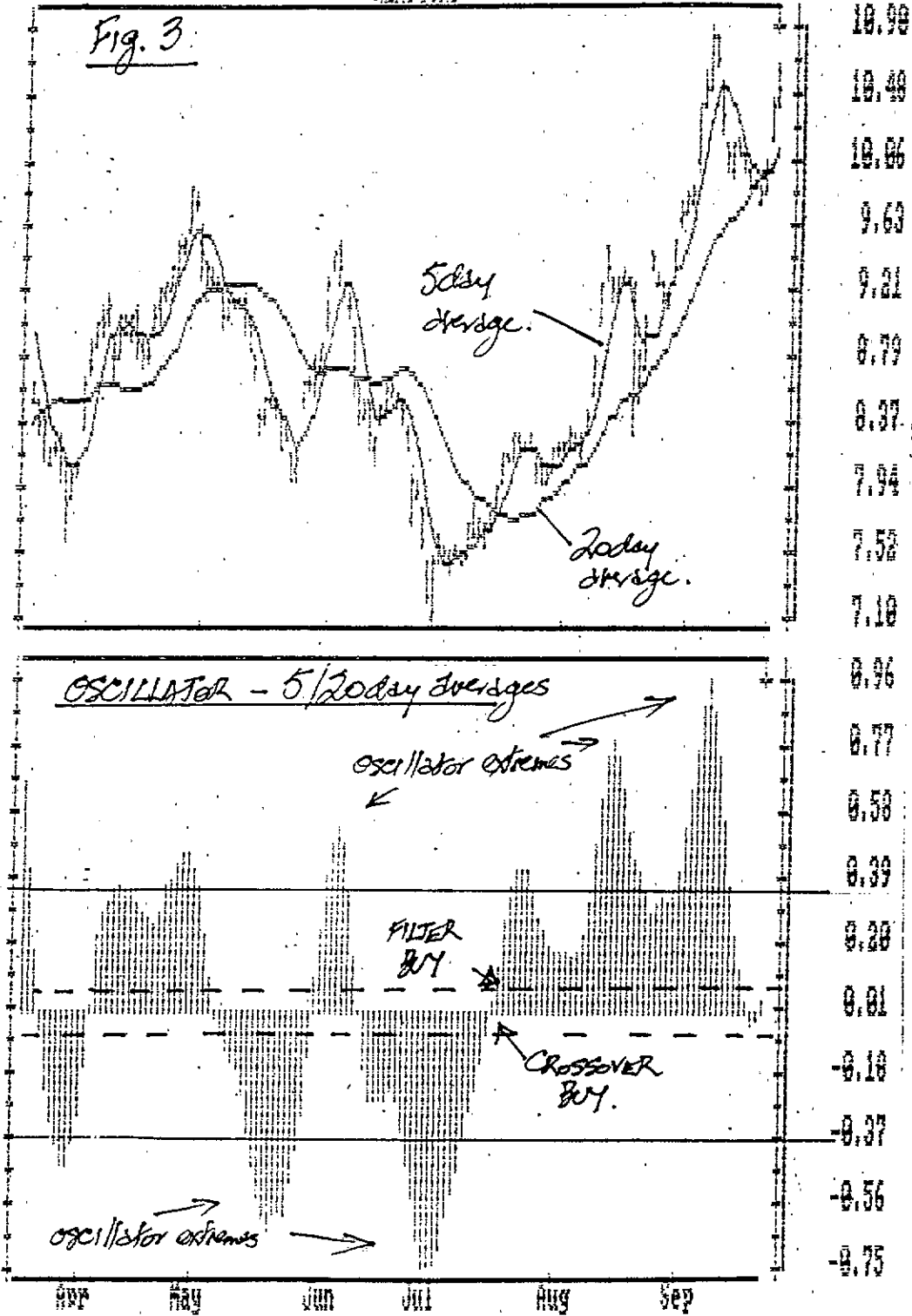
CROP SEASON	UNHEDGED RETURN PER BALE	FIRM SYSTEM RETURN PER BALE
1987	A\$458.50	A\$575.12
1988	A\$435.55	A\$581.13
1989	A\$403.05	A\$440.80
1990	A\$494.03	A\$460.63
1991		

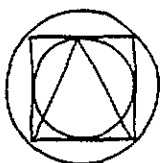


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Fig. 3





In recent years I became interested in computerized systems, and have worked to produce a "black box" model that could be used by someone who had no knowledge of technical analysis. My experience with corporate hedgers (treasurers, not dealers!) and offshore borrowers indicated that people using markets to hedge, do not want to trade often. They want to take action in the market the least number of times necessary to create futures/forward profit/losses to offset against physical market losses/profits to produce a net zero result from hedging.

Weekly Averages

In the new artificial intelligence system I introduced weekly moving averages in conjunction with the daily averages. In practice this meant that a hedge position was taken with the daily average signal but generally not quit until the slower weekly average gave the signal.

The concurs with my hedge philosophy that one should be quick to take protection and slow to assume risk.

The speculative philosophy is the opposite - to be slow to undertake risk, but quick to quit at the first sign of trouble.

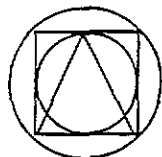
Highs/Lows

Action on moving average signals are generally taken on market opening the day following the crossover. I had already introduced a mathematical formula which enabled me to enter a stop at the close of the market, but this was too slow for weekly averages and 24 hour markets.

On the basis that a rising trend is a series of higher highs and a falling trend is a series of lower lows, I adjusted the new system to operate on highs and lows rather than the close. When a market is bought, the sell signal is produced from moving averages on lows. When a market is sold, the buy signal is produced from moving averages on highs. This enables a stop to be given which can operate in 24 hour markets such as foreign exchange.

Volatility

Because of the possibility of increased whipsaws from signals on highs and lows, I had to improve the quality of the signals. I found that markets with low daily average volatility often produced unsubstantial signals, but strong markets with higher volatility tended to give reliable signals.



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I have introduced a quality filter which recommends less or no action on quieter markets but substantial action on active strong markets. Often the daily market signal is ignored, so that hedge action on markets such as recent Australian interest rates, relies totally on the weekly signal. The result is an artificial intelligence program which my experienced programmer indicated was the most difficult of his career. I am now testing this system over a wide variety of markets in its historical analysis mode to ensure that it is capable of action in any market which purports to be freely trading - physical and futures.

I have found the Australian dollar one of the most difficult markets so it was one of the first tested with the following results:

Australian Exporter/Offshore Investor (USD)

	Unhedged	Fully Hedged	FIRM Hedged	Artificial Intelligence
1986/87	-6.50%	+9.36%	+14.37%	+16.48%
1987/88	-8.64%	+4.33%	+ 3.43%	+ 1.08%
1988/89	+5.89%	+5.51%	+ 2.48%	+ 1.34%
1989/90	-3.88%	+7.42%	+ 5.79%	+ 2.15%
1990/91	+3.64%	+5.34%	- 1.84%	+ 0.74%

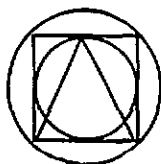
Australian Importer/Offshore Borrower (USD)

	Unhedged	Fully Hedged	FIRM Hedged	Artificial Intelligence
1986/87	+6.50%	-9.36%	+ 0.57%	+ 3.01%
1987/88	+8.64%	-4.33%	+ 2.50%	+ 1.74%
1988/89	-5.89%	-5.57%	- 1.70%	- 3.08%
1989/90	+3.88%	-7.42%	- 7.65%	- 4.55%
1990/91	-3.64%	-5.34%	- 8.95%	- 5.81%

Those who worry about the takeover of society by computers will be happy to learn that scientific artificial intelligence does not completely overtake the art of technical analysis. Even so, the new system would have allowed the corporate treasurer to hedge his offshore borrowing at a net cost of 1% p.a. in 1986/91 which was one of the most volatile periods of the Australian dollar.

The lesson for technical analysts is that even the simplest technical indicator can be massaged to produce superior results. Of course I have found that a successful hedge system is not as complex as a particularly successful speculative system. I am using a combination of technical indicators in testing a speculative system, but that is a story for another day.

Will Slatyer has been involved in futures and foreign exchange management since 1965 and managed the futures arm of the then Jacksons Ltd. He has a financial risk consultancy, Forex Risk Management Pty Ltd, offering hedge strategies and tactics to corporate clients
Contact (02) 949 3744.



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Dawn Bolton-Smith

16th September, 1991.

MOVING AVERAGES

Moving Averages have been around almost as long as charts but computers have made them much more readily available, and, optimising for a particular currency, stock or commodity is no longer tedious and time consuming. By nature they are lagging indicators. The moving average crossovers are actively used in today's computer orientated trading. They can and DO PROVIDE costly whipsaws. The use of 5 and 10 day averages can be extremely useful in fast moving markets and can be used as effective stop losses and also the 10 day average can capture long trends at times. The method can be traced back to the modelling of economic time services in the 1930's and is still sufficiently flexible to yield very substantial profits in the currency commodity/stock markets in the 1990's. When doing a total analysis of any market - always include moving averages.

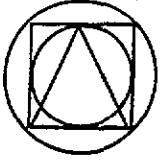
I am going to introduce a group of HARMONIC MOVING AVERAGES - 5/15/30 period which will bring excellent results on almost all markets including the smallest time period practical on 24 hour ranges. Other combinations might be as effective but the 5/15/30 combination has been proved - the case for pragmatism - IF IT WORKS USE IT!

(1) The moving average should be plotted on the same price scale as your currency/commodity/stock chart and using the effective principles for TRAFFIC STOP LIGHTS the colour combination should be consistent. In today's example, GREEN - 5 day, RED - 15 day, BLUE - 30 day. Once a colour combination is decided upon best suited to your colour graphics, it is best not to deviate from the chosen colour choices as the "brain" and visual concept become conditioned to the consistency of the colours and the information transmitted. Using the Reuters Technical Analysis on line machine with a black background, yellow is a good substitute for green for 5 period with 15 period red and 30 period blue. The use of COLOUR in markets as opposed to black/white greatly enhances the ability of the analyst to recognise trend changes much faster and trade plans take on much greater meaning with the excellent colour graphics of the R.T.A.

(2) The trend is extremely DEFINITIVE. Emphasises the need and value of TRADING WITH THE TREND.

(3) The action of the averages once the trend starts to change will be first reflected in the 5 period average.

(4) Other characteristics are "CLUSTERING" at the same price level which provides a signal for a powerful MOMENTUM MOVE. These can provide windfall profits but also spell disaster for unknowing market participants not prepared for such a phenomena. (e.g. 4-5 Pfennigs in the DM vs \$US).



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Dawn Bolton-Smith

16th September, 1991.

(5) **STACKED AND EVENLY SPACED.** After a long run UP (or DOWN) the distance between the averages is evenly spaced (a long run can be on a 5 minute, hourly, daily or weekly chart). When this configuration occurs, it is an indication that a reversal is imminent. The market can move HIGHER or LOWER as the case may be and it is by watching for a reversal signal (other indicators help here too) to take action for a potential move back to the 30 period time increment which becomes **STRONG SUPPORT** in an UP market where shorts can be covered (and reversed if so desired) when this average is reached. Similarly rules apply to a **DOWN MARKET**. The 30 increment time period becomes resistance and long positions covered and reversed if justifiable. The averages act as a "net of support on resistance" in UP and DOWN MARKETS and are like a magnet drawing prices to them. Sometimes in an extremely strong trend, the initial pullback is to the 15 period average but overall the 30 period (allowing for time) is generally the objective achieved. This effect works ON ALL TIME INCREMENTS but when it occurs on a daily or weekly chart, it can be used as a **POSITION TRADE** for multi day or weekly charts. Study this effect on your own charts.

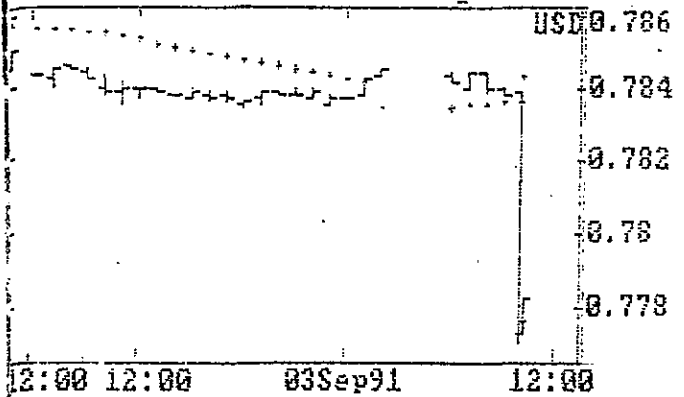
The **EVEN STACKING SIGNAL** often only appears for **ONE DAY** (or whatever time increment you are using), it is essential to monitor the averages on a continuous basis. This could well be built into a computer programme as a market alert.

The principles of these averages will provide great rewards on a day to day basis also. The "**EVEN STACKING**" principle can really alert you to some really important trend changes and you will be able to **LOCK IN THE GAINS** of the prevailing trend earlier. Having tested this combination of averages since 1985 over a broad base of markets, the signals and ensuing gains could be likened to a "signal to print money". Keen observation and attention to detail essential to maximise results. After using the Reuters Technical Analysis machine (on line) for over nine months, there is little doubt that by using these harmonic averages for the 24 hour ranges, another dimension is added to your overall analysis.

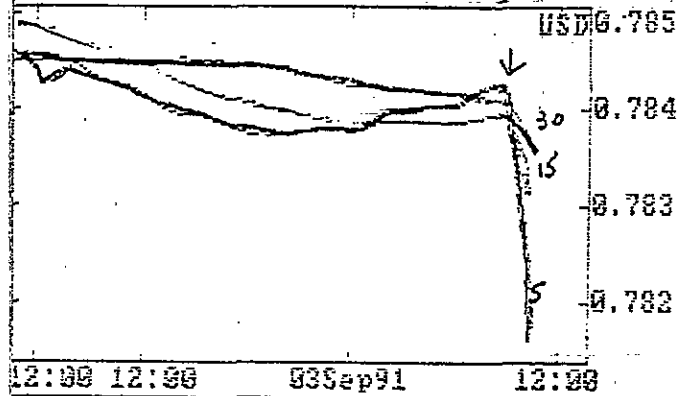
SYD 02Sep91 10:15 Technical Analysis

Charts Quotes Limits RICs Histor

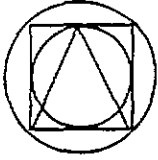
AUD= Bar(Hourly)



AUD= CI MA 5(Hourly)



0.785	0.784	0.783	0.782	0.781	0.780	0.779	0.778	0.777	0.776	0.775	0.774	0.773	0.772	0.771	0.770	0.769	0.768	0.767	0.766	0.765	0.764	0.763	0.762	0.761	0.760	0.759	0.758	0.757	0.756	0.755	0.754	0.753	0.752	0.751	0.750	0.749	0.748	0.747	0.746	0.745	0.744	0.743	0.742	0.741	0.740	0.739	0.738	0.737	0.736	0.735	0.734	0.733	0.732	0.731	0.730	0.729	0.728	0.727	0.726	0.725	0.724	0.723	0.722	0.721	0.720	0.719	0.718	0.717	0.716	0.715	0.714	0.713	0.712	0.711	0.710	0.709	0.708	0.707	0.706	0.705	0.704	0.703	0.702	0.701	0.700	0.699	0.698	0.697	0.696	0.695	0.694	0.693	0.692	0.691	0.690	0.689	0.688	0.687	0.686	0.685	0.684	0.683	0.682	0.681	0.680	0.679	0.678	0.677	0.676	0.675	0.674	0.673	0.672	0.671	0.670	0.669	0.668	0.667	0.666	0.665	0.664	0.663	0.662	0.661	0.660	0.659	0.658	0.657	0.656	0.655	0.654	0.653	0.652	0.651	0.650	0.649	0.648	0.647	0.646	0.645	0.644	0.643	0.642	0.641	0.640	0.639	0.638	0.637	0.636	0.635	0.634	0.633	0.632	0.631	0.630	0.629	0.628	0.627	0.626	0.625	0.624	0.623	0.622	0.621	0.620	0.619	0.618	0.617	0.616	0.615	0.614	0.613	0.612	0.611	0.610	0.609	0.608	0.607	0.606	0.605	0.604	0.603	0.602	0.601	0.600	0.599	0.598	0.597	0.596	0.595	0.594	0.593	0.592	0.591	0.590	0.589	0.588	0.587	0.586	0.585	0.584	0.583	0.582	0.581	0.580	0.579	0.578	0.577	0.576	0.575	0.574	0.573	0.572	0.571	0.570	0.569	0.568	0.567	0.566	0.565	0.564	0.563	0.562	0.561	0.560	0.559	0.558	0.557	0.556	0.555	0.554	0.553	0.552	0.551	0.550	0.549	0.548	0.547	0.546	0.545	0.544	0.543	0.542	0.541	0.540	0.539	0.538	0.537	0.536	0.535	0.534	0.533	0.532	0.531	0.530	0.529	0.528	0.527	0.526	0.525	0.524	0.523	0.522	0.521	0.520	0.519	0.518	0.517	0.516	0.515	0.514	0.513	0.512	0.511	0.510	0.509	0.508	0.507	0.506	0.505	0.504	0.503	0.502	0.501	0.500	0.499	0.498	0.497	0.496	0.495	0.494	0.493	0.492	0.491	0.490	0.489	0.488	0.487	0.486	0.485	0.484	0.483	0.482	0.481	0.480	0.479	0.478	0.477	0.476	0.475	0.474	0.473	0.472	0.471	0.470	0.469	0.468	0.467	0.466	0.465	0.464	0.463	0.462	0.461	0.460	0.459	0.458	0.457	0.456	0.455	0.454	0.453	0.452	0.451	0.450	0.449	0.448	0.447	0.446	0.445	0.444	0.443	0.442	0.441	0.440	0.439	0.438	0.437	0.436	0.435	0.434	0.433	0.432	0.431	0.430	0.429	0.428	0.427	0.426	0.425	0.424	0.423	0.422	0.421	0.420	0.419	0.418	0.417	0.416	0.415	0.414	0.413	0.412	0.411	0.410	0.409	0.408	0.407	0.406	0.405	0.404	0.403	0.402	0.401	0.400	0.399	0.398	0.397	0.396	0.395	0.394	0.393	0.392	0.391	0.390	0.389	0.388	0.387	0.386	0.385	0.384	0.383	0.382	0.381	0.380	0.379	0.378	0.377	0.376	0.375	0.374	0.373	0.372	0.371	0.370	0.369	0.368	0.367	0.366	0.365	0.364	0.363	0.362	0.361	0.360	0.359	0.358	0.357	0.356	0.355	0.354	0.353	0.352	0.351	0.350	0.349	0.348	0.347	0.346	0.345	0.344	0.343	0.342	0.341	0.340	0.339	0.338	0.337	0.336	0.335	0.334	0.333	0.332	0.331	0.330	0.329	0.328	0.327	0.326	0.325	0.324	0.323	0.322	0.321	0.320	0.319	0.318	0.317	0.316	0.315	0.314	0.313	0.312	0.311	0.310	0.309	0.308	0.307	0.306	0.305	0.304	0.303	0.302	0.301	0.300	0.299	0.298	0.297	0.296	0.295	0.294	0.293	0.292	0.291	0.290	0.289	0.288	0.287	0.286	0.285	0.284	0.283	0.282	0.281	0.280	0.279	0.278	0.277	0.276	0.275	0.274	0.273	0.272	0.271	0.270	0.269	0.268	0.267	0.266	0.265	0.264	0.263	0.262	0.261	0.260	0.259	0.258	0.257	0.256	0.255	0.254	0.253	0.252	0.251	0.250	0.249	0.248	0.247	0.246	0.245	0.244	0.243	0.242	0.241	0.240	0.239	0.238	0.237	0.236	0.235	0.234	0.233	0.232	0.231	0.230	0.229	0.228	0.227	0.226	0.225	0.224	0.223	0.222	0.221	0.220	0.219	0.218	0.217	0.216	0.215	0.214	0.213	0.212	0.211	0.210	0.209	0.208	0.207	0.206	0.205	0.204	0.203	0.202	0.201	0.200	0.199	0.198	0.197	0.196	0.195	0.194	0.193	0.192	0.191	0.190	0.189	0.188	0.187	0.186	0.185	0.184	0.183	0.182	0.181	0.180	0.179	0.178	0.177	0.176	0.175	0.174	0.173	0.172	0.171	0.170	0.169	0.168	0.167	0.166	0.165	0.164	0.163	0.162	0.161	0.160	0.159	0.158	0.157	0.156	0.155	0.154	0.153	0.152	0.151	0.150	0.149	0.148	0.147	0.146	0.145	0.144	0.143	0.142	0.141	0.140	0.139	0.138	0.137	0.136	0.135	0.134	0.133	0.132	0.131	0.130	0.129	0.128	0.127	0.126	0.125	0.124	0.123	0.122	0.121	0.120	0.119	0.118	0.117	0.116	0.115	0.114	0.113	0.112	0.111	0.110	0.109	0.108	0.107	0.106	0.105	0.104	0.103	0.102	0.101	0.100	0.099	0.098	0.097	0.096	0.095	0.094	0.093	0.092	0.091	0.090	0.089	0.088	0.087	0.086	0.085	0.084	0.083	0.082	0.081	0.080	0.079	0.078	0.077	0.076	0.075	0.074	0.073	0.072	0.071	0.070	0.069	0.068	0.067	0.066	0.065	0.064	0.063	0.062	0.061	0.060	0.059	0.058	0.057	0.056	0.055	0.054	0.053	0.052	0.051	0.050	0.049	0.048	0.047	0.046	0.045	0.044	0.043	0.042	0.041	0.040	0.039	0.038	0.037	0.036	0.035	0.034	0.033	0.032	0.031	0.030	0.029	0.028	0.027	0.026	0.025	0.024	0.023	0.022	0.021	0.020	0.019	0.018	0.017	0.016	0.015	0.014	0.013	0.012	0.011	0.010	0.009	0.008	0.007	0.006	0.005	0.004	0.003	0.002	0.001	0.000	-0.001	-0.002	-0.003	-0.004	-0.005	-0.006	-0.007	-0.008	-0.009	-0.010	-0.011	-0.012	-0.013	-0.014	-0.015	-0.016	-0.017	-0.018	-0.019	-0.020	-0.021	-0.022	-0.023	-0.024	-0.025	-0.026	-0.027	-0.028	-0.029	-0.030	-0.031	-0.032	-0.033	-0.034	-0.035	-0.036	-0.037	-0.038	-0.039	-0.040	-0.041	-0.042	-0.043	-0.044	-0.045	-0.046	-0.047	-0.048	-0.049	-0.050	-0.051	-0.052	-0.053	-0.054	-0.055	-0.056	-0.057	-0.058	-0.059	-0.060	-0.061	-0.062	-0.063	-0.064	-0.065	-0.066	-0.067	-0.068	-0.069	-0.070	-0.071	-0.072	-0.073	-0.074	-0.075	-0.076	-0.077	-0.078	-0.079	-0.080	-0.081	-0.082	-0.083	-0.084	-0.085	-0.086	-0.087	-0.088	-0.089	-0.090	-0.091	-0.092	-0.093	-0.094	-0.095	-0.096	-0.097	-0.098	-0.099	-0.100	-0.101	-0.102	-0.103	-0.104	-0.105	-0.106	-0.107	-0.108	-0.109	-0.110	-0.111	-0.112	-0.113	-0.114	-0.115	-0.116	-0.117	-0.118	-0.119	-0.120	-0.121	-0.122	-0.123	-0.124	-0.125	-0.126	-0.127	-0.128	-0.129	-0.130	-0.131	-0.132	-0.133	-0.134	-0.135	-0.136	-0.137	-0.138	-0.139	-0.140	-0.141	-0.142	-0.143	-0.144	-0.145	-0.146	-0.147	-0.148	-0.149	-0.150	-0.151	-0.152	-0.153	-0.154	-0.155	-0.156	-0.157	-0.158	-0.159	-0.160	-0.161	-0.162	-0.163	-0.164	-0.165	-0.166	-0.167	-0.168	-0.169	-0.170	-0.171	-0.172	-0.173	-0.174	-0.175	-0.176	-0.177	-0.178	-0.179	-0.180	-0.181	-0.182	-0.183	-0.184	-0.185	-0.186	-0.187	-0.188	-0.189	-0.190	-0.191	-0.192	-0.193	-0.194	-0.195	-0.196	-0.197	-0.198	-0.199	-0.200	-0.201	-0.202	-0.203	-0.204	-0.205	-0.206	-0.207	-0.208	-0.209	-0.210	-0.211	-0.212	-0.213	-0.214	-0.215	-0.216	-0.217	-0.218	-0.219	-0.220	-0.221	-0.222	-0.223	-0.224	-0.225	-0.226	-0.227	-0.228	-0.229	-0.230	-0.231	-0.232	-0.233	-0.234	-0.235	-0.236	-0.237	-0.238	-0.239	-0.240	-0.241	-0.242	-0.243	-0.244	-0.245	-0.246	-0.247	-0.248	-0.249	-0.250	-0.251	-0.252	-0.253	-0.254	-0.255	-0.256	-0.257	-0.258	-0.259	-0.260	-0.261	-0.262	-0.263	-0.264	-0.265	-0.266	-0.267	-0.268	-0.269	-0.270	-0.271	-0.272	-0.273	-0.274	-0.275	-0.276	-0.277	-0.278	-0.279	-0.280	-0.281	-0.282	-0.283	-0.284	-0.285	-0.286	-0.287	-0.288	-0.289	-0.290	-0.291	-0.292	-0.293	-0.294	-0.295	-0.296	-0.297	-0.298	-0.299	-0.300	-0.301	-0.302	-0.303	-0.304	-0.305	-0.306	-0.307	-0.308	-0.309	-0.310	-0.311	-0.312	-0.313	-0.314	-0.315	-0.316	-0.317	-0.318	-0.319	-0.320	-0.321	-0.322	-0.323	-0.324	-0.325	-0.326	-0.327	-0.328	-0.329	-0.330	-0.331	-0.332	-0.333	-0.334	-0.335	-0.336	-0.337	-0.338	-0.339	-0.340	-0.341	-0.342	-0.343	-0.344	-0.345	-0.346	-0.347	-0.348	-0.349	-0.350	-0.351	-0.352	-0.353	-0.354	-0.355	-0.356	-0.357	-0.358	-0.359	-0.360	-0.361	-0.362	-0.363	-0.364	-0.365	-0.366	-0.367	-0.368	-0.369	-0.370	-0.371	-0.372	-0.373	-0.374	-0.375	-0.376	-0.377	-0.378	-0.379	-0.380	-0.381	-0.382	-0.383	-0.384	-0.385	-0.386	-0.387	-0.388	-0.389	-0.390	-0.391	-0.
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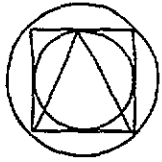
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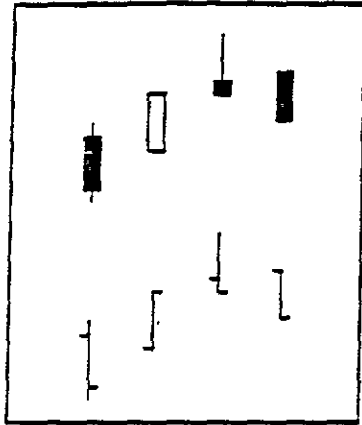
Enquiries David Hunt (02) 545 2605 or 238 7856.

CANDLESTICK CHARTING SERIAL

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CANDLESTICK TERMINOLOGY



The real body

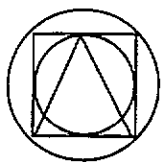
The real body refers to the price range between the Open and the Close. Japanese analysts regard the real body as the most important, or essential price activity. The larger the real body, the larger the range.

White body

This quite simply means that the market closed above the Open for that period. This is generally regarded to be bullish. Please note that it does not refer to the previous period's Open or Close, merely to the last one.

Yang line

This term comes from the yin and yang of Chinese culture. A yang line is the same as a white body candlestick.

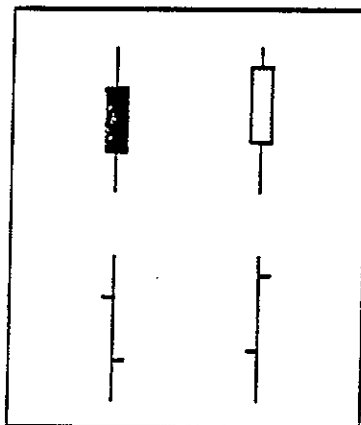


Black body

A black body is the opposite to a white body. The market closed below that day's Open. A black body is seen to be bearish. Again, we are only looking at this period's Close versus this period's Open. Do not compare it to the previous period's Open or Close.

Yin line

A black body candlestick is known as a yin line by Chinese analysts.

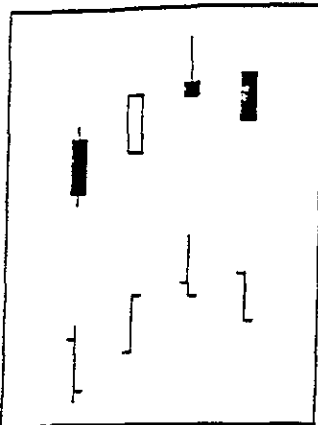
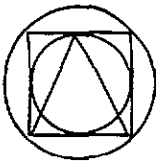


Shadows

These are the thin lines that appear above or below the real body. These thin lines, or shadows, indicate that the market traded beyond the range between the Open and the Close, either higher or lower.

It indicates that the market did not open at one extreme of the day's range and then close at the opposite extreme of that day's range.

Many analysts regard these shadows as merely market noise or extraneous price fluctuations.



Upper shadow

This refers to the thin line above the real body. This means that neither the Open nor the Close were at the High of the day. Some of the Candlestick patterns compare the length of the upper shadow to the real body itself.

Shaven head

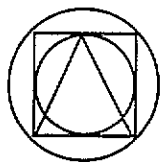
This is a period where the Open marked the extreme High of that day. Hence, if the market opened at the High, it would have a shaven head and at least a black real body. In other words, the market opened at the highs and traded down from there. Alternatively, if the market closes at the High, then it too would have a shaven head and probably a white body (if the Open was below the Close).

Lower shadow

This represents the price movement below the real body, ie. below the range of the Open to the Close. As with the upper shadow, the length of the lower shadow, compared to the real body, is important when interpreting Candlestick chart formations.

Shaven bottom

A shaven bottom is a period where the Open was the extreme low for the day. In this case, the real body would be at least white (if the market closed above the Open). On the other hand, if the market closed at the very Low of the day, then it too would have a shaven bottom, but possibly a black real body (if the Close is below the Open).



Spinning tops

If the Open and the Close are close to each other, then obviously the real body is rather small. As the name implies, these small bodied days have upper and lower shadows and hence look like spinning tops.

No significance is placed on the actual length of the shadows themselves.

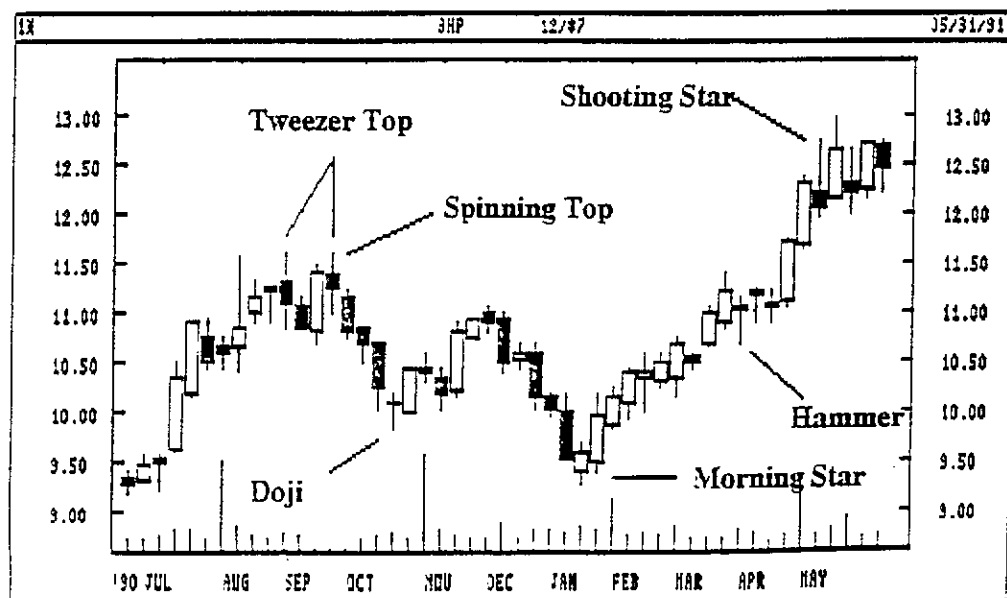
The colour of the real body is unimportant. Spinning tops represent assort of stalemate between the buyers and sellers in a market.

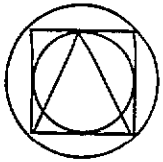
Doji lines

If the Close is at the same price level as the Open, the candlestick that is formed is called a doji.

From a practical perspective, one must allow a small fudge factor in terms of the exactness of the Open and Close price levels.

Doji lines are one of the most significant chart patterns used by Japanese technical analysts.





Hammer lines

These are to be found at market bottoms. As such, they are a signal to become bullish on the market. The actual Japanese word for this signal - *takuri* - means, roughly translated "trying to gauge the depth of the water by feeling for its bottom".

Hammers are characterised as having a small real body.

It does not matter whether the real body is white or black.

The real body must be at the top end of the trading range.

Ideally, there should be no upper shadow. (A small one is permissible.)

The lower shadow should be at least twice the height of the real body.

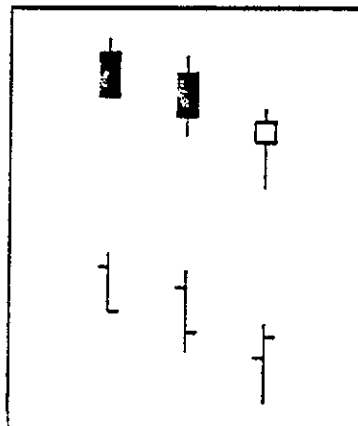
The significance of these lines is proportional to the length of the lower shadow.

It is seen to be more bullish if a Hammer line has a white real body. In other words, the Close is above the Open.

This is interpreted as the sellers attempting to push the market down significantly (evidenced by the long lower shadow) before they are over-powered by the buyers (evidenced by the distance from the extreme of the lower shadow to the top of the real body).

A traditional bar chart analyst would see this as an Open - Close Reversal pattern.

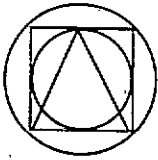
The larger the gap between the real body of the Hammer and the Open the following day, the more bullish the pattern.



The actual real body of the Hammer may be either white or black.

In trend down, the Hammer is seen to be a Bullish signal; in a trend up, it is called a Hanging Man.

The lower shadow must be twice the length of the body.



Hanging-man lines

These are to be found at market tops. As such, they are a signal to become bearish on the market. They, by themselves, are not usually enough to warrant a short position, except for the most aggressive of traders.

Hanging-man lines are characterised by having a small real body.

It does not matter whether the real body is white or black.

The real body must be at the top end of the trading range.

Ideally, there should be no upper shadow. (A small one is permissible.)

The lower shadow should be at least twice the height of the real body.

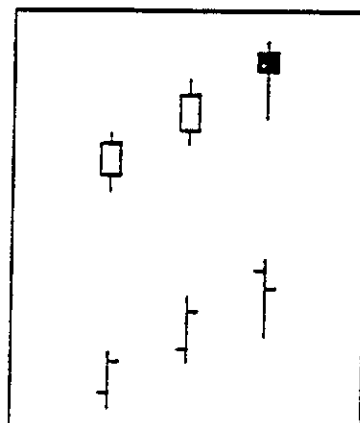
The significance of these lines is proportional to the length of the lower shadow.

Hanging-man lines are more bearish if they have a black body. This signifies that the Close is below the Open.

The buyers, who managed to push the prices up from the low of the lower shadow, ran out of steam, or buying power, and were not able to close the price above the Open.

This pattern on a Western bar chart would be called an Open - Close Reversal.

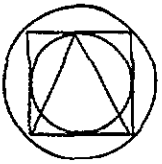
If the market gaps down significantly on the Open the next day, well below the low of the real body of a Hanging-man line, the bearish message is amplified.



As with a Hammer, the real body of a Hanging Man may be either white or black.

The real body should be no less half the length of the lower shadow.

Ideally, a Hanging Man has a shaven head.



Belt-hold lines

These are one day chart signals that can be either bullish or bearish, depending on the context of the current market direction.

During a move up, a bearish belt-hold line is simply a day that opens at, or near, the High for the day and trades down for the entire day.

The Close should be very close to the day's low.

Hence, the real body would be black.

Additionally, the real body should be large in comparison to the previous white real body days.

Ideally, the day would have a shaven top as well as a shaven bottom.

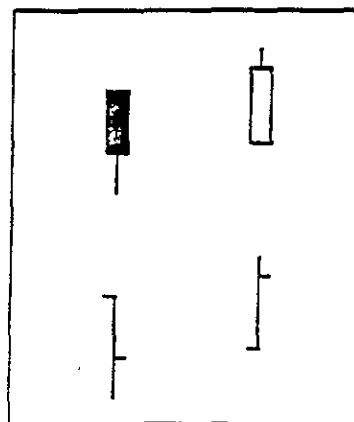
The relationship to the previous day seems to be fairly unimportant.

In the case of a market that is probing new lows, a bullish belt-hold line is looked for by alert traders.

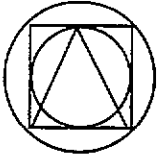
This would appear as a long, white body day with little, or no upper or lower shadow.

Volume, as well as other traditional Western chart analysis techniques such as the theory of support and resistance, can, and should, be used to confirm the potential change of direction.

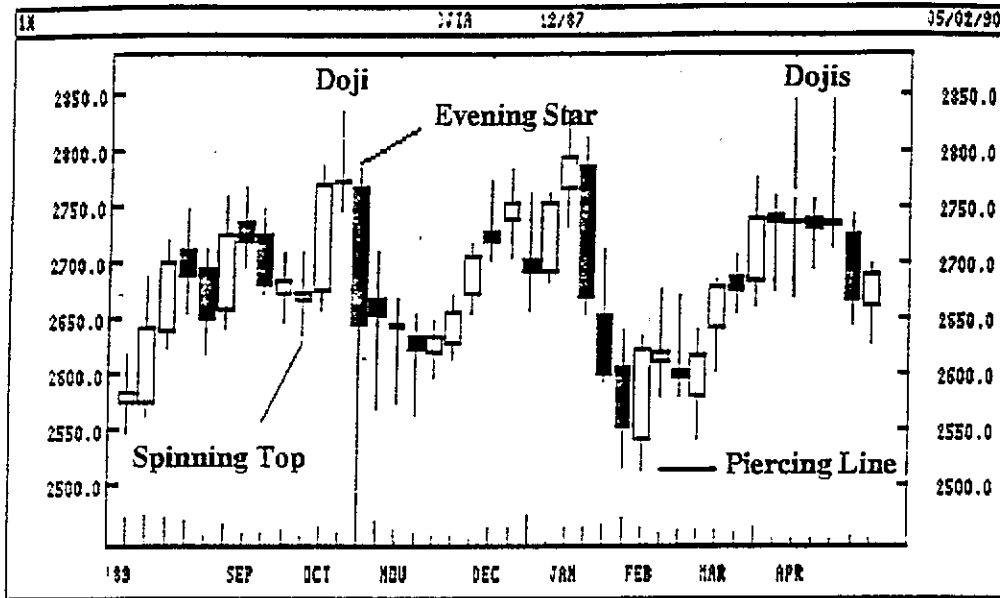
Because of the apparent vagueness of this Candlestick pattern, the equivalent in Western bar chart signals can range anywhere from Key Reversals to Open - Close Reversals to none at all.



Bearish Bullish

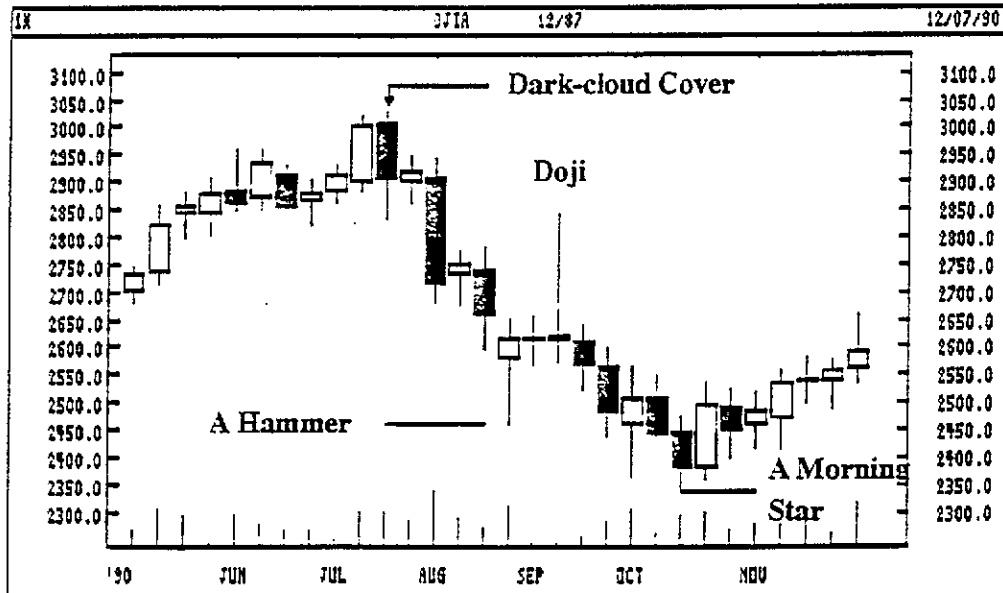


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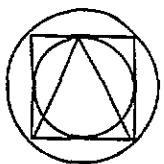


The weekly chart of the Dow Jones Industrial Average illustrates some of the Candlestick formations that we have examined so far. It is interesting to note how several patterns can combine to reinforce a particular signal. The textbook Doji that formed in October 1989, became part of an Evening Star. The same formation occurred in January of the following year.

The Low of that decline was marked by a Bullish Piercing Line.



The extreme high week in the DJIA chart above was marked by a Dark-cloud Cover, while a pause in the move down commenced after the Hammer line. The end of that reaction was signalled by the Doji. Then, at the very lows a Morning Star provided the clue of a potential bottom. The market is always talking to us - we must learn its language.



Engulfing Lines

The market must be in a clear trend, either up or down.

Two days, or more accurately two periods are required for these patterns.

The real bodies must be a different colour.

If the first line is a doji, or almost a doji, then the two real bodies may be the same colour.

Bullish engulfing patterns occur at market lows.

The second real body must be white for a bullish pattern.

Bearish engulfing patterns occur at market tops.

The second real body must be black for a bearish engulfing pattern.

The real body of the second day must engulf the real body of the previous day.

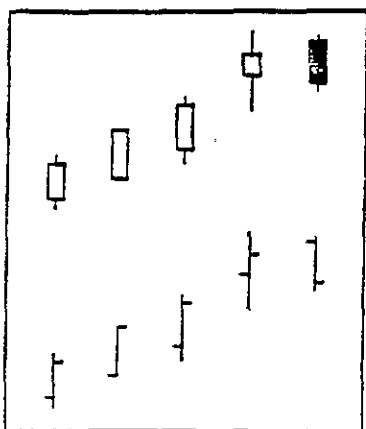
If the real body engulfs the upper and lower shadows of the previous day, then the pattern is the same as a Key Reversal in Western technical analysis.

If the engulfing pattern occurs after a long or a fast trend, the significance of the pattern increases.

Additionally, if the second day has a very large real body versus a small real body on the preceding day, the pattern is seen to be more important.

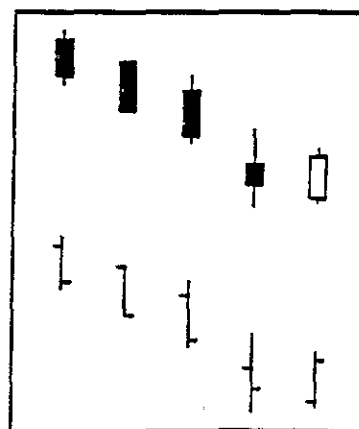
If this large real body engulfs more than one real body, then this pattern contains an even stronger message.

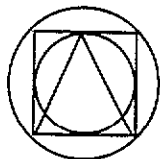
As with traditional chart analysis, high volume on the second day would be positive for the potential reversal.



The Bearish Engulfing Pattern on the left illustrates a selling signal only evident on Candlestick charts.

The Bullish Engulfing Pattern on the right only appears as an Open - Close Reversal on a Western bar chart.





Dark cloud cover

This is another two day reversal pattern. The first day must be a strong day with a white real body.

The Open on the second day should be above the upper shadow of the previous day. Ideally, the second day has a shaven head. As the Close of the second day must be below the Open, a black real body is evident on that day.

The real body of the second day penetrates at least 50 percent of the previous day's real body. The greater this penetration, the more bearish the signal.

The black real body of the second day does not have to extend below the lower shadow of the first day.

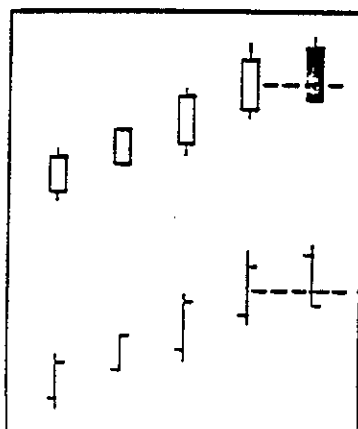
A dark cloud cover is the same as a Reversal day with Western technical analysis.

If the Close of the second day is below the Open of the first day, then a bearish engulfing pattern is present. This is equivalent of a Key Reversal.

A second day that opens at the High and closes at the extreme Low (a day with a shaven head and a shaven bottom) produces a more bearish message.

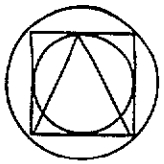
An failure to hold above a previous resistance level by the second day adds to the bearish interpretation of a dark cloud cover.

The Volume should be monitored at the Open to assess whether the market is experiencing a blow-off. Any intra day reversal would leave the Longs very exposed. High Open Interest numbers are another clue for futures traders.



In the text book version of the Dark-cloud Cover the Open of the second day is above the upper shadow of the previous white real body day.

Without exception the upper shadow of the second day must be higher than the previous upper shadow.



Piercing line

This is the opposite of a bearish dark cloud cover.

Two days are required for this bullish pattern.

The first day contains a black real body, whilst the second has a white real body.

On the second day, the market opens below the lower shadow of the first day and trades higher than that level. This creates a relatively long, white real body.

If the close of the second day is above the 50 percent level of the previous day's real body, then the piercing pattern is complete.

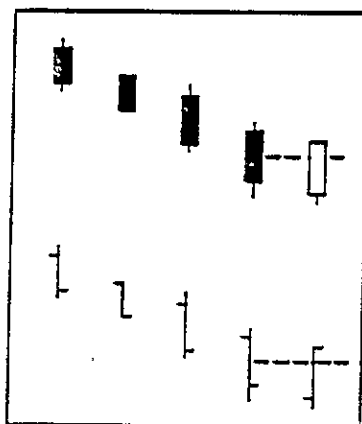
The more of the previous day's real body that is retraced, the more significant the message.

If the entire real body of the previous day is eclipsed, then this pattern becomes a bullish engulfing pattern.

A shaven bottom and a shaven head on the second day reinforces the bullishness of this pattern.

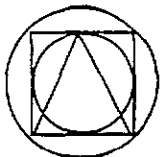
The Western equivalent of this pattern is a Reversal.

Volume and Open Interest can be used as added tools of confirmation for a bullish piercing pattern.



The Western bar chart equivalent of a Piercing Pattern is a Reversal Day.

The Close of the white real body day must retrace at least 50 percent of the previous black real body for the pattern to deliver its Bullish message.



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The system allows for the downloading through modem of a vast array of files containing useful programs, utilities, demos data etc. Files are updated constantly as they become available.

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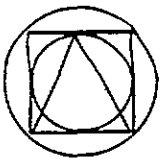
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* Baud Rate = 2400, Data Bits = 8, Stop Bits = 1 *
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[ATAA Info Network] = File Area No. 1

GENERAL Files Available.

GC.ZIP 37,847 Global Time Clock:
World time zones/alarm.

PKUNZIP.EXE 22,022 File Decompression Utility.

ASTROL94.ZIP 161,873 Astrology - Calculate zodiac signs.etc.

WTDEMO.ZIP 515,845 Wavetrader Full Demo Package.

STOCKS.ZIP 46,042 Stock Buy & Sell Simulation Game.

MFRACT.ZIP 5,220 Draw 3-D Fractal Graphs.

PLANET.ZIP 37,914 Computes Orbital Data.

PC-STOCK.ZIP 47,636 Database and Graphing Program

MODEMD30.ZIP 72,206 The Modem Doctor Ver 3.0 - Diagnostics.

FM330.ZIP 79,630 Format Master - DOS Format Utilities

MKTEGA31.ZIP 100,166 Full Graphing/Database System.

TELERATE.ZIP 50,417 Telerate Access Service Demo Package

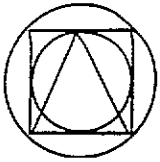
GLOBEX.ZIP 124,791 Globex Features & Trading Simulator.

WINTRADE.ZIP 323,224 WINDoTRADER Trading System Demo.

ACEBONDS.ZIP 82,328 Essex ACE T-Bonds Trading
System Demo.

TICKDATA.ZIP 198,479 Tickdata Program Demonstration.

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