The Power of Oscillator/Cycle Combinations: By Walter Bressert

How to Combine Oscillator and Cycle Analysis to Improve
Market Timing and Profits in the Futures Markets

Published by
Online Trading Solutions
www.OTSTraders.com

While commodity trading has the potential for large profits, it also has the potential for large losses. To trade futures, you must be aware of the risks and be willing to accept them.

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Walter Bressert is acknowledged as the man who brought cycle analysis to the futures markets in this original newsletter *HAL Commodity Cycles.* Published from 1974 to 1985, it was profitable 10 of 12 years and rated #1 in Bull markets by Futures magazine.

Walter retired in 1985, and in 1991 published *"The Power of Oscillator/Cycle Combination."* It is the only published work available today that shows how to sell tops and buy bottoms by combining oscillators with the timing of cycle analysis and has sold thousands of copies.

From 1991 through 1995, he published the *CycleWatch* newsletter, which forecast time and price moves weeks and months into the future in the S&P Index, Bonds, Precious Metals, Currencies, and the agricultural markets. *CycleWatch* was available as a daily fax-on-demand, and via DBC Signal, FutureLink, and DTN. Walter currently broadcasts an S&P Bond commentary with intra-day charts and trading recommendations updated 4 times a day on the Internet and America-on-Line. His pre-opening comments are featured on the Futures magazine AllStar Advisor's Hotline.

Most recently, Walter has developed *CycleTrader* software designed to identify and trade any market in any time-frame with mechanical buy/sell signals. *CycleTrader* is simply the most powerful cycle software program available for buying bottoms and selling tops. High probability, intra-day trading with *CycleTrader* is the focus of several 3-day *CycleTrader* trading intensives held each year. He also publishes a 9-lesson, hands-on, home study course on trading with cycles.

Walter currently manages hedge accounts in the S&P Index to provide "insurance" for stock portfolios against sizeable down moves, and also offers management for futures accounts (minimum $500,000).

He was one of the original founders of CompuTrac before it was purchased by TeleratelDown Jones, and is a long-standing director of the non-profit Foundation for the Study of Cycles. He has lectured internationally for twenty-five years and written articles for the Wall Street Journal, Barron's, Futures magazine and the *"Commodity Research Bureau Yearbook."* He was a contributing editor to the Financial News Network and appears on CNBC from time-to-time.

Chapter One

FOCUS ON CYCLES

The Nature of Cycles

Everything in nature moves in cycles. Our solar system moves in a cycle around the center of the Milky Way galaxy. The planets move in precise and predictable cycles around the sun. The cycle of the tilt of the earth causes the cycle of the seasons. The rotation of the earth produces the cycle of night and day. The full moon occurs with predictable regularity as do the rise and fall of the tides. Each year geese migrate, animals hibernate, and salmon swim upstream to spawn, to mention just a few of the Seasonal Cycles with which we are familiar.

Other cycles are such an intimate part of our daily life that it may be hard to think of them as cycles. The cycle of sleep is experienced by most of us every 16 hours or so. Both men and women experience a monthly cycle of emotional highs and lows. The cycle of a heartbeat is as regular as clockwork until disturbed by exercise or an emotional experience such as a margin call. These are all cycles we can understand and accept because we have an understanding of the underlying cause of these cycles.

Many other cycles affect our lives for which we do not know the cause. The non-profit Foundation for the study of Cycles has been isolating and studying cycles since the 1930's, and has documented over three thousand cycles in weather, war, sunspots, drought, marriage, animal populations, inflation, bank failures, real estate, manufacturing, steel production, and stock prices, to name only a few. Of more immediate interest are cycles in the price of gold, silver, copper, the S&P index, interest rates, currencies, soybeans, corn, cattle, sugar and other agricultural and financial markets.

Knowing that cycles affect market prices is of little more than a passing interest for a market analyst and trader unless the cycles can be used to identify tops and bottoms of price movement, and to also give indications of future price activity in both time and price. Herein lays the challenge presented to the cycle analyst.

It is fundamentals that move the markets, but you have probably noticed that the fundamental picture is the most bullish at tops and the most bearish at bottoms. Cycle analysis of the futures markets assumes that at any point in time, *the then current*

fundamental information available is relative only to *the* current *price* structure, *and that fundamental events will* occur to *move prices in the direction of the cycle.* Such an event may be a government report that greatly changes the supply or demand picture; money supply figures; utterances of Federal Reserve officials; foreign purchases; crop failure or freeze in any part of the world; war or the threat of war; unexpected political action such as embargoes, tariffs, or price controls which can change either the supply or demand picture. These and many other unforeseen factors can alter the prospects for the future. Cycle analysis does not pretend to forecast what will happen in the future, just that some event will occur to move prices in the direction of the cycle.

Unfortunately for the market analyst and trader, cycles can contract, expand, and even skip a beat now and then. The uses of Oscillator/Cycle Combinations are powerful tools that often allow for early identification of cycle highs and lows. Once a high/low has been identified, the component parts of the cycle are used to set up time expectations for the next high or low. Cycle analysis is an art that can be readily learned through the application of the principles outlined in this book. Despite its limitations, cyclical analysis is the one approach that can provide relatively accurate time and price projections weeks, months, and even years into the future.

Basic Cyclic Concepts

CYCLES IN PRICES

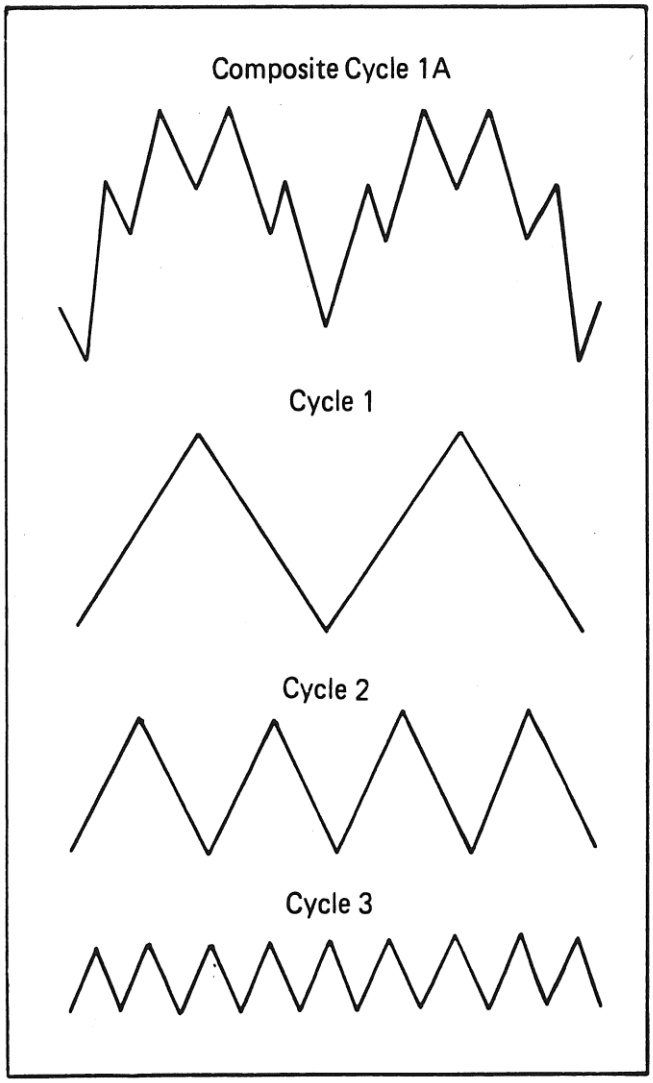
Success in the futures markets requires adhering to the old adage of "trade with the trend." If the trend is up, buy the dips; if the trend is down, sell the rallies. What the trend *was* is relatively easy to see on a chart; what the trend *will be* is often another question. Foreknowledge of the trend, or of a trend reversal, is every commodity trader's dream.

The use of cycles is one of the most powerful analytical tools for identifying trends and trend reversals. Once a cycle has bottomed, the trend will be up until the cycle tops; once the cycle has topped the trend will be down until the cycle bottoms. How long the trend will be up or down depends upon the length of the cycle.

Each market has an individual cycle profile which consists of several dominant cycles that visibly and consistently affect prices. Once these dominant cycles have been identified future price expectations can be established and tops and bottoms identified as they occur. Therefore, the basic principle in cyclical analysis is to identify the longest dominant cycle affecting price activity, and, then to work down, cycle-by-cycle, to the smallest dominant cycle you wish to trade. When the dominant long-term cycles have been determined, they will provide an overview of expected price movement and trend.

Then weekly and daily short-term cycles can be used to determine when to enter and exit the markets, as well as to confirm tops and bottoms of the longer-term cycles. Most markets have several dominant cycles, each with a trough and a crest / affecting price activity / anyone of which can be isolated and measured. The length of the cycle is usually measured from trough-to-trough (low-to-low).

Example 1-1



In this simplified example, 3 cycles have been combined to form the composite Cycle 1A.

Notice how the larger cycle (Cycle 1) seems to lose its actual crests to a combination of Cycles 2 and 3. This interaction allows the development of guidelines to analyze and trade the markets.

DOMINANT CYCLES

Oscillator/cycle analysis involves the isolation and use of 4 dominant cycles (refer to Example 1-2).

1) Long-term DOMINANT
2) CYCLES that are longer
3) than one year in length, establish the longer-term trends of the markets. Long-term cycles most markets range from 2 to 11 years.

2) The SEASONAL CYCLE is the yearly cycle that tends to have highs and lows occur at approximately the same time periods of the year. It is a very distinct cycle in agricultural markets and shows up as Seasonal tendencies in most other markets, including metals and the financials. Seasonal Cycles follow reliable patterns, and their highs and lows can be anticipated with an unusually high degree of accuracy.

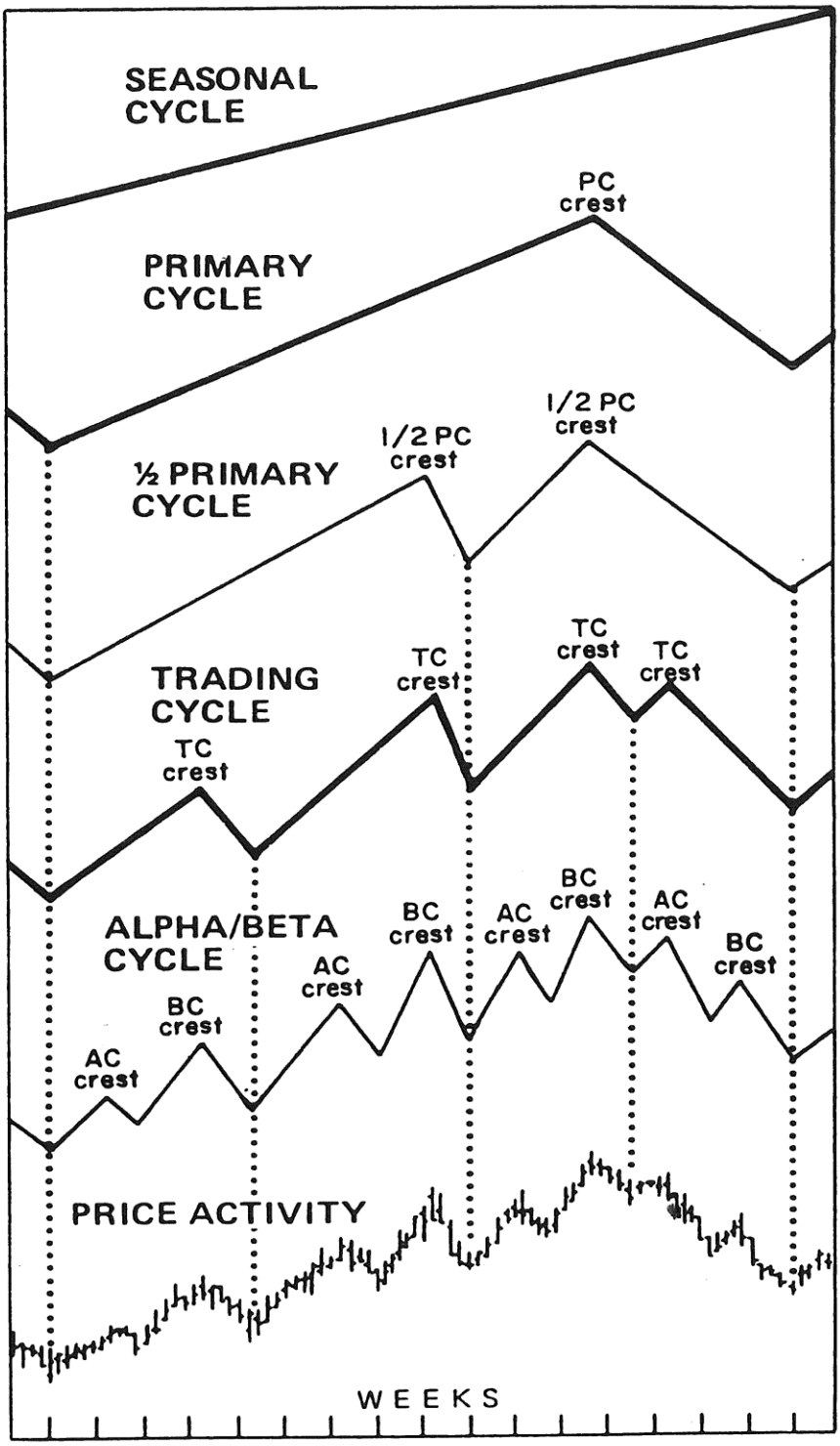
3) The PRIMARY CYCLE is the dominant weekly cycle shorter than one year. Each market has its own Primary Cycle, and the average cycle length ranges from 9 to 22 weeks. A few markets have a smaller sub-cycle called the 1/2 Primary Cycle which averages one-half the length of the Primary Cycle. The Primary Cycle and 1/2 Primary Cycle will normally top and bottom with a concurrent Trading Cycle (see dotted lines in Example 1-2).

4) The TRADING CYCLE is usually measured in days. This cycle is used to enter and exit the market for short-term trades. Most Trading Cycle lengths are from 3 to 5 weeks in the agricultures and metals; the financials tend to have Trading Cycles of approximately 8 weeks. Within the Trading cycle are two smaller sub-cycles, each normally one-half the length of the longer Trading Cycle. The Trading Cycle does not have its own crest. It will always crest at the same time as one of the shorter sub-cycles called the Alpha Cycle, and the Beta Cycle.

The ALPHA CYCLE is the first smaller cycle within the Trading Cycle. The Trading Cycle will always begin with a new Alpha Cycle.

The BETA CYCLE is the second smaller cycle within the Trading Cycle, and begins when the Alpha Cycle bottoms. The Beta Cycle will always bottom when the Trading Cycle bottoms, (see dotted lines in Example 1-2).

An important characteristic of the Trading cycle is its relationship with the next longer dominant cycle, usually the Primary Cycle, but on occasion, the 1/2 Primary Cycle. If this next longer cycle is moving up, the Trading Cycle tends to crest with the Beta Cycle Crest. If the Primary Cycle is moving down, then the Trading Cycle will tend to crest with the Alpha Cycle Crest.


SEASONAL CYCLE
PC crest
PRIMARY CYCLE
1/2 PC crest
1/2 PC crest
½ PRIMARY CYCLE
TC crest
TC crest
TC crest
TRADING CYCLE
TC crest
BC crest
AC crest
BC crest
AC crest
BC crest
AC crest
ALPHA/BETA CYCLE
AC crest
BC crest
PRICE ACTIVITY
WEEKS

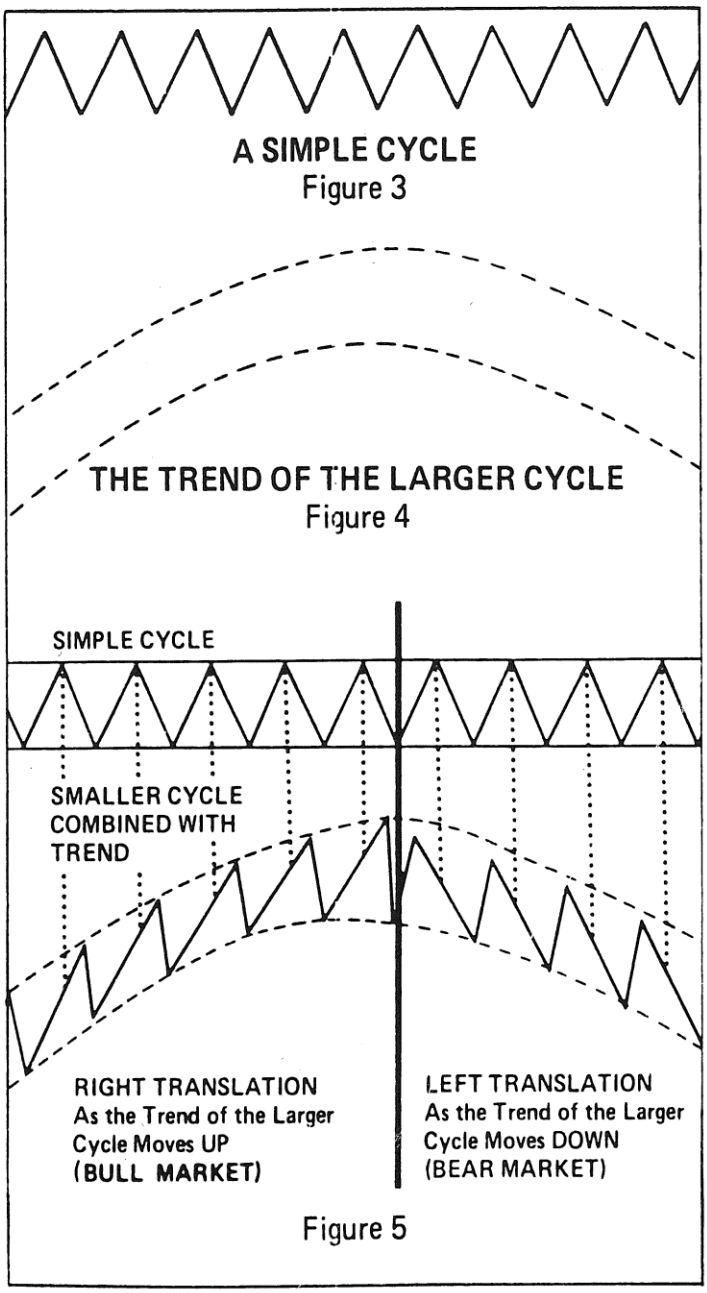
Example 1-2

RIGHT AND LEFT TRANSLATION

Dominant Cycles of different lengths interact in a predictable manner as each cycle is affected by the next larger cycle.

The simple cycle in Fig. 3 moves up and down from crest-to-trough, and trough-to-crest in a predictable rhythm with each high equidistant to the lows. When combined with a larger cycle this rhythm changes, but in a predictable and consistent manner.

In Fig. 4, the trend of the larger cycle is represented by the parallel dashed lines. Fig. 5 illustrates Right and Left Translation. As the market rises to the top of the larger cycle, the tops, or crests, of the smaller cycles shift to the right, exhibiting a cyclical characteristic called Right Translation (see dotted lines in Fig. 5). Also, the bottoms, or troughs, of the smaller cycle are above the previous troughs, and the crests are above the previous crests.



Example 1-3

When the larger cycle is moving down, the crests of the smaller cycles shift to the left exhibiting Left Translation. Also, each trough is below the previous trough, and each crest is below the previous crest.

The following cyclic concepts can be applied to any two dominant cycles, one being longer than the other:

1) Right Translation—Higher crests and higher troughs tend occur in a rising market as the next longer dominant cycle is moving up ... as the trend is up.

2) Left Translation—Lower troughs and lower crests tend to occur in a falling market as the next longer dominant cycle is moving down . . . as the trend is down.

3) Each longer cycle determines the trend for the next shorter cycle.

4) If the direction of the longer cycle is known, then the trend is known for the shorter cycle.

The old adage—

Trade with the trend—If the trend is up, buy the dips; if the trend is down, sell the rallies.

can be restated—

If the longer-term cycle is moving up, buy the troughs of the shorter cycle; if the longer-term cycle is moving down, sell the crests of the shorter cycle.

LONG-TERM CYCLES

When I first began trading the markets, I was interested in holding a position for several days and my long term perspective was about 3 weeks. Over the years this perspective has lengthened, and I now start my analysis of a market with a review of the cycles 2 to 11 years long. The position of a market relative to the longer-term cycle will often have an effect upon the Seasonal Cycle and Primary Cycle.

Long-term cycles account for the major highs and lows on all commodity charts, both agricultural and financial. The BIG moves up and down usually occur around the highs and lows of these cycles. Also, the long-term cycles set the trend for the next shorter Seasonal Cycle, which will act differently if the trend is up than if the trend is down. Listed on the following page are the long-term cycles for each of the markets.

LONG-TERM CYCLES

Stock Market - 4-Year Cycle
Bond Yields and Interest Rates - 4-Year Cycle
Wholesale Commodity Prices and the CRB Index - 3-Year and 9-11 Year Cycle
Currencies - 4-Year Cycle
Gold - 5 1/2-Year and 9-1/4 Year Cycle
Silver - 5 1/2-Year and 9 1/4-Year Cycle
Copper - 5-Year Cycle
Soybean Complex - 24-Month and 39-Month Cycle
Wheat - 4 1/2-Year and 9-Year Cycles
Corn - 3-Year and 9-11-Year Cycles
Cattle - 3 3/4-Year and 7 1/2-Year Cycles
Hogs - 3-Year and 9-Year Cycles
Pork Bellies - 3-Year and 9-Year Cycles
Cotton - 3-Year and 6-Year Cycles
Sugar - 7-Year Cycle
Cocoa - 3-Year Cycle
Coffee - 3-Year Cycle
Crude oil - 6-Year Cycle

SEASONAL CYCLES

The long-term cycles always top and bottom with a Seasonal Cycle and the Seasonal Cycle sets the trend for a large part of the year.

For example, in a bull move out of a Seasonal low, a rise of 7 months or more is not uncommon. The trend, then, would be up for seven months. Conversely, in a bear move, the Seasonal can move down for 7 months or more from the Seasonal high, so identification of the Seasonal high would set an expectation for a prolonged bear market. Seasonal Cycles are easy to accept in the agricultural markets because we know the cause. Generally, it is harvest which sets the lows, and prices move higher throughout the year until the next harvest with variations based on increases or decreases in demand, supply and expectations. But there are also Seasonal tendencies that show up in the metals, the stock market, interest rate markets, and currencies that are not as consistent as the agricultural markets.

Seasonal tendencies mean that a market will tend to top and bottom at certain times of the year, or in some cases have a fast market at certain times of the year.

My approach is to isolate the time periods in which Seasonal highs and lows have occurred 70% or more of the time, and call this the basic Seasonal Cycle. The time periods for the highs and lows of markets with distinct Seasonal Cycles are on the following page. Below them are listed the markets with Seasonal tendencies.

SEASONAL CYCLES

	Lows	Highs
Soybeans	June-October	April-July
Soybean Meal	February-March, or August-November	March-August, or December
Soybean Oil	January-April, or August-November	March-May, or July-November
Wheat	April-August	November-February
Corn	August-December	April-September
Cattle	June-October	March-August
Hogs	August-December	May-August
Pork Bellies	June-August, or January-March	February-May, or September-October
Cotton	December-March, or June-August	June-October
Sugar	June-September	March-July, or October-December
Cocoa	May-October	May-September
Coffee	April-October	January-June
Copper	July-November	March-May
Crude oil	October-February	April-August

SEASONAL TENDENCIES

S&P Index - Lows tend to be made September through November, or February/March. Highs tend to be made August through October or April.

Interest Rates - Lows tend to occur in the first or third quarter; highs tend to occur in the third or fourth quarter.

Precious Metals - In bull markets, the tendency is to top in the first quarter, and bottom in second quarter. In bear markets, the tendency is to bottom in third quarter and top in third or fourth quarter.

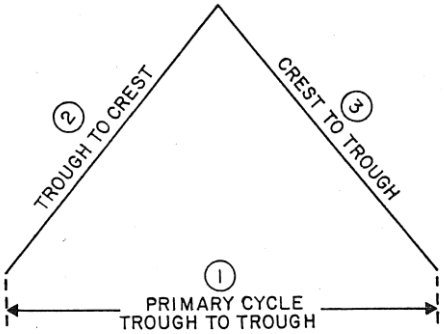
Currencies - Lows tend to occur May-September; highs tend to occur November-April.

THE PRIMARY CYCLE

The most consistent aspect of the markets is time, and the Timing Bands for the primary Cycle tops and bottoms indicate when to look for specific patterns in Oscillators that will indicate a cycle top or bottom, or a high probability trade.

These primary Cycles are of two types. The first is a simple up/down move similar to Example 1-4. There are only 3 measurable components:

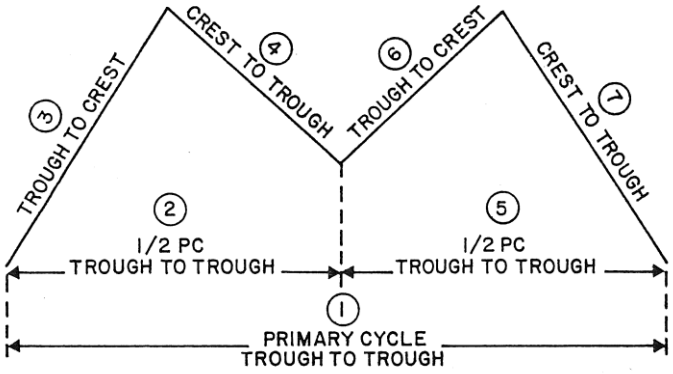
Example 1-4



1) Trough to trough (T-T)
2) Trough to crest (T-C)
3) Crest to trough (C-T)

The second type, shown in Example 1-5, is more complex because it has within it a smaller cycle called the 1/2 primary cycle that causes the Primary cycle to have two tops and an intervening low between primary Cycle bottoms. The price moves of this 1/2 Primary cycle are not always large, nor do they occur in every cycle. But the interaction of these cycles produces 7 measurable components:

Example 1-5



1) PC T-T
2) First 1/2 PC T-T
3) First 1/2 PC T-C
4) First 1/2 PC C-T
5) Second 1/2 PC T-T
6) Second 1/2 PC T-C
7) Second 1/2 PC C-T

CYCLIC COMPONENTS OF THE PRIMARY CYCLE

These components have been measured for each Primary Cycle. To eliminate unpredictable extremes and to narrow the time periods for future projections, only the middle 70% of the total samples measured are used for each cyclic component. These measurements are called 70% Cycle Timing Bands. Seven times out of 10, a cyclic component will top or bottom within a 70% Cycle Timing Band. Approximately 20% will occur before the Band, and 10% will occur after the Band.

Commodity	Primary Cycle (PC) Weeks T-T		½ PC Weeks T-T		Weeks T-C		Weeks C-T	
	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand
S&P INDEX	22	16-25	10	6-14	5	2-10	5	1-9
EURODLRS	21	18-25	10	7-14	5	2-10	5	2-8
T-BONDS	21	16-28	10	7-15	5	2-10	5	2-8
	14	12-16	-	-	-	-	-	-
CRUDE OIL	25	15-35	-	-	-	-	-	-
SWISS F (2)	22	19-28	8	6-11	4	1-6	3	2-6
D MARK (2)	30	25-44	9	6-10	7	4-9	3	1-6
J YEN (2)	31	26-44	8	6-13	4	1-6	4	2-7
BRIT P (2)	26	18-35	7	6-11	4	2-7	3	1-5
GOLD (3)	18	16-23	10	9-12	8	6-10	2	1-6
	-	-	7	5-11	3	1-4	4	2-5
SILVER	19	16-22	10	7-13	5	3-7	5	3-7
COPPER	15	9-18	-	-	7	5-12	7	2-11
SOYBEANS	14	11-20	-	-	5	2-12	7	3-12
S MEAL	16	15-21	9	6-11	5	2-8	4	2-7
S OIL	19	14-21	8	6-12	4	2-7	4	2-7
WHEAT	18	14-22	-	-	9	2-13	9	2-10
CORN	20	17-27	10	8-14	5	4-8	5	3-8
L CATTLE	9	7-13	-	-	5	1-9	4	1-7
L HOGS	11	9-14	-	-	4	3-8	6	3-8
BELLIES	16	12-20	8	5-11	4	2-7	3	1-6
COTTON	22	16-27	11	9-13	9	5-11	7	3-10
SUGAR	15	12-20	-	-	7	2-14	7	2-14
COCOA	17	14-25	-	-	7	4-14	8	2-18
COFFEE	15	12-22	-	-	9	4-14	7	2-12

(1)T-Bonds have 2 interactive Primary Cycles.

(2)These markets do not have a 1/2 primary Cycle. The Timing Bands for the 8-Week Trading Cycle are shown under the 1/2 Primary Cycle.

(3) Gold has different Timing Bands for the first and second ½ primary Cycles.

One problem with these measurements is that they do not differentiate between bull and bear markets and as a result the time periods can be very broad, especially the Timing Bands from low-to high and high-to-low. As a general rule, in a bull market, or uptrend, the Trough-to-Crest Band should be from the average to the end of the Timing Band; the Crest-to-Trough Band should be from the beginning of the Timing Band to the average. In a bear market, or downtrend, the T-C Band should be from the beginning of the Timing Band to the average; the C-T Band should be from the average to the end of the Timing Band.

For example—In the S&P Index the 1/2 Primary Cycle Trough-to Crest Band is 2-10 weeks with an average of 5. In bull markets use a Timing Band of 5-10 weeks, and in bear markets use a Timing Band of 2-5 weeks. The Crest-to-Trough Band is 1-9 weeks, with an average of 5. In bull markets use a Timing Band of 1-5 weeks, and in bear markets use a Timing Band of 5-9 weeks.

These Timing Bands can be plotted on a chart to visually see when to anticipate highs and lows. Cycle highs and lows can be expected to occur within the Timing Bands about 7 out of 10 occurrences. When the oscillators complete the Setup/Trigger patterns within the Timing Bands, a cycle high or low is usually in place.

The trough-to-trough and trough-to-crest Timing Bands are counted from the low that begins the cycle. The crest-to-trough Timing Band is counted from the high of the cycle.

The Trading Cycle also has 7 similar components.

THE SEVEN CYCLIC COMPONENTS OF THE TRADING CYCLE

The interplay between the Trading Cycle and the Alpha and Beta Cycles has 7 cyclic components that project time periods for cyclic crests and troughs to occur. Most markets will follow the Trading Cycle, Alpha cycle/Beta Cycle pattern shown in Example 1-6.

1) Trading Cycle Trough to Trough

2) Alpha Cycle Trough to Trough

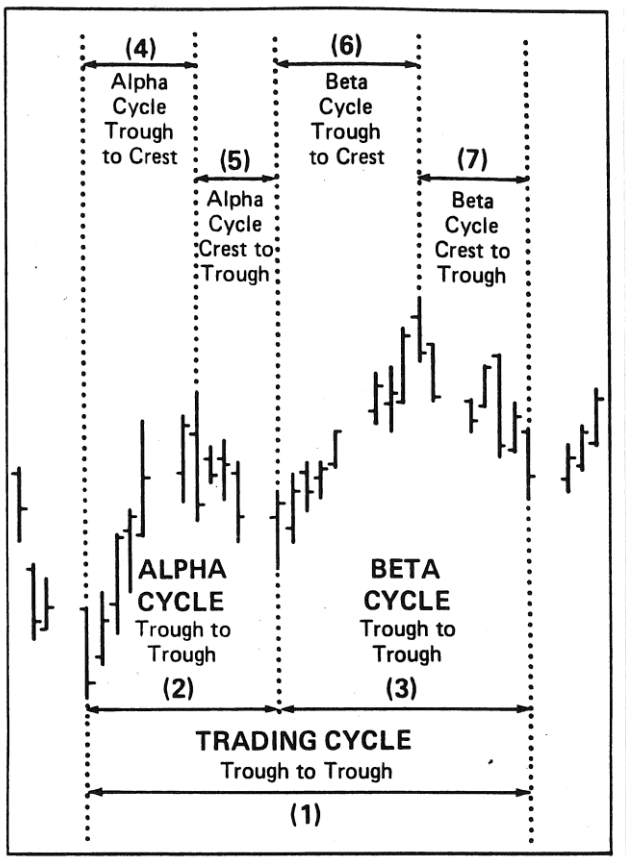
3) Beta Cycle Trough to Trough

4) Alpha Cycle Trough to Crest

5) Alpha Cycle Crest to Trough

6) Beta Cycle Trough to Crest

7) Beta Cycle Crest to Trough



Example 1- 6

My personal preference is to use a calendar day count for the Trading Cycle and its components, and the bar chart examples that relate to the cycles are plotted on 7-day chart paper. Although the US markets are closed on weekends, the world does not stop making financial transactions over the weekend. Inter-bank currency transactions are made in various parts of the world ı precious metals are bought and sold, business and government decisions are consummated. These and many other events that move markets continue to occur over weekends, as do many cycle highs and lows. These weekend cycle highs and lows show up as Friday or Monday price highs or lows which are easily identified on 7-day charts. These charts also allow easy identification of the weekly ranges which are often used as Trigger entries.

However, when calculating oscillators, one can only use market days. So, there are 2 sets of components for the Trading Cycle in the Timing Band Tables that follow — calendar days, which include weekends; and market days, which should be used for detrending and oscillator calculation, and can be plotted on regular 5-day chart paper.

TIMING BANDS - Calendar Days

	S&P INDEX		T-BONDS		EURO DLRS		CRUDE OIL		SWISS F (Weeks)	
	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand
T-T	55	40-60	30	21-41		41-53	25	18-32	8	6-11
AT-T	26	17-36				14-22	13	8-13		
AT-C	13	7-23	15	7-22		3-14	8	4-12	4	1-6
AC-T	11	4-21	15	5-18		3-13	4	2-7	3	2-6
BT-T	25	18-35				12-25	12	10-17		
BT-C	9	4-20				4-16	5	3-9		
BC-T	13	7-21				5-14	6	4-10		

	D MARK (Weeks)		J YEN (Weeks)		BRIT P (Weeks)		GOLD		SILVER	
	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand
T-T	9	6-10	8	6-13	7	6-11	21	18-28	35	28-43
AT-T							10	8-14	19	14-23
AT-C	7	4-9	4	1-6	4	2-7	7	4-10	10	7-15
AC-T	3	1-6	4	2-7	3	1-5	3	1-5	7	3-12
BT-T							11	7-14	18	12-21
BT-C							4	3-8	8	2-10
BC-T							6	3-9	11	5-14

	COPPER		SOYBEANS		B MEAL		BOIL		WHEAT	
	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand
T-T	25	20-31	28	21-36	28	21-36	29	25-35	44	37-51
AT-T	13	9-13	14	10-18	14	10-18	14	10-18	24	18-37
AT-C	8	4-12	9	4-13	9	4-13	9	4-13	17	13-22
AC-T	4	2-7	4	1-8	4	1-8	4	1-8	7	5-12
BT-T	13	10-16	15	12-19	15	12-19	15	12-19	21	15-23
BT-C	5	3-9	6	3-10	6	3-10	6	3-10	10	4-16
BC-T	7	4-10	8	3-12	8	3-12	8	3-12	10	2-14

TIMING BANDS - Calendar Days (cont'd)

	CORN		L CATTLE		L HOGS		PORK BELLIES		COTTON	
	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand
T-T	28	21-35	21	18-28	29	25-35	28	25-35	25	20-30
AT-T	14	9-17	11	9-14	15	12-19	14	11-19	13	8-16
AT-C	9	5-14	7	4-12	9	6-14	9	7-15	8	4-12
AC-T	4	1-6	4	1-7	6	3-8	4	2-8	3	1-6
BT-T	14	12-20	10	7-12	14	9-15	14	10-17	13	10-16
BT-C	6	4-10	4	2-6	6	3-9	5	2-8	4	3-10
BC-T	8	6-14	5	3-9	7	5-11	9	6-12	6	4-9

	SUGAR		COCOA		COFFEE	
	Avg	TBand	Avg	TBand	Avg	TBand
T-T	27	25-36	30	25-32	29	24-36
AT-T	15	14-19	15	13-19	15	13-19
AT-C	10	9-16	9	4-12	9	5-13
AC-T	4	2-7	4	1-8	4	1-9
BT-T	12	9-19	14	12-17	14	9-19
BT-C	3	2-8	6	3-10	6	2-10
BC-T	7	5-8	8	4-10	8	3-12

TIMING BANDS - Market Days

	S&P INDEX		T-BONDS		EURO DLRS		CRUDE OIL		SWISS F (Weeks)	
	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand
T-T	39	29-43	21	15-30		29-38	18	13-23	8	6-11
AT-T	19	12-26				10-16	9	5-9		
AT-C	9	5-16	11	5-16		2-10	5	2-9	4	1-6
AC-T	8	3-15	11	3-17		2-9	2	1-5	3	2-6
BT-T	18	13-25				8-18	8	7-12		
BT-C	6	3-14				2-11	3	2-7		
BC-T	9	5-15				3-10	4	2-8		

	D MARK (Weeks)		J YEN (Weeks)		BRIT P (Weeks)		GOLD		SILVER	
	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand
T-T	9	6-10	8	6-13	7	6-11	15	12-20	25	20-30
AT-T							7	5-10	13	10-16
AT-C	7	4-9	4	1-6	4	2-7	5	2-7	7	5-11
AC-T	3	1-6	4	2-7	3	1-5	2	1-4	5	2-9
BT-T							8	5-10	13	8-15
BT-C							3	2-6	6	1-7
BC-T							4	2-7	8	3-10

	COPPER		SOYBEANS		B MEAL		BOIL		WHEAT	
	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand
T-T	18	14-22	20	15-26	20	15-26	21	16-25	31	26-37
AT-T	9	6-11	10	7-13	10	7-13	10	7-13	17	12-20
AT-C	6	2-9	6	2-9	6	2-9	6	2-10	12	9-16
AC-T	3	1-5	3	1-6	3	1-6	3	1-6	5	3-9
BT-T	9	7-11	11	8-14	11	8-14	11	8-14	14	10-17
BT-C	3	2-6	4	2-7	4	2-7	4	2-8	7	2-12
BC-T	5	2-7	6	2-9	6	2-9	6	2-9	7	1-10

TIMING BANDS - Market Days (cont'd)

	CORN		L CATTLE		L HOGS		PORK BELLIES		COTTON	
	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand	Avg	TBand
T-T	20	15-25	15	12-20	21	17-25	20	17-25	18	14-22
AT-T	10	6-13	8	6-10	11	8-14	10	7-14	9	5-12
AT-C	6	3-10	5	2-9	7	4-10	7	5-11	6	2-9
AC-T	3	1-5	3	1-5	4	2-6	3	1-6	2	1-5
BT-T	10	8-15	7	5-9	10	6-11	10	7-13	10	7-12
BT-C	4	3-7	3	1-5	4	2-7	3	1-6	4	2-7
BC-T	6	4-10	4	2-7	5	3-8	7	4-9	5	2-7

	SUGAR		COCOA		COFFEE	
	Avg	TBand	Avg	TBand	Avg	TBand
T-T	19	17-26	21	17-23	20	17-26
AT-T	11	10-14	11	9-14	11	9-14
AT-C	7	6-12	6	2-9	7	3-10
AC-T	3	2-5	3	1-6	3	1-7
BT-T	9	5-14	10	8-13	10	6-14
BT-C	3	1-6	4	2-8	4	1-8
BC-T	5	3-6	6	2-8	6	2-9

7 STEPS TO PLOTTING THE TIMING BANDS

Each cyclic component has a special color, which differentiates the Timing Bands. This color code should be used when drawing the Timing Bands on your charts. The color code makes it possible to recognize cyclic patterns on your charts. It also enables you to tell at a glance where a market is within a cycle, and to compare previous cycles with current market activity.

COLOR CODE
Red—Trading Cycle Trough to Trough
Brown—Alpha/Beta Cycle Trough to Trough
Green—Alpha/Beta Cycle Trough to Crest
Orange—Alpha/Beta Cycle Crest to Trough

TIMING BANDS FOR OUR EXAMPLE

	AVG	TBAND
Trough-to-Trough	28	21-36
Alpha Trough-to-Trough	14	10-18
Alpha Trough-to-Crest	9	4-13
Alpha Crest-to-Trough	4	1-8
Beta Trough-to-Trough	15	12-19
Beta Trough-to-Crest	6	3-10
Beta Crest-to-Trough	8	3-12

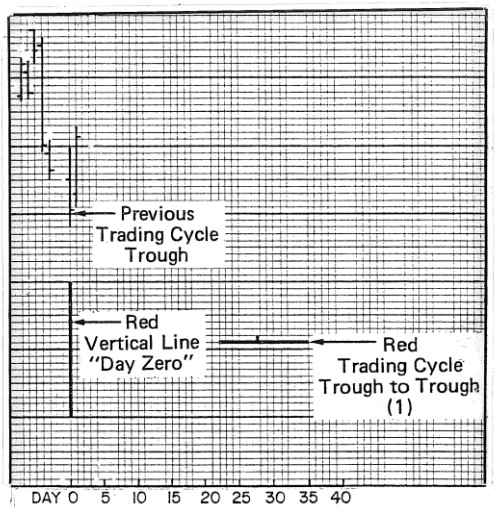
STEP 1 - Trough-to-Trough of the Trading Cycle

To plot daily Timing Bands, you must determine when the last Trading Cycle low occurred for the market you wish to analyze. From any Trading cycle low it is possible to anticipate the time period for the trough of the next Trading Cycle, and the trough of the Alpha Cycle. It is also possible to anticipate the next Alpha Cycle Crest with a 70% probability of being right.

Draw a red vertical line on the day of the last Trading Cycle Trough in the lower section of your chart. The red line now becomes 'Day Zero' for your count.

From Day Zero, count out horizontally 22-36 grids, or days, and with a red pencil draw a horizontal line on the chart connecting Day 22 up to and including Day 36.

Place a small vertical dash on Day 28 to show the average.



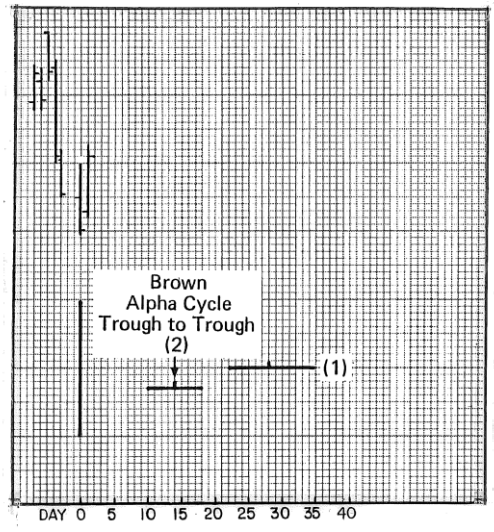
Seven times out of 10 in the past, the Trading Cycle has bottomed within this band. The time period may look large to you at this time, but as time marches on, and you put the other 6 bands on the chart, you will see how it is possible to make this time period much, much smaller.

STEP 2 - Trough-to-Trough of the Alpha Cycle

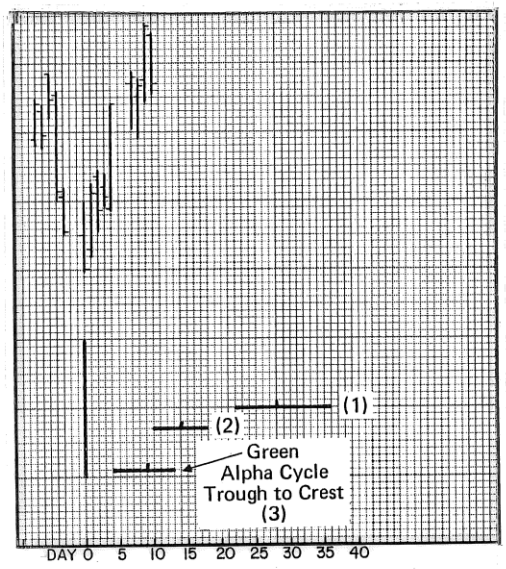
The Trading cycle and Alpha Cycle always begin together, so begin the Alpha cycle count from the previous Trading Cycle Trough.

With the brown pencil, several vertical grids below the red Trading Cycle Band (1), draw in the trough-to-trough of the Alpha Cycle Band (2) from Day 10 up to and including Day 18.

Place a small vertical slash on Day 14 to show the average.



STEP 3 – Trough-to-Crest of the Alpha Cycle



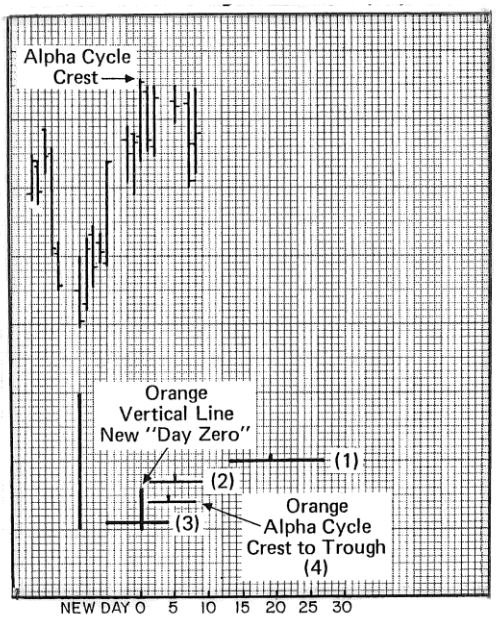
Once again, begin the count using the red vertical line, which represents the previous Trading Cycle Trough as Day Zero.

In green, about 6 to 8 vertical grids below the Alpha Cycle Trough to Trough Band (2), draw in the Trough to Crest Band of the Alpha Cycle from Day 4 to Day 13.

Place a small vertical slash on Day 9 to show the average.

STEP 4 – Crest-to-Trough of the Alpha Cycle

Because the Alpha Cycle Crest-to-Trough measurement begins with the Alpha Cycle Crest, it is necessary to wait until the Alpha Cycle Crest has occurred before charting the Crest-to-Trough Band (4).



Draw an orange vertical line through the green Alpha Cycle Trough-to-Crest Band (3), and extend this line up several grids to denote the Alpha Cycle Crest. This orange, vertical line now becomes Day Zero for the Alpha Cycle Crest-to-Trough Band (4).

With the Orange pencil, between Band 2 and 3, draw in the crest-to-trough of the Alpha Cycle Band from Day 1 up to and including Day 8.

Place a small vertical slash on Day 4 to show the average.

Note that there is now a time period during which the brown trough-to-trough of the Alpha Cycle (2), and the orange crest-to trough of the Alpha Cycle (4) overlap. The Alpha Cycle Trough will frequently occur during this overlap area.

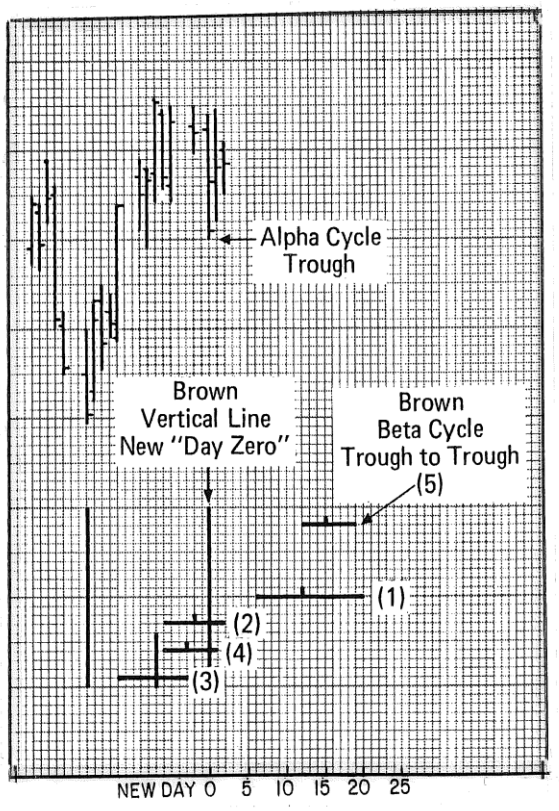
STEP 5 - Trough-to-Trough of the Beta Cycle

Once the Alpha Cycle Trough has occurred, it is possible to draw in the Timing Bands for the Beta Cycle: trough-to-trough of the Beta Cycle (5) and trough-to-crest of the Beta Cycle (6).

Draw a brown vertical line through the Alpha Cycle Trough to-Trough Band (2) and the Alpha Cycle Crest-to-Trough Band (4) to denote the Alpha Cycle Trough. Extend this line up to the same height as the previous red Trading Cycle Trough-to-Trough vertical line. This brown vertical line now becomes the new Day Zero for the Beta Cycle Bands (5 and 6).

With the brown pencil, draw in the Trough-to-Trough of the Beta Cycle Band at the same horizontal height as the top of the red and orange vertical lines from Day 12 up to and including Day 19.

Place a small vertical slash on Day 15 to show the average.



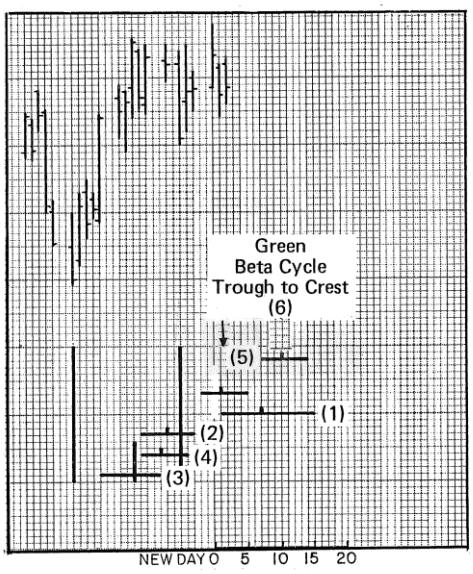
STEP 6 Trough-to-Crest of the Beta Cycle

Begin your count using the vertical brown line, which represents the Alpha Cycle Trough as Day Zero.

With a green pencil, draw in the trough-to-crest of the Beta Cycle Band several grids above the trough-to-trough of the Trading Cycle Band (1) from Day 3 to Day 10.

Place a small vertical slash on Day 6 to show the average.

Once the Beta Cycle Crest has been located, it is possible to chart the last cyclic component; crest-to-trough of the Beta Cycle.

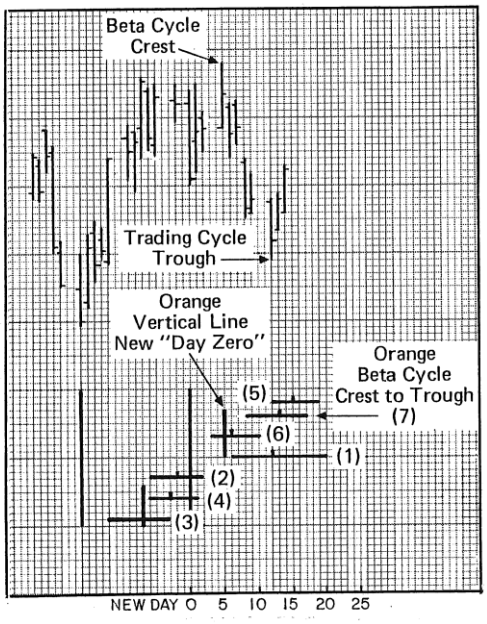


STEP 7 - Crest-to-Trough of the Beta Cycle

Use the orange pencil to draw a vertical line through the trough-to-crest of the Beta Cycle Timing Band (6). Extend this line up several grids to denote the Beta Cycle Crest. This orange vertical line now becomes the new Day Zero for the crest-to-trough of the Beta Cycle Band.

In orange, between the green trough-to-crest of the Beta Cycle (6) and the brown trough-to-trough of the Beta Cycle (5), draw in the crest-to-trough of the Beta Cycle from Day 3 to Day 12.

Place a small vertical slash on Day 8 to show the average.



Now there are 3 overlapping lines to give the most probable time for the Trading Cycle Trough to occur:

- The red trough-to-trough of the Trading Cycle (1)
- The brown trough-to-trough of the Beta Cycle (5)
- The orange crest-to-trough of the Beta Cycle (7)

The Trading Cycle will frequently bottom within the overlap area of all three Timing Bands as shown in our example. Once it is confirmed, the Trading Cycle trough becomes the new Day Zero for Bands 1, 2 and 3 of the next Trading Cycle.

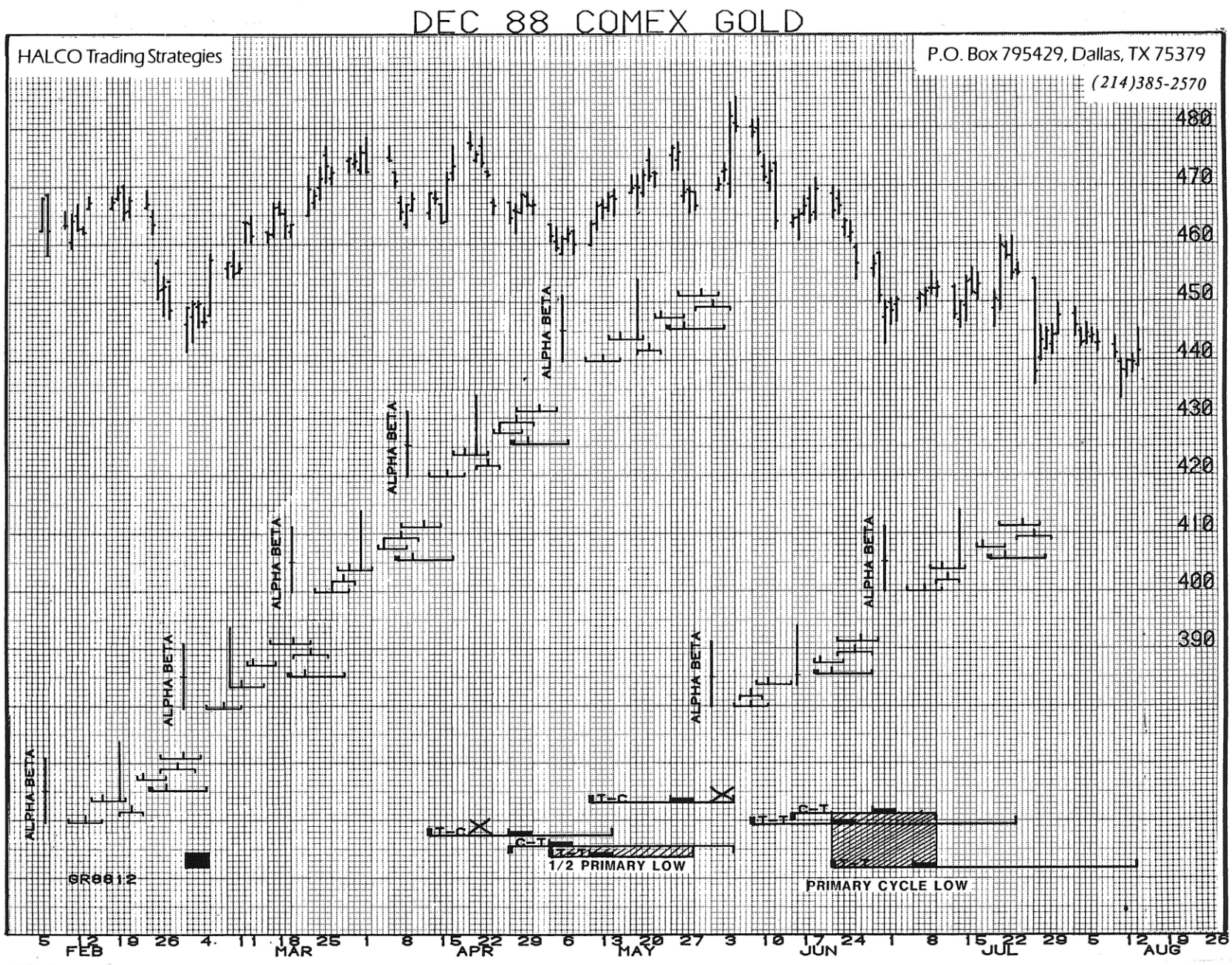
The same 7 steps can be used to construct the Primary Cycle and 1/2 primary Cycle Timing Bands, which can be plotted on weekly charts, and also daily charts.

CHART CY-*1* ••• is a calendar day chart of DEC 1988 Gold with Timing Bands for the Primary Cycle and Trading Cycle below the prices.

The primary Cycle bottom the week of March 4 is indicated by the solid rectangle. The 1/2 primary Cycle Trough-to-Crest Band of 6 to 10 weeks is labeled T-C, and the average of 8 weeks is shown by the bump the week of April 29. The X the week of April 22 shows that the first 1/2 primary Cycle has topped, and from that week the crest-to-trough band of 1-6 weeks with an average of 2 weeks (labeled C-T) was counted. The edges of this band are pointed down to show that the count is down, from high-to-low.

The 1/2 PC Trough-to-Trough Band of 9-12 weeks with an average of 10 weeks is labeled T-T. The overlap of the T-T and C-T Bands the weeks of May 6 through 27 is the most probable time period for the ½ PC to bottom, and it occurred the first week of the overlap. From this low the T-C Band of 1-4 weeks for the second 1/2 PC was counted. The X indicates the week of the high and from this high the C-T Band of 2-5 weeks was counted. The 1/2 PC Band of 5-11 weeks was counted from the first 1/2 PC low made the week of May 6.

The primary Cycle T-T Band at the bottom of the chart is 16-23 weeks from the PC low made the week of March 4. The overlap of the 3 Timing Bands — C-T, 1/2 PC T-T, and the 1/2 PC T-T is the most probable time period for the primary Cycle to bottom, as it did the week of July 1. The next set of Timing Bands would be calculated from this low.



Primary Cycle and Trading Cycle Timing Bands For Gold
Chart CY-1

The Trading Cycle Timing Bands are plotted above the PC Bands. The vertical lines labeled ALPHA BETA indicate the TC lows. The 3 lowest bands are the Alpha Cycle Bands, and the 3 highest bands are the Beta Cycle Bands. The darker middle band is the Trading Cycle Band of 18 to 28 calendar days. The other vertical line indicates the Alpha Cycle low, which begins the count for the Beta Cycle Timing Bands. The overlap areas of the C-T and T-T Bands are where most of the Alpha Cycle and Trading Cycled lows occur.

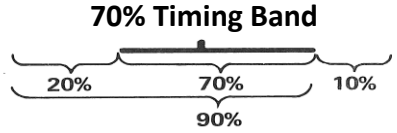
Oscillators are essential to the identification of the cycle highs and lows. It is the combination of time, price *and* oscillators that allows the early identification of cycle tops and bottoms that occur both within and outside of the Timing Bands.

THE PROBABILITY OF MAKING A SUCCESSFUL TRADE IS MUCH GREATER LATER IN THE TIMING BANDS THAN EARLIER

While Timing Bands are ranges within which prices have topped better than 7 times out of 10 in the past, the probability of making a successful trade is much greater later in the Timing Bands than earlier.

Normally, 70% of the cyclic tops and bottoms will occur within the range of the Timing Band; 20% will occur before the Band, and 10% will occur after the Band. So, by the time the last day of the 70% Timing Band has been reached, 90% or more, or the cycles would have already topped, or bottomed.

In a bottoming situation, on the last possible day of the overlap area of Bands 1, 5, and 7, once the market closes above the previous day's close and also the open, probabilities favor that day being the Trading Cycle low.



Chapter Two

TECHNICAL TOOLS WITH CYCLES

TECHNICAL ANALYSIS

Technical analysis enables an individual to analyze markets in which he has no fundamental expertise. While each market has its own individual characteristics, they must be isolated and identified through historical research. There is no single technical tool or grouping of tools that will work in all markets, and the use of cycles is simply another technical tool, but one that serves as the 'rule' that brings the technical picture into focus through the use of time.

The following technical tools provide time and price objectives. Performance of these tools is greatly improved when combined with cycles. For example, the Mid-Cycle Pause Price Objective is dependent upon the cycle, and once the cycle has ended and a new cycle begun the price objective is no longer valid. Sixty-forty Percent Retracements are valid only for the cycle in which they occur. Support/Resistance Lines are always valid, and cycles will tend to top and bottom at, or near, the support/Resistance levels.

Technical tools, combined with cycles and oscillators, give price levels that will provide support and resistance, often allowing you to anticipate Trends and Trend Reversals.

MID-CYCLE PAUSE PRICE OBJECTIVES

Establishing a position without a price is like taking a bus trip without knowing your destination. How do you know where to get off? Mid-Cycle Pause Price Objectives (MCP) are used to determine the distance prices will move to a cyclic top in bull markets or bottom in bear markets, and should be used in conjunction with other tools.
They can be constructed for Beta Cycles, Trading Cycles, 1/2 Primary cycles, and Primary cycles.

A Mid-Cycle Pause Price Objective will only be met, or exceeded if the next longer cycle continues to move in the same direction. For example, a MCP for a Trading Cycle will only be met if the 1/2 Primary Cycle or Primary cycle continues to move in the same direction; a MCP for a primary Cycle will only be met if the Seasonal Cycle continues to move in the same direction. A MCP will not be met in a trading range.

CONSTRUCTING A
MID-CYCLE PAUSE PRICE OBJECTIVE
IN A BULL MARKET

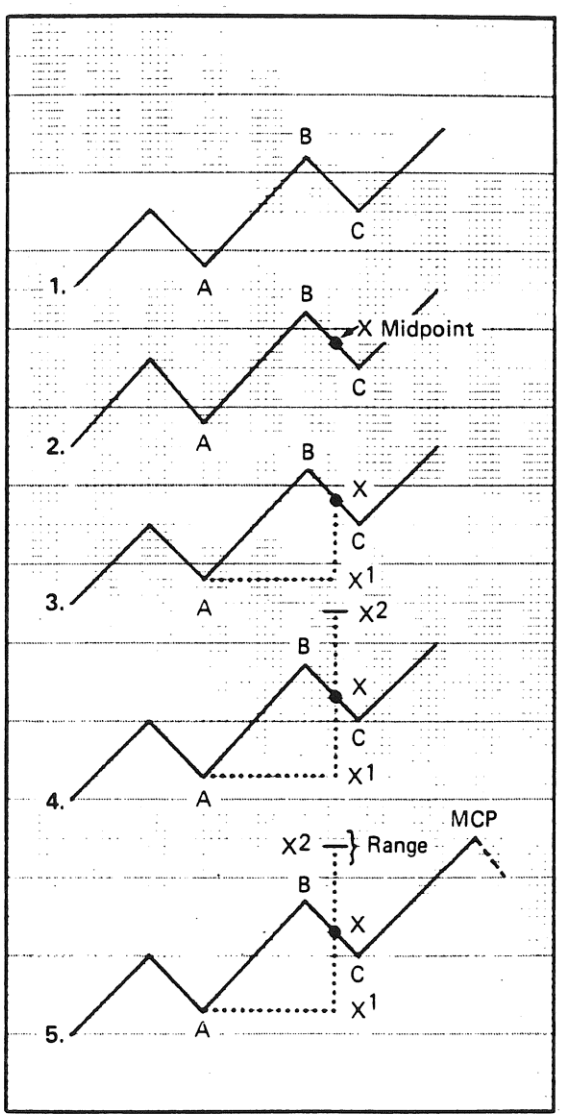
1) Measure the diagonal distance from the cyclic top B to the cyclic low C.

2) Mark the midpoint of the diagonal line BC as X.

3) Measure the vertical distance from the midpoint X to the price low of the preceding Cycle A**.** This distance is X-X1.

4) Measure the same distance as X-X1 above X to X1. The Mid-Cycle Pause Price Objective is X2.

5) Measure 10% of the total distance X1-X2, and plot this above and below X2. This is the range within which the next cycle of the same length that you are measuring should top.



CONSTRUCTING A
MID-CYCLE PAUSE PRICE OBJECTIVE
IN A BEAR MARKET

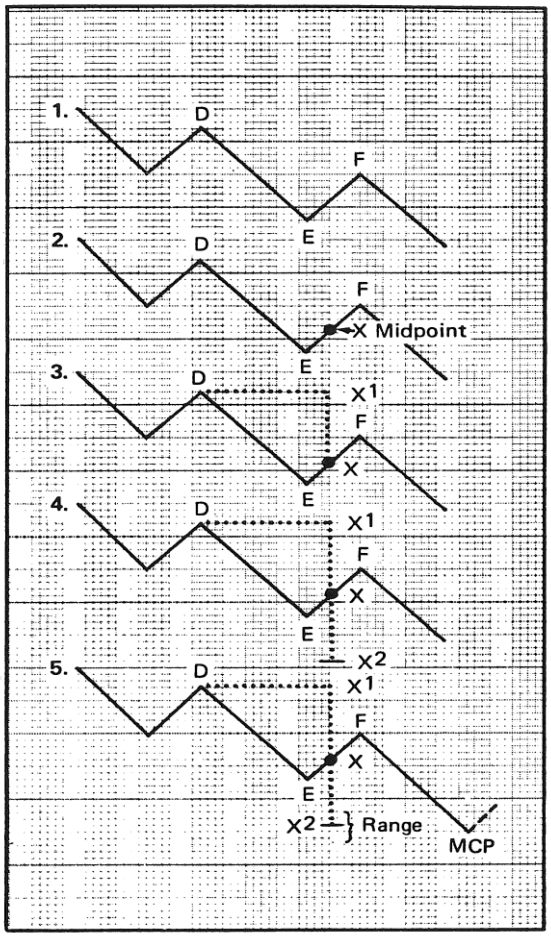
1) Measure the diagonal distance from the cycle low E to the cyclic top F.

2) Mark the midpoint of the diagonal line EF as X.

3) Measure the vertical distance from the midpoint X to the price high of the preceding cycle D. This distance is X-X1.

4) Measure the same distance as X-X1 below X to X2. The MidCycle Pause Price Objective is X2.

5) Measure 10% of the total distance above and below X2. This is the range within which the next cycle of the same length as you are measuring should bottom.



60-40% RETRACEMENTS

One of the most consistent tools for determining price objectives is the 60-40% Retracement derived from the Fibonacci .618-.382 relationship. This is a general area—close to 60%, and close to 40%. 60-40% Retracements are used to determine a price range for cyclic highs to occur in bear markets, and cyclic lows to occur in bull markets. Like MCP Price Objectives, 60-40% Retracements are only valid if the next longer cycle continues to move in the same direction. This price range should be used in conjunction with 70% cyclic Timing Bands.

Most Primary cycles, Trading Cycles, and Alpha Cycles will retrace at least 40%. The 60-40% measurement can often be used to enter a market when a cyclical top or bottom is due. Often, if a buying or selling opportunity is missed, you can enter the market as it retraces and still catch a substantial part of the move.

CONSTRUCTING A 60-40% RETRACEMENT IN A BULL MARKET

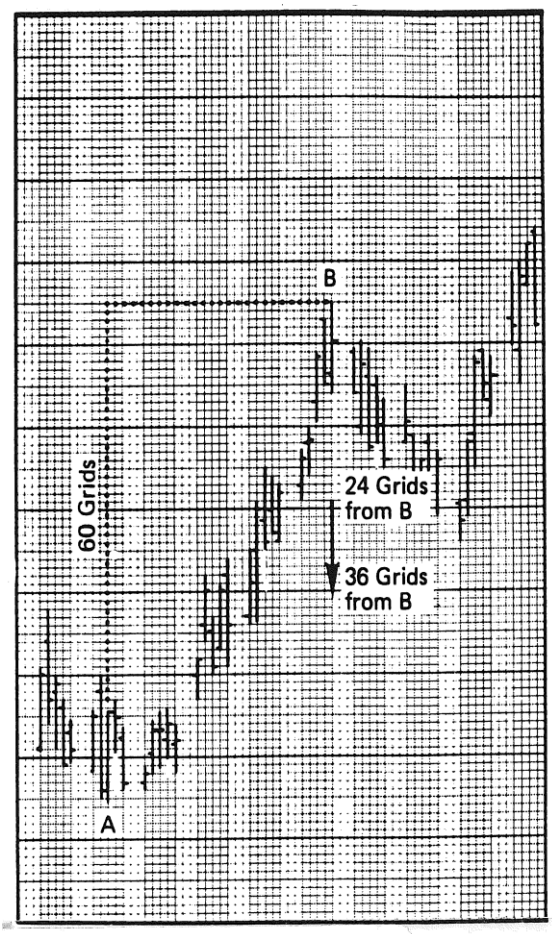
1) Measure the vertical distance (in grids from the cyclic trough A to the crest B.

2) Multiply the number of grids by .40 and .60 (60 x .40 = 24 grids; 60 x .60 = 36 grids).

3) Directly below the price high B, plot the .40 and .60 numbers, measuring down from the high.

4) Connect the two points, and place an arrowhead pointing down at the bottom of the line.

5) This is the price range within which the cycle should bottom. Timing Bands will provide the time period for prices to bottom while in the price range.



CONSTRUCTING A 60-40% RETRACEMENT IN A BEAR MARKET

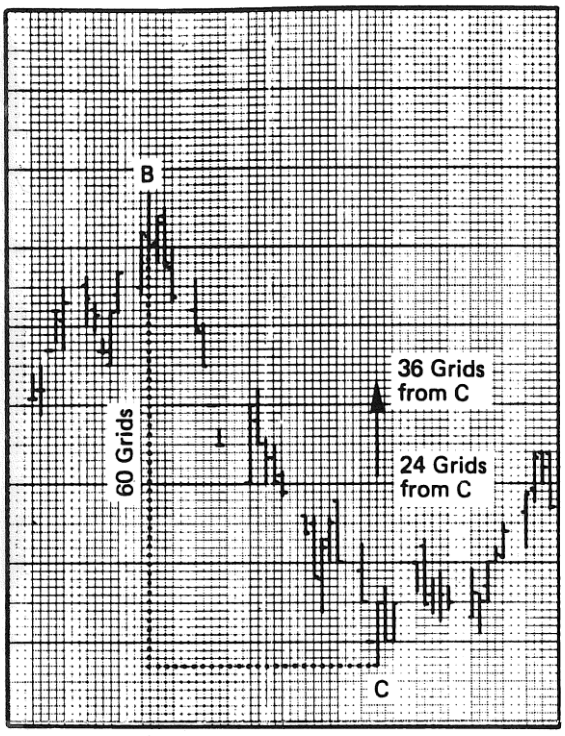
1) Measure the vertical distance (in grids) from the cycle crest B to trough C.

2) Multiply the number of grids by .40 and .60 (60 x .40 = 24 grids; 60 x .36 = 36 grids)

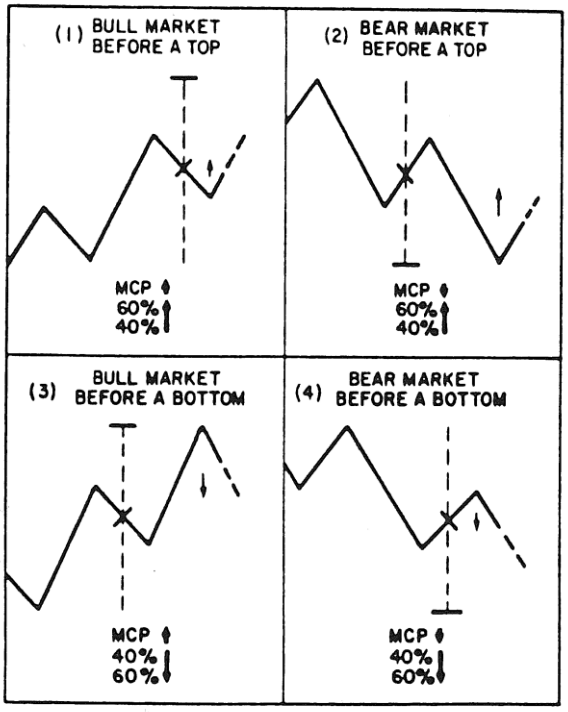
3) Directly above the price low C, plot the .40 and .60 numbers, measuring up from the low.

4) Connect the two points and place an arrowhead pointing up at the top of the line.

5) This is the price range within which the cycle should top. Timing Bands will provide the time period for prices to top while in the price range.



This diagram illustrates four of the basic situations in which MCP Price Objectives and 60-40% Retracements are constructed. In situations (1) and (4), if the market continues to move in the same direction, it is expected to reach the MCP. But the 60-40% range may offer resistance and must be exceeded for the MCP to be reached. In situations (2) and (3), the MCP has already been met and the 60-40% Retracement in the other direction is expected to be reached. Prices should then reverse, and a new MCP will be generated as prices follow the direction of the longer term cycle.



SPEED RESISTANCE LINES

Speed Resistance Lines were developed by Edson Gould, and brought to the public eye in the early 1970's by Gerald Appel in his excellent book, *Winning Market Systems.* Used with each individual cycle, Speed Resistance Lines become powerful analytical tools to help determine price objectives, cyclic tops and bottoms, and trend reversals. In fact, some of the most powerful and consistent buy and sell signals are generated when prices retrace 60-40% to meet the level of a Speed Resistance Line in the overlap area of Cyclic Timing Bands as one or more oscillators overextend.

Speedlines can be constructed for Trading Cycles, Alpha/Beta Cycles, Primary Cycles, 1/2 Primary Cycles, Seasonal Cycles, and Long-Term Cycles. Construction is based on the distance from low to high or high to low of the individual cycle.

CONSTRUCTING SPEED RESISTANCE LINES IN A BULL MARKET

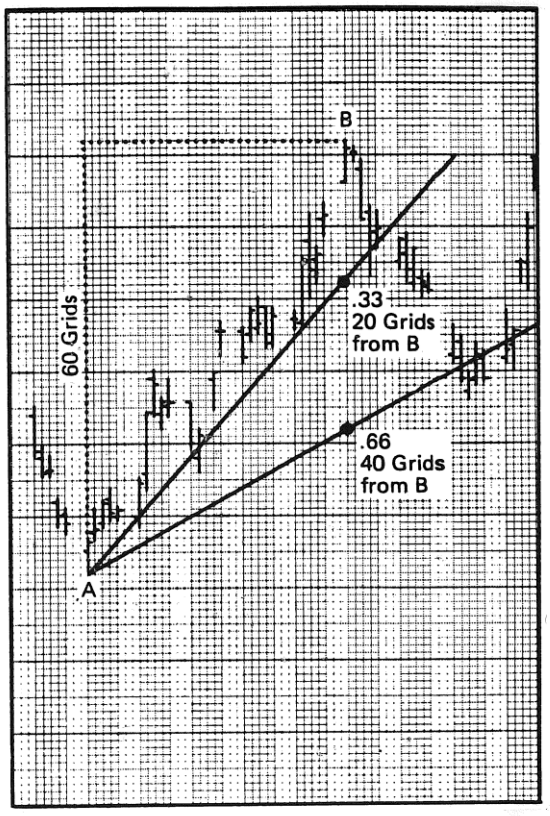
1) Measure the vertical distance (in grids) from the cyclic trough A to the crest B.

2) Divide this distance by three, or multiply the number of grids by .33 and .66 (60 x .33 = 20 grids; 60 x .66 = 40 grids).

3) Directly below the crest B, place dots at the .33 and .66 points, measuring down from the high.

4) From the low A, draw a line through the .33 point. This is the upper Speedline.

5) From the low A, draw a line through the .66 point. This is the lower Speedline.



When the upper Speedline is decisively penetrated, prices will often drop to the lower Speedline. Prices dropping decisively below the lower Speedline will often test and/or drop below the low at A.

CONSTRUCTING SPEED RESISTANCE LINES IN A BEAR MARKET

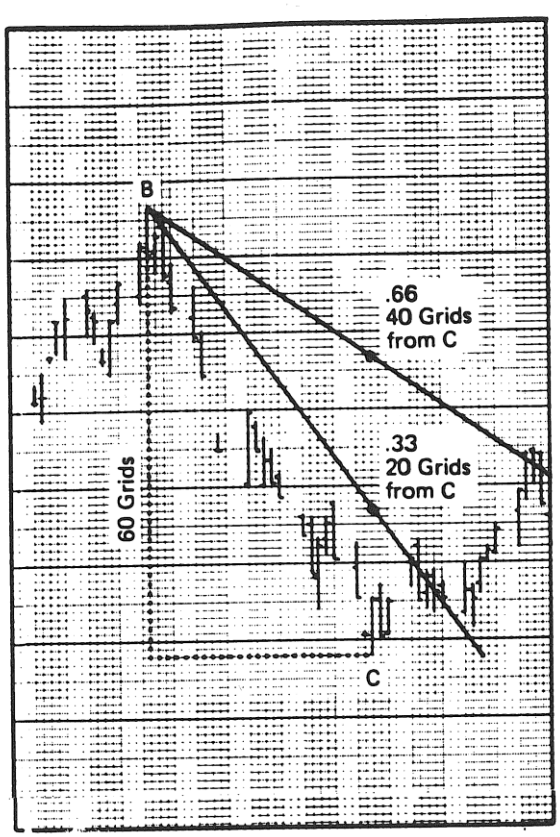
1) Measure the vertical distance (in grids) from the crest B to trough C.

2) Divide this distance by 3, or multiply the number of grids by .33 and .66 (60 x .33 = 20 grids; 60 x .66 = 40 grids).

3) Directly above the trough C, place dots at the .33 and .66 points, measuring up from the low.

4) From the crest B, draw a line through the .33 point. This is the lower Speedline.

5) From the crest B, draw a line through the .66 point. This is the upper Speedline. When the lower Speedline is decisively penetrated, prices will often rise to the upper Speedline. Prices rising decisively above the upper Speedline will often test and/or exceed the high at B.



HOW TO DETERMINE DECISIVE PENETRATION

The entire day's range is below the Speedline in a Bull Market, or above the Speedline in the Bear Market.

Penetration of the Speedline is more than 1.5% of the price level at which the Speedline is penetrated. At 50 cents, multiply 50 cents by 1.5% (.50 x .015) which equals .0075. Then subtract that figure from the 50 cents (.50 - .0075), which equals .4925. If the close is below that figure, then the Speedline has usually been decisively penetrated.

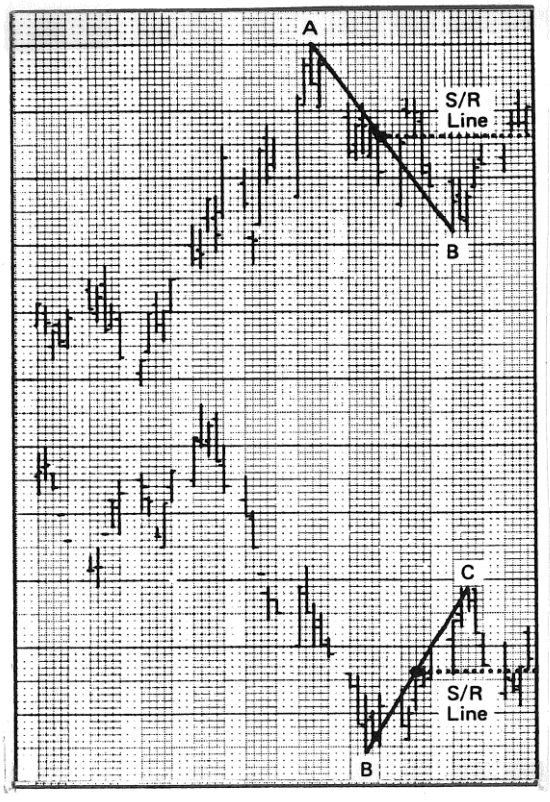
CYCLIC SUPPORT RESISTANCE LINES

Cyclic Support/Resistance Lines are price levels that are likely to provide support in declining markets and resistance in rising markets. Cycles will often top and bottom around these lines, sometimes months or even years after the support or resistance line has been established.

Once a Support/Resistance level has been established, the same line can offer support in a declining market and resistance in a rising market. For example, declining prices may temporarily congest around a support level before it is finally penetrated to the downside. But when prices try to rally back up again, the same line may offer resistance to the rising market.

The strength of support/Resistance levels is determined by how often prices have rebounded or become congested at these levels. Generally, the longer the cycle, greater is the effect of support or resistance. Cyclic Support/Resistance Lines are most effective when constructed for Trading Cycles, primary Cycles, Seasonal Cycles, and other Long-Term Cycles.

A Support/Resistance Line on a Daily Chart may be drawn horizontally from the mid-point of the diagonal distance measured to construct a Mid-Cycle Pause Price objective. Give newly constructed Support/Resistance lines some time to test its congesting and rebounding power before anticipating its effect on future price movement.



1) When a market is moving up, draw the line out from the midpoint of the diagonal distance from crest A to trough B.

2) When a market is moving down, draw the line out from the midpoint of the diagonal distance from trough B to crest C. In Weekly and Monthly Range Charts, the 'old' highs and lows are frequent Support/Resistance Levels, especially those that have stopped prices more than twice.

Chapter Three

FOCUS ON OSCILLATORS

What is an *oscillator?*
Oscillators are indicators of tops and bottoms in price. They will move up with prices to indicate a top; then they will move down with prices to indicate a bottom.

I define an oscillator as any mathematically calculated line, or lines, that move up and down with price activity in such a way that overbought and oversold situations can be identified. Mathematically calculated oscillators are often at their extremes at tops and bottoms, and visually illustrate the swings of the market from overbought to oversold, from overbought to oversold . . . and so on.

Unfortunately, not all overbought and oversold levels, or patterns of an oscillator, are significant price highs or lows of a market. That's where Oscillator/Cycle Combinations come into play.

THE POWERFUL OSCILLATOR/CYCLE COMBINATION

The power of Oscillator/Cycle Combinations lies in the combination of time and price. Cycle analysis will provide a clear-cut means of projecting cycle lengths; oscillators, which are a factor of price and time, allow overbought and oversold levels that occur at cycle highs and lows to be seen. Used together, it is the combination of the time periods identified through cycle analysis, and oscillator patterns that will help confirm the tops and bottoms as they are forming and to make projections into the future.

The Oscillator

An oscillator can be as simple as the difference between two moving averages, such as the 3-Day minus a 10-Day Moving Average, or the price fluctuation around a single moving average, as in a Detrend. It can be so complex that it cannot realistically be calculated by hand, as in the Commodity Channel Index. No matter how simple or complex, its basic quality is that it should move with prices in such a way as to indicate overbought and oversold levels.

But trying to simply sell overbought levels and buy oversold levels will not work, especially in the heat of the market. My approach is to take emotion out of the decision to enter or exit a market by making these decisions mechanical in a two-step process, the 'Setup' and the 'Trigger entry' which combine to form the Oscillator/Cycle Combination.

The Setup is an oscillator formation that can incorporate anyone of a number of factors, such as when the oscillator turns down, or when the oscillator goes above the Sell Line or below the Buy Line. It could be a divergence, or a penetration of the Crossover line. Whatever it is, once a Setup has formed, price activity of the market will make the entry decision for you in the Trigger entry. This is usually exceeding the high of a previous day (week or month) for a buy; dropping below the low of the price range for a sell.

Once an Oscillator/Cycle Combination, consisting of a Setup and a Trigger entry is identified, it should be researched over 5 to 40 years of historical data to evaluate its performance.

How to Research Oscillators

Start your research by working through at least 5 years of price history, keeping notes of everything that seems to be important. As you research, you will begin to see things of interest that have the potential to develop into Setups. You may find an oscillator high that is below the previous oscillator high—but what if there's a double top? What happens if the oscillator is higher and prices are lower? You must thoroughly check each and every combination. Over a relatively short period of research time, the combinations with profit potential will become apparent to you.

There is no single formula for successfully developing oscillator patterns, but starting with these guidelines will save you both time and money as you develop your own approach.

1) Do a bare minimum of 5 years of research on anyone oscillator pattern. My own experience in evaluating oscillator/price combinations is that it is important to research a large number of samples. This research will give you the confidence to establish positions at tops and bottoms against the prevailing market sentiment. If you don't do at least 5 years of research (and preferably 10 or 20), when you begin trading the patterns you are likely to encounter situations that you have not anticipated that almost always cost you money.

2) Keep a notebook or a cassette tape as you research to record your finds, and note additional areas to explore later. If you try to add these to your original research, you are likely to lose direction. Over a period of time, as you review your notes, you will find that some things come up again and again, and you will be able to isolate gems that are like money in the bank.

3) Learn one oscillator well. One of the reasons people have difficulty making money in the markets is that they try to evaluate too many oscillators, or trade too many markets. By focusing your research on one oscillator in several markets you will learn much more than the person jumping from oscillator to oscillator and trade to trade. And what you learn in that single oscillator can often be applied to other oscillators.

This boils down to identifying and quantifying oscillators and patterns the inexpensive way —on paper. Most of us have a tendency to do it the expensive way — "It looks so good I'm sure it will work this time, and I'll research it later." You know what happens.

4) Do not rely on only a single oscillator. A thorough study of each individual oscillator can produce patterns that will make money. Combinations of oscillators can increase the performance of individual oscillators. Also, no oscillator will pick every top and bottom, and some sizable moves can be missed by relying on just a single oscillator.

SEVEN TECHNIQUES TO ENHANCE OSCILLATOR PERFORMANCE

The purpose of oscillator analysis is to confirm highs and lows in a market through the identification and evaluation of overbought and oversold levels. The nature of cycle highs and lows is that they most often occur at overbought and oversold levels. The combination of oscillators and cycles allows:

1) The identification of the most significant patterns occurring at overbought/oversold levels, which are often the cycle highs and lows.

2) Establishment of time expectations for the next cycle high or low and significant overbought/oversold level.

Remember, cycles contract, extend and skip beats, while oscillators do not always overextend at cycle highs and lows. Even when they do overextend they often reach their most overextended before or after the exact price high.

You are probably thinking something similar to my thoughts years ago. If cycles are not exact in their timing, and oscillators are not consistent in reaching their extremes at cycle highs and lows, how can the combination of the two be anything more than inconsistent?

Awareness of the limitations of cycles and oscillators is half the battle. Knowing what they cannot do demands the development of high probability parameters that will make Oscillator/Cycle Combinations more exact in the identification of cycle highs and lows and in trading decisions.

First, do not expect oscillators to identify every cycle high and low. There will be times when a high or low will not show up as a significant overbought or oversold level in a particular oscillator . . . so, use several oscillators.

Second, develop historically researched patterns that will indicate a cycle high or low with *high probability* and act when these parameters are met, using mechanical Setup/Trigger entry combinations.

Third, use market-proven, money management concepts to control risk and optimize profits.

Over the years I have come to rely upon *SEVEN TECHNIQUES* that enhance the performance of most oscillators, take the judgment out of the identification of cycle tops and bottoms, and mechanize the market entry process.

SEVEN TECHNIQUES

1) PRICE/OSCILLATOR TURNS
2) SMOOTHING THE OSCILLATOR
3) *LEVELS, OR BUY/SELL LINES*
4) CROSSOVER LINES
5) THE ZERO LINE
6) PRICE/OSCILLATOR PATTERNS
7) SETUP/TRIGGER ENTRY PATTERNS

1) *PRICE/OSCILLATOR TURNS* ••• is the simplest approach to the use of an oscillator, and means that prices and the oscillator turn at approximately the same time, usually within several days of the other (or weeks for a weekly chart, months for a monthly chart, and so on). Unfortunately, most oscillators have 'wiggles' of a day or more that are not the highs or lows of the cycle we wish to identify and trade.

This technique can be valid for many oscillators once the problem of how to separate the false oscillator turns from the good oscillator turns is solved. Fortunately, several of the other techniques serve to qualify the turns in such a way that a simple oscillator turn can be not only an accurate indicator of tops and bottoms, but also help generate mechanical entry and exit signals.

2) SMOOTHING THE OSCILLATOR ••• eliminates many of the false wiggles. It is normally accomplished through a simple moving average, but can also be done with an exponential average or another oscillator. Once smoothed, upturns and downturns in an oscillator often become tradable, or can become part of a pattern.

4) *LEVELS THAT ACT AS BUY OR SELL LINES* ••• can also eliminate some of the false turns in an oscillator, and often indicate levels at which tops and bottoms can be expected in an oscillator, a smoothed oscillator, or Detrend. A Level is an oscillator level that is frequently exceeded as oscillators make highs and lows, such as the 70 and 30 levels of the stochastic or the 100 and -100 levels of the CCL Those levels are built into the oscillator; others can be determined by observation.

Through research, Levels to help determine tops and bottoms can be found and applied to all Detrends and most oscillators. For example, in Chapter Twelve on the "Stochastic", the 70 and 30 Levels are bypassed and other Levels used to identify the Seasonal highs and lows in the soybean market. Throughout the book you will see Levels applied to many different oscillators.

AUTHOR'S NOTE: As this book goes to press in March 1991 for the second time, it is apparent that I should expand on how to determine the Levels of Buy/Sell Lines and how to adapt them. A cycle low will frequently occur as an oscillator is overextended. Initially, look for the Level of the greatest overextension reached by most cycle tops and bottoms. This approach is used for most Buy/Sell Lines in the book. A second way to determine the Buy/Sell Line is to review the cycle bottoms and look for a Level that is not as extreme, but still identifies the cycle bottoms as well, or nearly as well, as the lower line. For example, in the S&P pattern on Page 11-2, the MACD Detrend has a Buy Line at -90 that was met or exceeded as all 4-Year Cycles bottomed, either before, at, or after the cycle low, but before the rise above the MACD Crossover Line (Which is also the Zero Line of the Detrend).

Now, if you review the S&P charts in the book on Pages 11-13 to 11-15/ or in your analytical system, you will see that the -70 Level also included all of the 4-Year cycle lows. With the filter of a rise above the Crossover to complete the Setup plus the Trigger entry, the -70 Level was as effective as the Buy Line at -90, and should be used in the future. A drop below -70 will have the same potential for a Setup or a drop below -90. Use the mirror image approach for Sell Lines.

This same approach can be taken with all Buy/Sell Lines in this book. It will be to your benefit to review the Buy/Sell Lines you are using every 6-12 months, searching for the ones that identify the highs and lows at the greatest extremes, and also ones that are not as extreme, but when followed by an oscillator turn and Trigger entry perform as well, or nearly as well, as the first.

4) CROSSOVER LINES ••• are excellent filters for oscillators that tend to turn before prices, and those having false turns that cannot be smoothed out of an oscillator. With a crossover, market entry is not as close to price tops and bottoms as when a simple downturn is used, but the probability of an accurate confirmation of a high or low is often greatly increased. The Signal line in the MACD functions as a Crossover.

A Crossover combined with a smoothed oscillator *and* Buy/Sell Lines is used in the CCI chapter to identify the highs and lows of the 4-Week Trading Cycle in T-Bonds.

5) *THE ZERO LINE* ••• is often a level of support or resistance for oscillators, and crossing it can be a criteria for constructing a pattern to identify highs and lows, or to generate an entry signal. In every price Detrend the Zero Line is the moving average around which prices are detrended; and in oscillator Detrends the Zero Line is usually the Crossover.

Only an Historical review will show how prices act relative to the Zero Line in a Detrend, or another oscillator. By reviewing Real-Time Detrends you will find that in most markets the 40, 20 and 10-unit time periods do act as Support and Resistance Levels. The Zero Line is frequently used as an important component in the structure of Price/Oscillator Patterns.

6) PRICE/OSCILLATOR PATTERNS ••• combine one or more of these techniques with price to identify recurring oscillator patterns. Price/Oscillator Patterns combine with the timing of cycles to produce Oscillator/Cycle Combinations, many of which provide the mechanical identification of cycles as well as mechanical entry and exit signals. For two specific examples, refer to the oscillator patterns for gold in Chapter Thirteen on the “3-10 Oscillator,” and the use of the MACD with the Japanese Yen in Chapter Six on "Detrending Oscillators." There are other examples throughout the book.

7) SETUP/TRIGGER ENTRY PATTERNS ••• turn the Price/Oscillator Patterns into “no thinkums.” These patterns with mechanical entries can take most of the judgment out of analysis and trading, but only if you can let go of the thrill and excitement that comes with making the decisions.

Most of us trade as much or more for the excitement of trading as for the profits. I was one of the best examples of a trader who was above the “trading for excitement” theory, and I used to give a knowing lecture against it at my workshops. It had been such a major part of the daily activity in most of my adult life that I was blind to the hold it had on me. It wasn’t until I had stopped trading for a couple of years that I was able to look back and see that the excitement of trading had controlled my life.

It was then that I decided to develop mechanical trades, or “no thinkums,” that would leave me free to enjoy the other aspects of living that I had missed while immersed in the markets for so many years. I am sure that not all people get hooked as

deeply as I did, but if you have walked only a part of that path you understand what I mean. And if you haven't, you are probably going to, unless you incorporate these concepts into your trading.

The setup is the Price/Oscillator Pattern developed through historical research. Using the setup alone means that you have to make the decision to enter the market, to pull the trigger at the time you feel it is appropriate. The Trigger entry eliminates that emotional attachment; not all of it, but a good part of it. The entry is pre-determined by the historical performance of the oscillator pattern and simple mechanical entry and exit techniques that let the price action of the market complete the pattern and trigger a market entry.

Trigger entries normally put you into the market on strength when buying the market, and on weakness when selling the market. When buying the market, the Trigger entry would normally be a buy stop above the high of:

- the day (week, month, hourly range, or another time period) that turned the oscillator up; or
- the time period that resulted in the Crossover; or

- the time period that preceded the oscillator upturn or Crossover; or

- the time period that followed the oscillator upturn or Crossover.

For any of the above, the Trigger entry stop could be placed above the next larger time period than the one that turns the oscillator or completes the Crossover. For example, if a daily oscillator turned up, the Trigger entry could be placed above the high of the week in which the upturn occurred.

In some situations, the close of a time period may be preferable to exceeding the high, or a pivot Point may be used (see Chapter Fourteen, “Trading and Money Management”).

THE DEVELOPMENT OF THE OSCILLATOR/CYCLE COMBINATION

The development of the Oscillator/Cycle Combination is a 3-step process. For example, at a bottom:

1) The time is right for a cycle high or low, as determined by cycle Timing Bands.

2) The price/Oscillator Pattern sets up.

3) Price activity puts you in the market by exceeding the Trigger entry buy stop.

The pattern is then complete and you have a pre-determined probability of a cycle top or bottom being in place and of making money, based on the time period researched. If you also researched the historical time and price moves to the Primary Cycle high you have reasonable expectations for the move that follows based on historical precedent, not hope. The mirror image would be followed to sell the market.

The patterns and research tables scattered throughout the book should be studied carefully to see how these concepts complement each other and allow cycle highs and lows to be confirmed with mechanical trading signals.

Chapter Four

FINDING CYCLES WITH CENTERED DETRENDING

Detrending is a process that eliminates the trend of a market relative to a moving average or an oscillator. On a chart this process allows individual cycles and overextension levels to be identified. The detrending process for cycle identification is somewhat different than that used with oscillators, and these are examined separately.

Detrending and Cycles

Each futures market is composed of many cycles. A combination of longer-term cycles and the Seasonal cycle determines the trend of the markets. But to trade, a market, it is necessary to analyze the shorter-term cycles Which frequently enable the top or bottom of a cycle to be confirmed within days or weeks.

Smaller cycles are often hard to identify because the more powerful, longer cycles, an obscure the, pattern of the smaller Cycle. The detrending process is used to eliminate the effects of cycles longer than the cycle for which you are searching. Each individual cycle can then be more accurately measured.

Detrending is a simple process. The first step is to have an idea of the approximate length of the cycle you wish to identify. Then run a moving average that is the same length as, the suspected cycle calculated on the close. The moving average is then centered, or plotted at the midpoint of the time period of the suspected cycle length. For example, a 20-Week Centered Moving Average would be plotted 10.5 weeks before the current week, which is more conveniently plotted 11 weeks before the current week.

S&P Index

CHART D-1 ••• the S&P Index has a 20-Week Cycle which shows up very clearly in the chart below. The top panel of Chart D-1 is a weekly plot of the cash S&P Index highlighting the 1982 low, with a Centered 20-Week Moving Average. The centered moving average then becomes a Zero Line as the bars of the chart are plotted relative to it, resulting in the actual Centered Detrend in the bottom panel of the chart.

Weekly S&P INDEX
3/81 to 12/82
with Centered Moving Average and Centered Detrend

The lows and highs of the 20-Week cycle are identified by the dots in both the chart and the Detrend. While the cycle highs and lows that show up in the Detrend match the price highs and lows of the chart above it, this is not always the case.

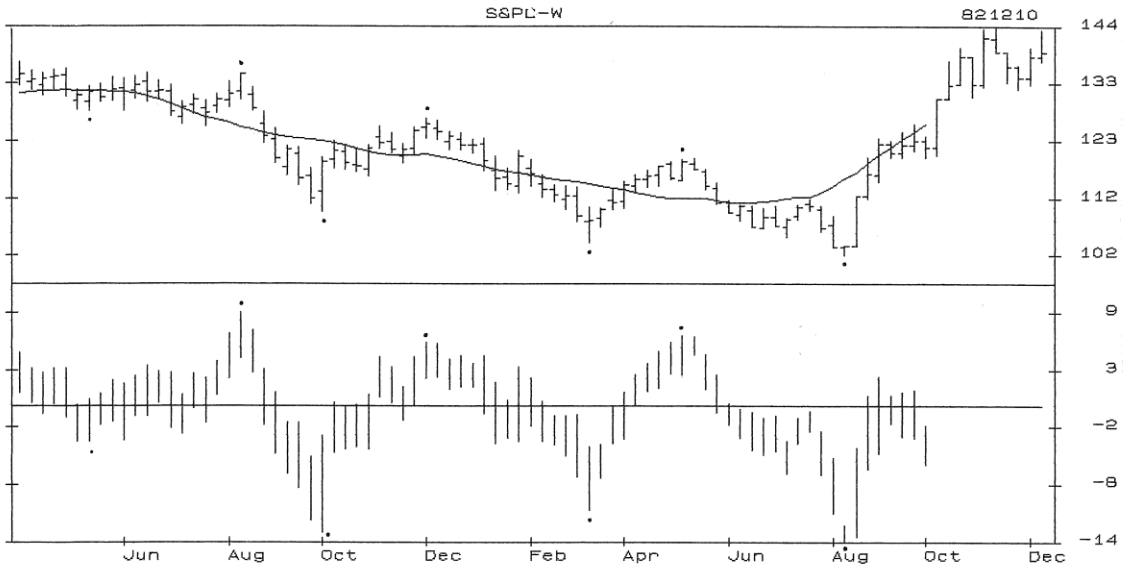


Chart D-1

CHART D-2 ••• is the weekly cash S&P from March 1983 to February 1990. This longer time period gives a better perspective of how accurate the Detrend is and highlights several important aspects of detrending. The Detrend lows of the 20-Week Cycle are marked by dots. Use a ruler to draw lines that match them to the price lows in the top panel.

S&P INDEX
Weekly Cash - 3/83 to 2/90
with 20-Week Centered Detrend

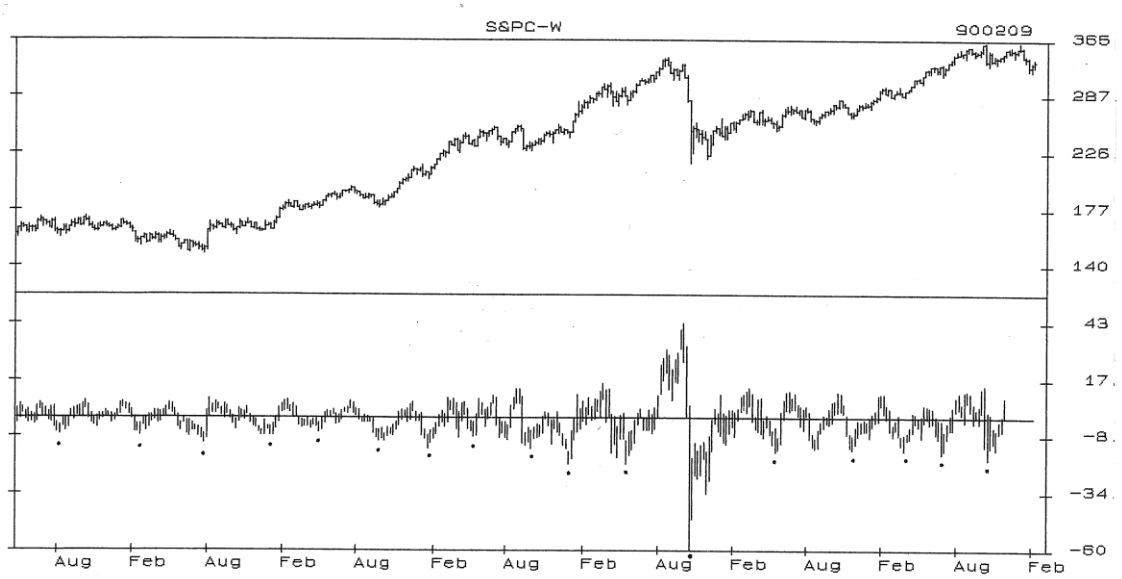


Chart D-2

A complete cycle phasing should be done over the longest possible data time series, normally 20 to 30 years, but this 6.7-year period, which has a smaller sample base, will serve to illustrate both a basic approach to cycle analysis and important characteristics of cycles. During this time period there were 16 cycles. The time periods from low-to-low are listed below from the longest to shortest time periods.

13 15 16 17 18 18 21 21 -M- 22 22 24 26 28 29 30 33

The median length, marked M, is between 21 and 22 weeks, or 21.5 weeks for this time period. Since 1950 the median length has been 22 weeks. Seventy-five percent of the lows occurred 15 to 26 weeks from the previous low, which is a 75% Timing Band that is very close to the 15-25 week Timing Band from the 1950 time series.

Every cycle low occurred below the 20-Week Centered Moving Average; every cycle high occurred above the moving average. Only in extremely rare situations will a cycle low occur above the centered moving average, or a cycle high below the centered moving average. *So,* a *basic premise of detrending is that cycle lows occur below the centered moving average and that cycle highs occur above the centered moving average.*

CYCLE HIGHS AND LOWS ARE NOT ALWAYS PRICE HIGHS AND LOWS•••

Trend, or the combination of longer-term cycles, can distort the shorter-term cycles that are so important to short-term trading and analysis. Detrending shows that cycle lows are not always price lows, nor are cycle highs always price highs. It is not uncommon, especially in an uptrending market, for the price low to occur before the cycle low, or even *tor* the cycle to seemingly disappear. To fully integrate this concept into your market perspective, practice detrending several markets and study the highs and lows. The examples that follow will give some an insight into this phenomenon.

CHART D-3 ••• shows the detrended cycle low at B, which is a higher price than the low 4 weeks earlier at C. This low occurred the week of 890301. The uptrend caused by the rising - 4-Year and 8-Year Cycles prevents the weaker 20-Week Cycle from having a more substantial price decline.

Weekly S&P Index
12/87-9/89
With 20-Week Centered Detrend

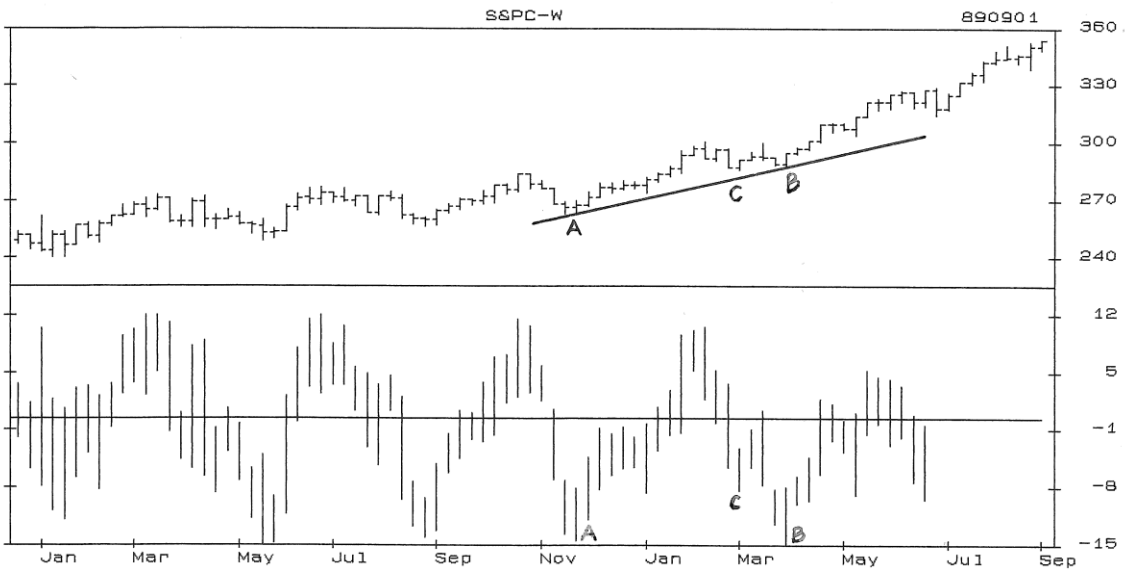


Chart D-3

CHART D-4 ••• shows a detrended cycle low made the week of 870522 at B, which is higher than the price low made 5 weeks earlier at C. At both this low and the low in Chart 0-3, the AB Trendlines, which are not drawn at the price low are an indication that such a divergent cycle bottom may be occurring. Also notice the price/detrend divergence between the price highs at D and E, and the Detrend highs at D and E.

Weekly S&P Index
6/86-2/88
With 20-Week Centered Detrend

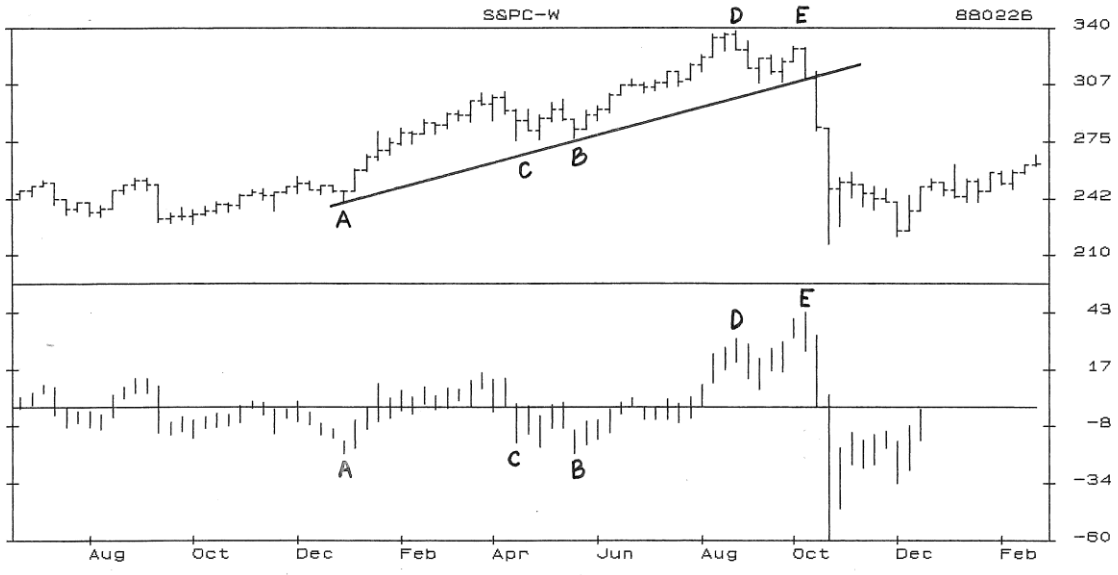


Chart D-4

GOLD

CHART D-5 ••• the top panel of Chart D-5 is a Weekly Gold Chart from 1981 through 1987. The dots indicate the lows of the 18-Week Primary Cycle. The bottom panel is the Detrend of an 18-Week Centered Moving Average. The two circled time periods of D-7 and D-6, illustrate some characteristics of detrending that will occasionally be encountered in most markets.

Weekly Gold Chart
1981-1987
with 18-Week Centered Detrend

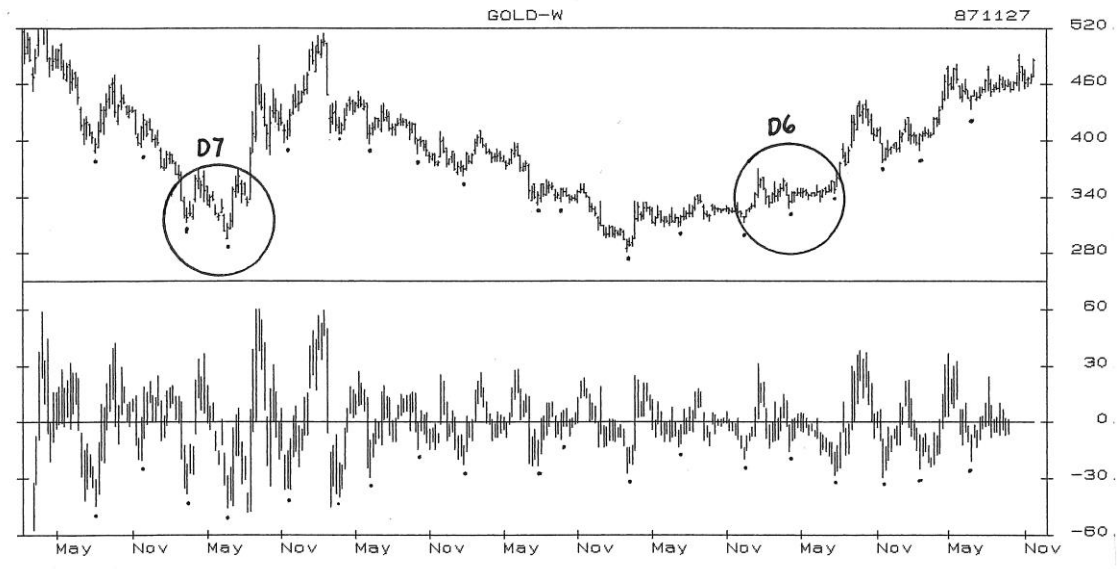


Chart D-5

In *CHART D-6* ••• the cycle lows at A and B show up quite distinctly in both the price chart in the top panel and the Detrend in the bottom panel. Simply using the price chart of gold would lead to the conclusion that the cycle must have bottomed at D. But the Detrend shows that the cycle low actually occurred the week of 860725 at C. The prolonged trading range from B to C was the result of a tug of war between the longer-term cycles moving up, and shorter-term cycles moving down. Once the Primary Cycle bottomed at C, gold was free to rapidly move higher.

Weekly Gold
4/85-1/87
with 18-Week Centered Detrend

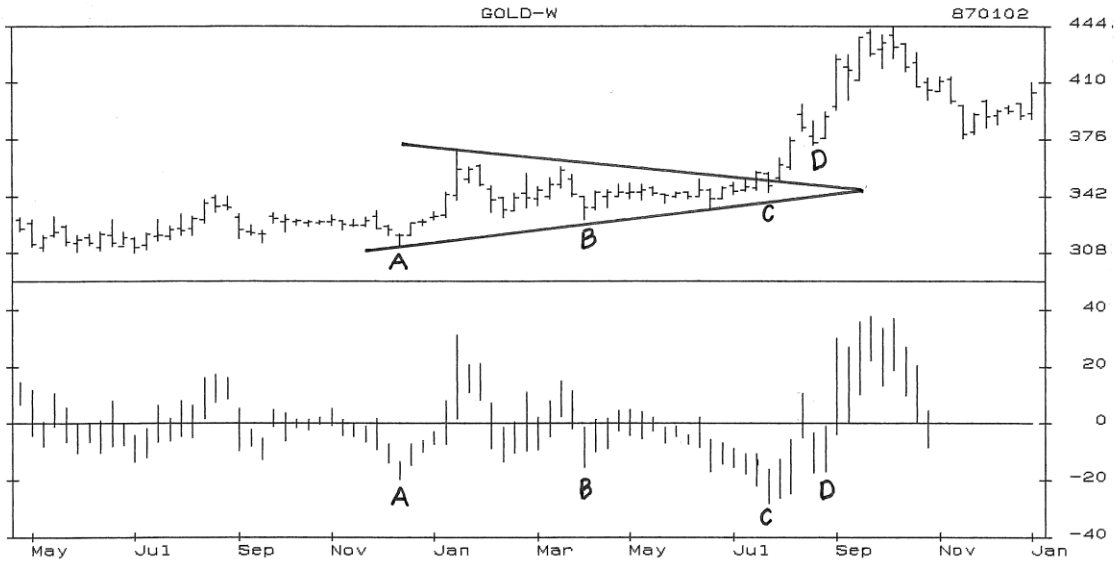


Chart D-6

With a centered moving average, which lags prices by one-half the cycle, you would not be able to see this on a chart in time to do anything about it. But seeing the actual Detrend makes you aware of how such a phenomenon can occur, and this experience can often be helpful in determining which direction a market will break out from a trading range or chart pattern such as the wedge drawn on the chart.

CHART D-7 ••• a somewhat similar situation occurs in Chart D-7 following the 1982 low in gold. Notice that the price low at C was followed by a higher low at D that had a lower Detrend that was the real cycle low. This low was also followed by a breakout of a wedge, or triangle pattern, which had a substantial upmove. This same low at D will show up later in the book with an oscillator pattern that confirmed a Primary Cycle low and gave a low risk buy signal.

Lows A and B show a situation where the lower Detrend at B did not indicate the real cycle low. Obviously, nothing works all of the time. However, the low at B followed the lowest low since the 1980 high and did not occur in an uptrend where this pattern is most frequently seen.

Weekly Gold
7/81-3/83
with 18-Week Centered Detrend

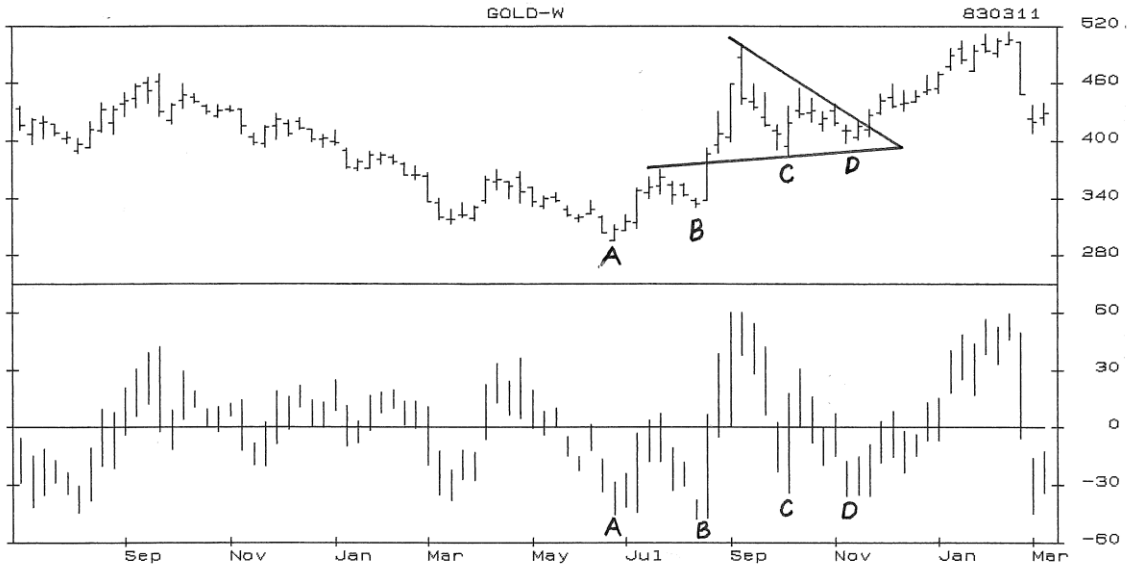


Chart D-7

The dominant shorter-term daily cycles, or Trading Cycles, should also show up when detrended. Most of the time in most markets these cycles will bottom as the Primary Cycle bottoms. The lengths of the Trading Cycles and their cyclic components for most active futures markets are listed in Chapter One. Gold has a Trading cycle that averages 15 market days from low-to-low, and since 1974 has had a 70% Timing Band of 13 to 20 market days.

CHART D-B ••• is a daily chart of the nearby contract of gold from 880918 through 890526. The top panel of the chart shows the lengths of the Trading Cycles, which are also identified in the 15-Day Centered Detrend in the bottom panel of the chart. The Primary Cycle lows are labeled PC.

Daily Gold
9/88-5/89
with 15-Day Centered Detrend

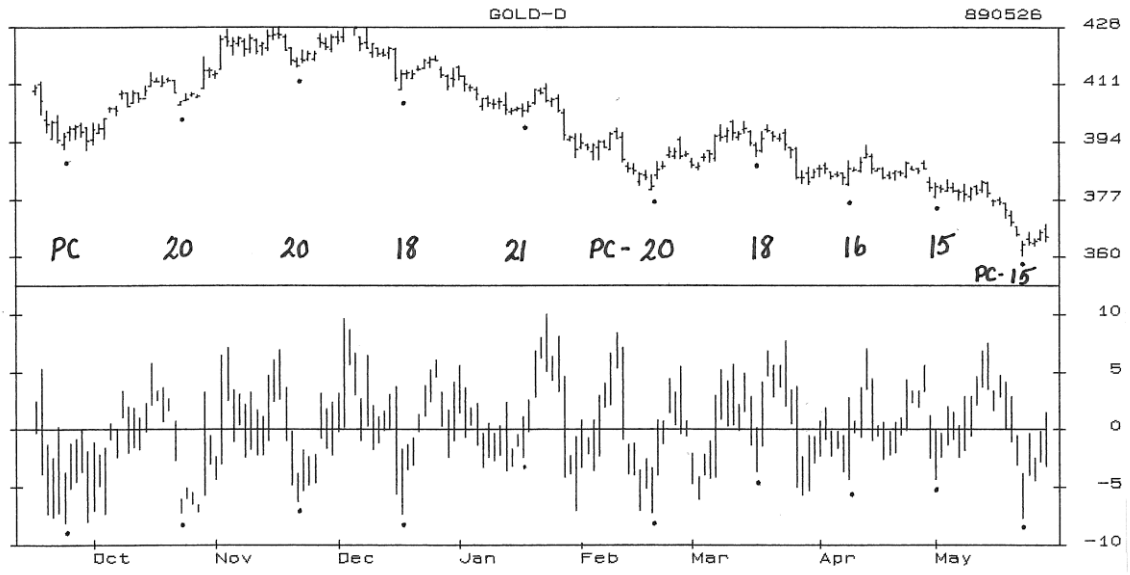


Chart D-8

SWISS FRANC

CHART D-9 ••• the Swiss Franc is an example of a market that maintains a directional move for a long period of time. Monthly Chart D-9 shows a 4-Year Cycle that sets the trend for the shorter-term cycles.

Monthly Swiss Franc
5/75-2/90
with 48-Month Centered Detrend

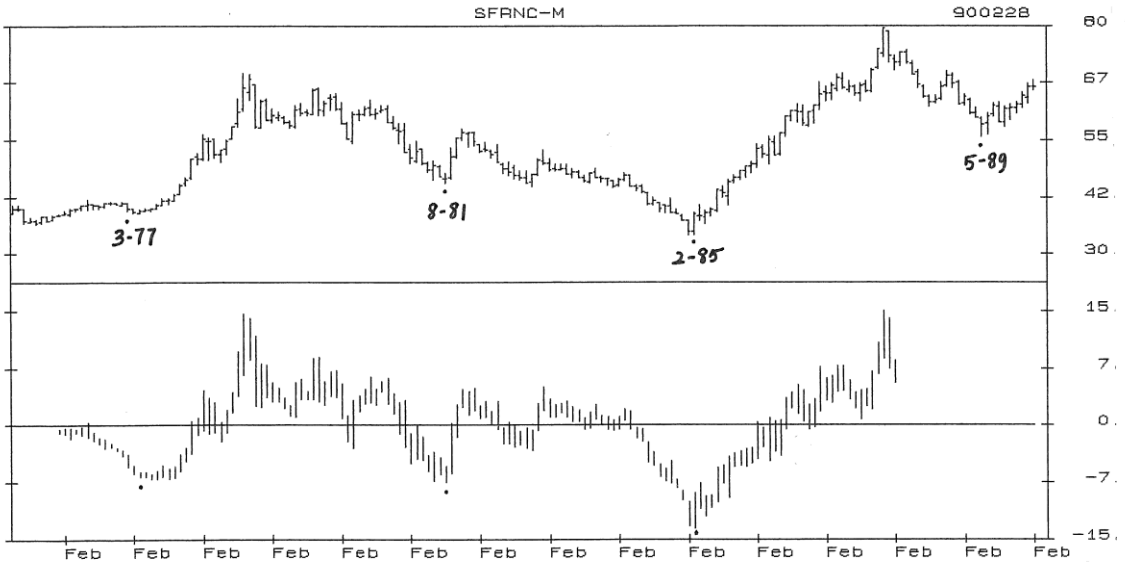
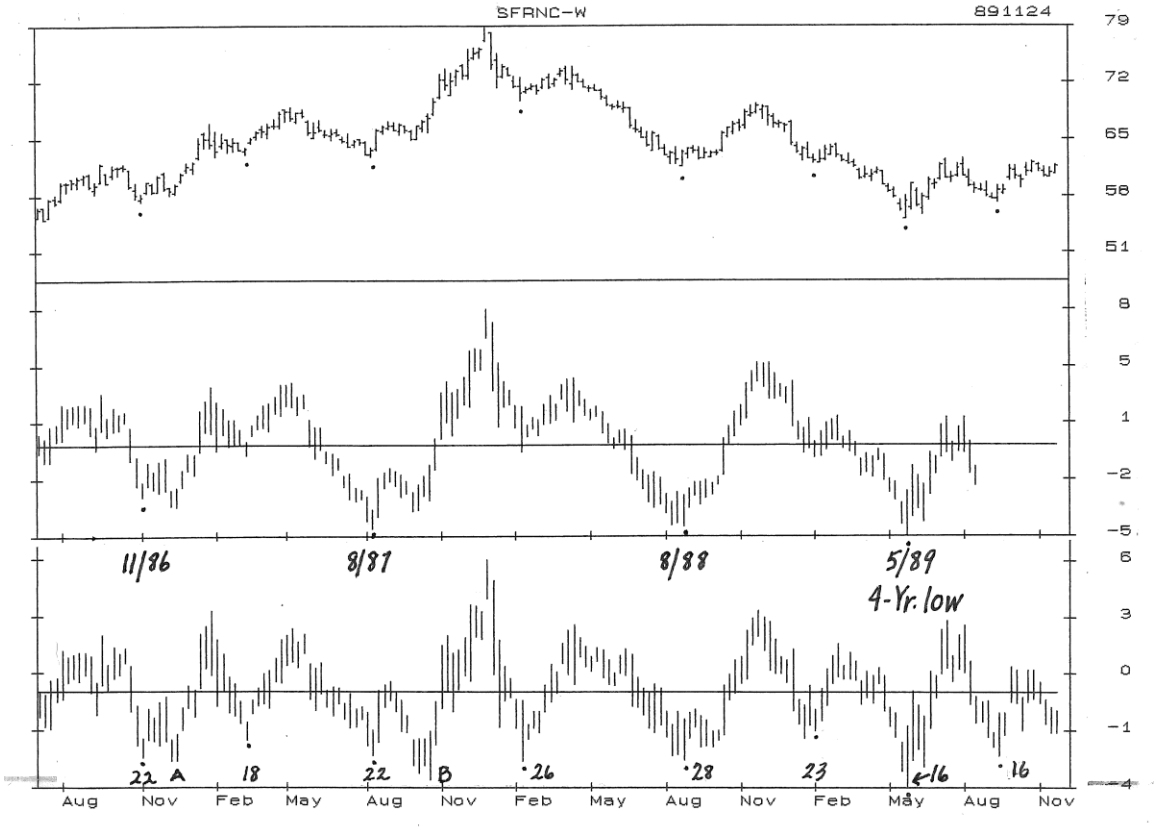


Chart D-9

CHART D-10 ••• is a weekly chart of the Swiss Franc from June 1986 to November 1989. The middle panel is a 50-Week Centered Moving Average Detrend that illustrates the Seasonal tendency to make lows in the May through September time period; and highs November through April. The fluctuations of the 22-Week Primary Cycle that can be seen in the 50-Week Detrend stand out much more clearly with the 22-Week Centered Detrend in the bottom panel.

Weekly Swiss Franc 6/86-11/89
with 50-Week Centered Detrend
and 22-Week Centered Detrend



Charts D-10

The number of weeks from low-to-low is shown in the Detrend and fit the 80% Timing Band of 16-28 weeks.

Notice that at A and B the Detrend is lower than the cycle price low. This is somewhat unusual, and for want of a better explanation, I attribute it to the 8-Week Trading Cycle illustrated in Chart D-11.

CHART D-11 ••• the cycle lows are indicated in the price chart in the top panel, and the weekly counts are shown in the 5-Week centered Detrend in the bottom panel. While this cycle has a Timing Band of 6-11 weeks and is not always easy to spot, it often provides some of the lowest risk opportunities to trade the Swiss Franc, as well as the D-Mark and Japanese Yen.

Weekly Swiss Franc
5/86 to 11/89
with 5-Week Centered Detrend

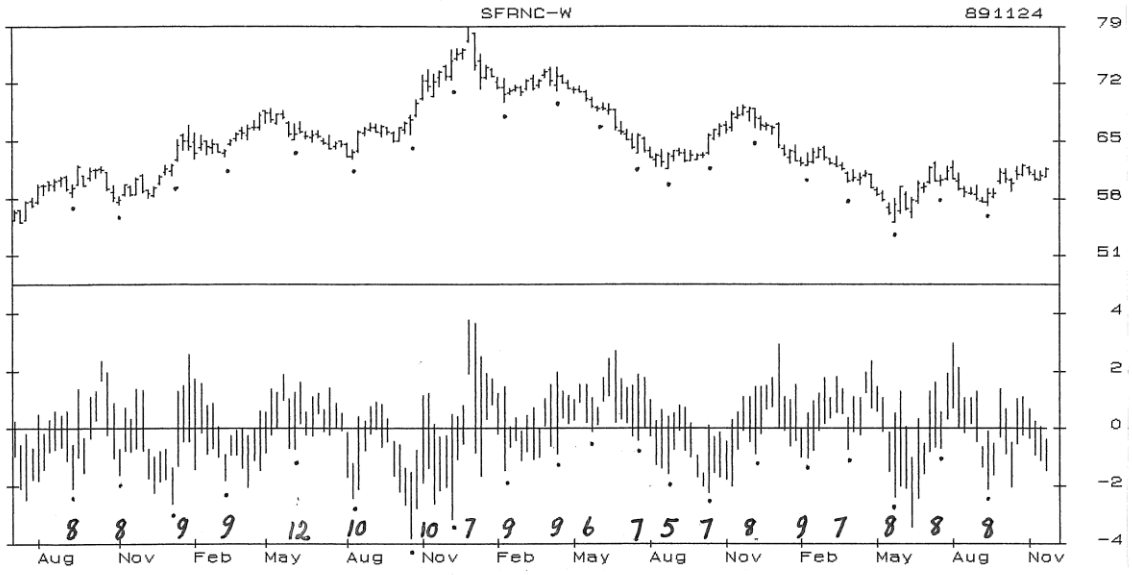


Chart D-11

T-BONDS

With all of the economic forces affecting interest rates and the bond market, including the release of government data and reports, it is not surprising that the Primary Cycle in this market is somewhat elusive. A phenomena that must be considered is that the Federal Reserve can, if it so chooses, move interest rates at its discretion for a prolonged period of time, extending the length of the Primary cycle and keeping oscillators at overbought or oversold levels.

T-Bonds have 2 strong weekly cycles that move in and out of dominancy. One is a cycle that averages 21 weeks from low to low. It has a Timing Band of 18 to 28 weeks (see Chapter One) with two-thirds of the cycles occurring 18 to 22 weeks from the previous low *when this cycle is dominant.* The other cycle averages 14 weeks from low-to-Iow and has a 100% Timing Band of 12 to 16 weeks.

CHART D-12 ••• shows a weekly T-Bond Chart of the nearby futures contract from March 1983 through January 1990 in the top panel, with a 21-Week Centered Detrend in the middle panel, and a 14-Week Centered Detrend in the bottom panel. The Primary Cycle highs and lows are indicated by the dots in all 3 panels (for greater visual clarity use a parallel ruler to draw vertical lines through all 3 panels at highs and lows; one color for highs, another for lows).

Many PC highs and lows are clear cut, but in questionable situations a judgment was made based on a number of factors, such as oscillator patterns, Right and Left Translation, and also to include some extremes of unusually long and short cycles to be prepared for these extremes in real-time trading. The time periods of the selected PC highs and lows are indicated in the middle panel. The numbers at the bottom are the number of weeks from low-to-Iow; the numbers at the top are the number of weeks from low-to-high.

The 21-Week Cycle, with 12 lows, usually makes more sizable bottoms than the 14-Week Cycle, which occurred 11 times. However, a close look at the 14-Week Detrend in the lower panel shows that most of the 21-Week Cycles are composed of 2 smaller cycles of which at least one is a 14-Week cycle that begins or ends the larger 21-Week Cycle.

The moves from low-to-high, or trough-to-crest, for all cycles are 7 to 16 weeks for 17 of the cycles, with one cycle stretching to a 20-week high. Most of these occurred in bull markets. Only 4 cycles rose to a top in 3 to 5 weeks and these were definitely in bear moves.

The counts from high-to-Iow can be calculated by subtracting the low-to-high count from the low-to-Iow count. These counts, from 1 to 18 weeks, are so spread out that meaningful Timing Bands cannot be calculated. However, the 14-Week Cycles all bottomed 1 to 12 weeks from the high, and the 21-Week Cycles all bottomed 6 to 18 weeks from the cycle high. Generally, the shorter high-to-low counts will occur in bull markets, and the longer high-to-Iow counts will occur in bear markets. The combination of the Timing Bands from low-to-Iow and the oscillators will be the most important factors in determining the PC lows.

To get the most out of this book I recommend that you reconstruct these charts for yourself on a more detailed scale. A complete study of this market would require weekly futures data from 1977, and cash data as far back as possible.

Weekly T-Bond 3/83-1/90
with 21-Week Centered Detrend
and 14-Week Centered Detrend

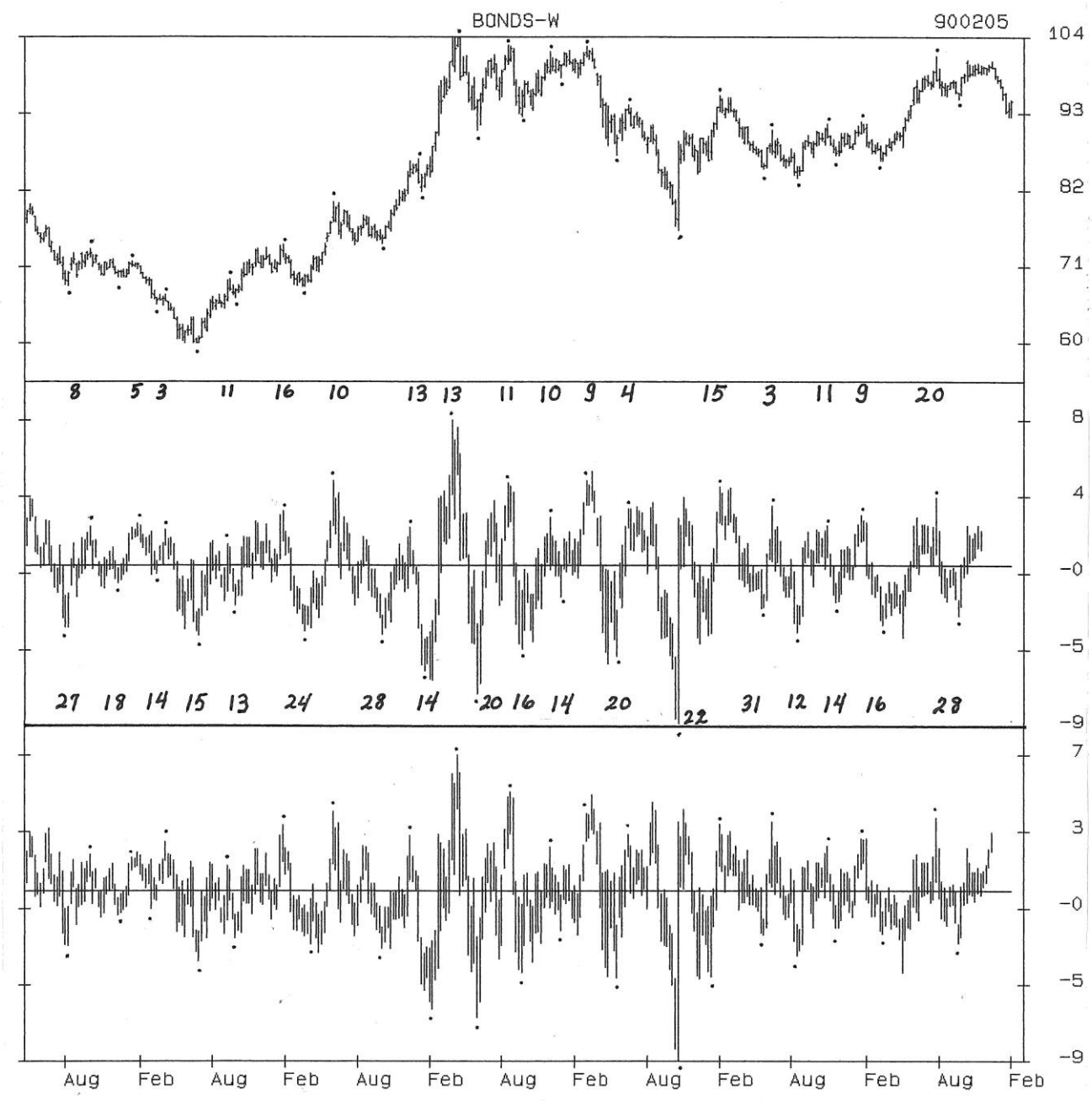


Chart D-12

CHART D-13 ••• shows a daily bar chart of T-Bonds in the top panel from 880923 to 900209 and a 21-Day Centered Detrend in the bottom panel. With the Detrend, the cycles show up clearly. Every Trading cycle low is made with the Detrend well below the moving average. The Detrend low is not always the same as the price low, but it is usually within 4 days of it. The detrended highs are not as exact as the lows, but are still helpful in identifying the cycle highs.

Of the 14 cycles in this time period 65% occurred 17 to 23 market days from the previous TC low; 35% occurred 28 to 30 days from the low. So, as a general guideline expect the TC low to occur 17 to 23 market days after the previous low, and if prices continue to decline after the twenty-third day a bottom is not likely until the twenty-eighth to the thirtieth day.

The distribution is not as tight for the count from low-to-high, but of the cycles that had a count of 14 to 22 days to the high, all made the TC low 28 to 30 days from the previous low. Information like this can be like 'money in the bank' if used at the right time. Of course these tendencies should be confirmed by a review of a much longer time period.

Daily T-Bonds
9/88-2/90
with 21-Day Centered Detrend

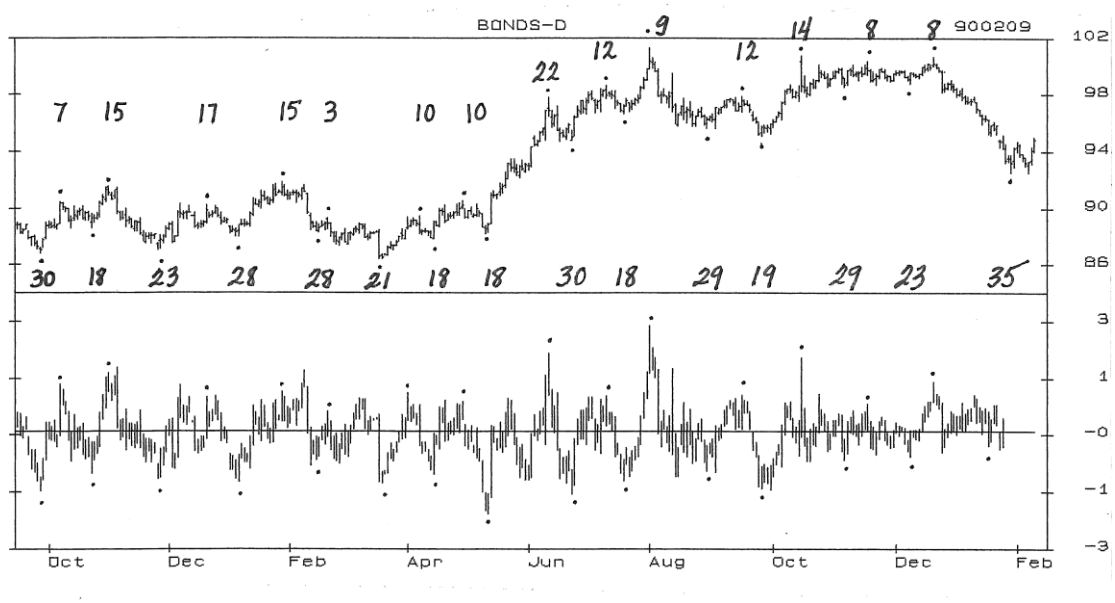


Chart D-13

SOYBEANS

CHART D-14 ••• the Seasonal Cycle in the soybean market, as in most agricultural markets, is a very powerful and dominant cycle which can set the intermediate-term trend for many months. Chart D-14 is a weekly chart of the nearby contract of soybeans from March 1983 to February 1990 in the top panel and a 50-Week Centered Detrend in the lower panel. The dates above the Detrend indicate the Seasonal highs and the dates below the Detrend, the lows.

Weekly Soybeans
3/83-2/90
with 50-Week centered Detrend

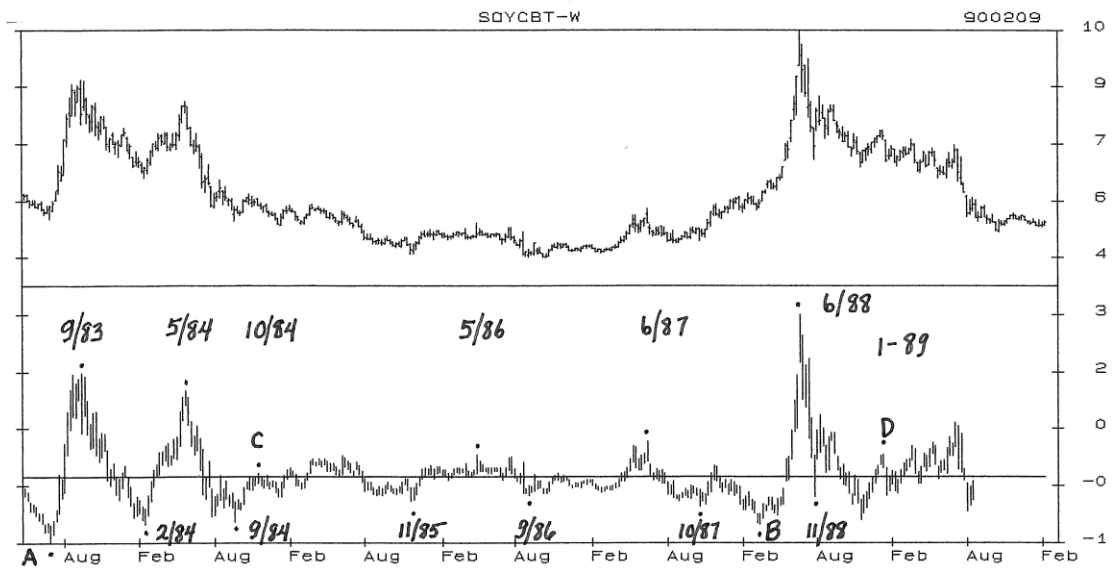


Chart D-14

The long-term trend in beans is determined by the direction of the 24 and 39-Month Cycles. Notice Lows A and B in the Detrend. These are not Seasonal lows, but exemplify the distorting power of the longer term cycles as they move up to a top.

The Seasonal highs at C and D are so overpowered by the longer term cycles that they show up as only short-term highs in the Detrend and in the chart. It is hard for most of us to accept that a Seasonal high can occur only weeks from a Seasonal low, but it frequently happens following the top of a 24 and/or 39-Month Cycle high.

Chart *D-15* ••• shows the weekly chart of the nearby contract of soybeans from March 1983 through February 1990 in the upper panel and a Centered Detrend of a 14-Week Moving Average in the lower panel.

Weekly Soybeans
3/83-2/90
with 14-Week Centered Detrend

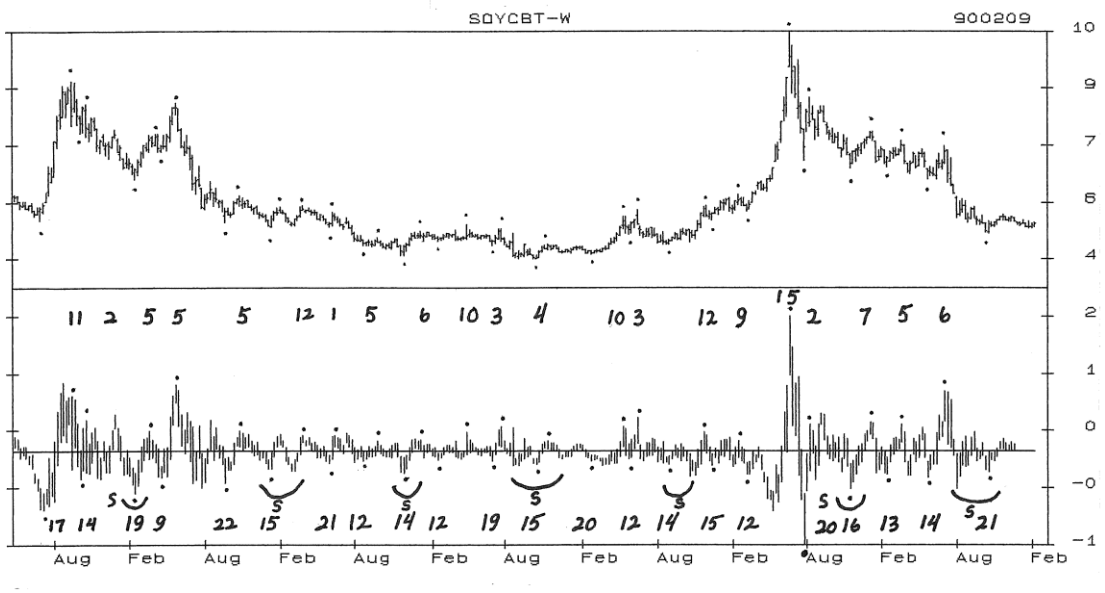


Chart D-15

The primary Cycle count from low-to-Iow is at the bottom of the lower panel, and the count from low-to-high is at the top of the lower panel. The length of the PC averages 14 weeks from low-to-Iow, with a Timing Band of 11 to 22 weeks, which includes 85% of all cycles. This cycle tends to have a smaller 1/2 primary Cycle within it that is not consistent in length, but shows up in most cycles as a drop below the Detrend.

A full 60% of the Primary Cycles bottom over a 5 week time period of 11-15 weeks from the previous PC low, and only 40% bottom over the 6-week time period of 16-22 weeks from the previous low. However, in about one-third of these longer cycles, one of the 1/2 Primary Cycles is 11 or 12 weeks long. This can be somewhat confusing, but the oscillators will help identify the lows as they occur.

The counts from low-to-high average 5 weeks with 87% of the highs occurring within a Timing Band of 1-12 weeks. A review of the relationship to the Seasonal Cycle

shows that of the 15 cycles with a low to high of 6 to 17 weeks, 80% occurred as the Seasonal Cycle was moving up to the Seasonal high, and *all counts of* 10 or *more weeks occurred as the Seasonal was moving up.* After the Seasonal Cycle tops, very short counts from PC low to PC high of 1 to 3 weeks are not uncommon.

A guideline that can be developed here (and checked in earlier years) is to expect a PC high to be 10+ weeks from a PC low if the Seasonal Cycle is moving up, and that a count of 10+ weeks from low-to-high will confirm a Seasonal low.

The Centered Detrend works for identifying dominant cycles of all lengths in daily, weekly, monthly, quarterly and yearly charts. It also works with intra-day data of various time periods. Detrending will eliminate most of the effects of the longer-term cycles, but the cycles shorter than the one detrended will still show up and can cause some distortion. To have a valid Centered Detrend, the moving average must be reasonably close to the cycle length. Average cycle lengths for daily Trading Cycles and weekly primary Cycles of most futures markets are given in Chapter One. The Seasonal Cycle can be detrended against a 40-Week or a 50-Week Moving Average. A starting place for intra-day cycles are 55 minute and 110 minute time periods.

Unfortunately, Centered Detrends must have a centered moving average, which means that the cycle prices will be well past the high or low before you can confirm it. This is where oscillator analysis and real time detrending come into play. While the Centered Detrend cannot be used in real-time trading, it can, and should be used to confirm the tops and bottoms after they have occurred. Remember, almost all cycle highs occur *above* the centered moving average, and almost all cycle lows occur *below* the centered moving average.

Chapter Five

THE DETREND AS AN OSCILLATOR

The centered Detrend is the most accurate way to identify cycle highs and lows. With it you can see Right and Left Translation and the flow of cycles. You can also readily see why price highs and lows are not always cycle highs and lows. But because the moving average is centered, this Detrend is not useful for real-time analysis.

A current-time Detrend in which prices are detrended around a moving average that is *not* centered can be used as a market oscillator to indicate overextended price levels and also to help identify cycle highs and lows.

CHART D-16 ••• shows a centered 20-Week Moving Average running through prices of a weekly S&P Index chart from 831202 through 870515 in the top panel. The highs and lows of the 20-Week Primary Cycle and the Seasonal Cycle are indicated on the price chart. The lower panel is the 20-Week Centered Detrend with the primary Cycle highs and lows also indicated. The 20-Week Cycle highs are all above the moving average and easy to identify. The 20-Week Cycle lows are all below the moving average and are also easy to identify.

Weekly S&P Index
12/83-5/87
with 20-Week Centered Detrend

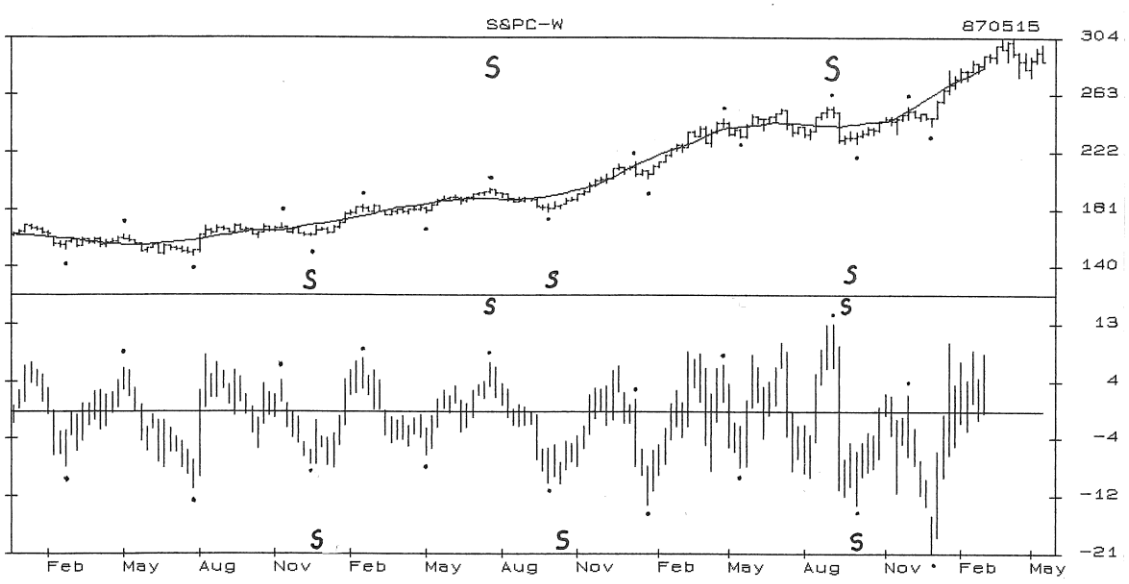


Chart D-16

CHART D-17 ••• has a current time 20-Week Moving Average in the price chart. It is exactly the same shape as the centered average, but since it is plotted at the last time period used to calculate the moving average, it is 10 weeks ahead of the centered average. While the real-time Detrend looks very different, the Primary Cycle highs and lows can be identified. Unlike the centered Detrend, many of the lows are above the moving average. Because the 20-Week Moving Average is close to one-half the length of the Seasonal Cycle, it is the Seasonal lows that stand out in this Detrend.

Weekly S&P Index
12/83-5/87
with 20-Week Real-Time Detrend

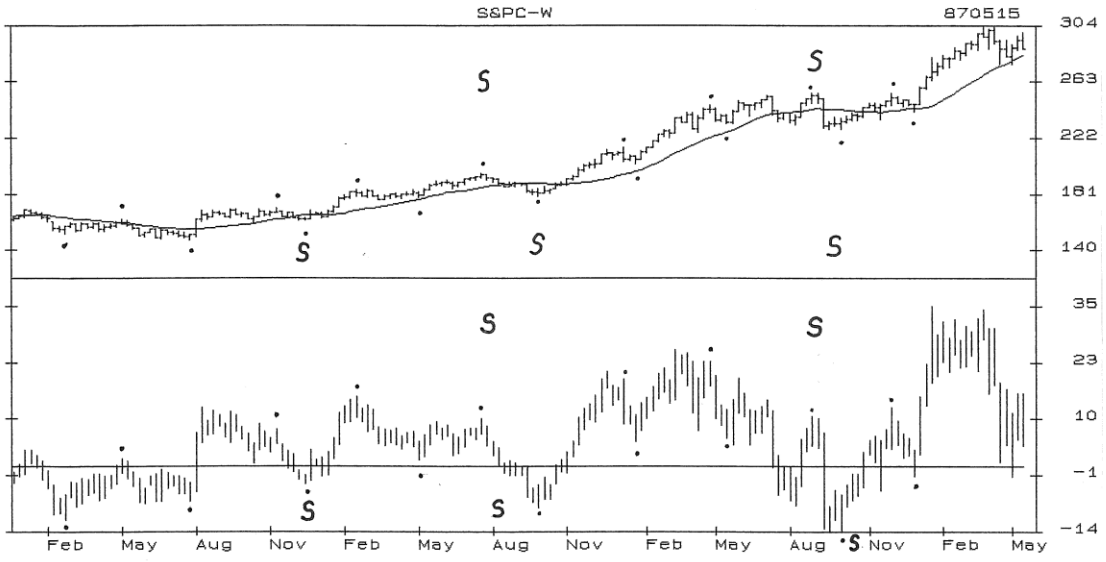


Chart D-17

CHART D-I8 ••• a moving average that is one-half the time span of a cycle will tend to highlight the highs and lows of that cycle somewhat the same as a Centered Detrend, and is called a Half-Span. As with the centered moving average the highs should be above the average, and the lows below it. Chart D-18, a weekly S&P chart for the same time period as Charts 16 and 17, shows a current 10-Week Moving Average in the top panel and the 10-Week Detrend below it. The highs and lows of the 20-Week Primary Cycle stand out clearly in the S&P Index. While this Half-Span shows the cycles clearly in the S&P Index, it does not always show the cycles as distinctly in other markets. In half of the cycles, the Detrend tops before prices top.

Weekly S&P
12/83-5/87
with 10-Week Detrend

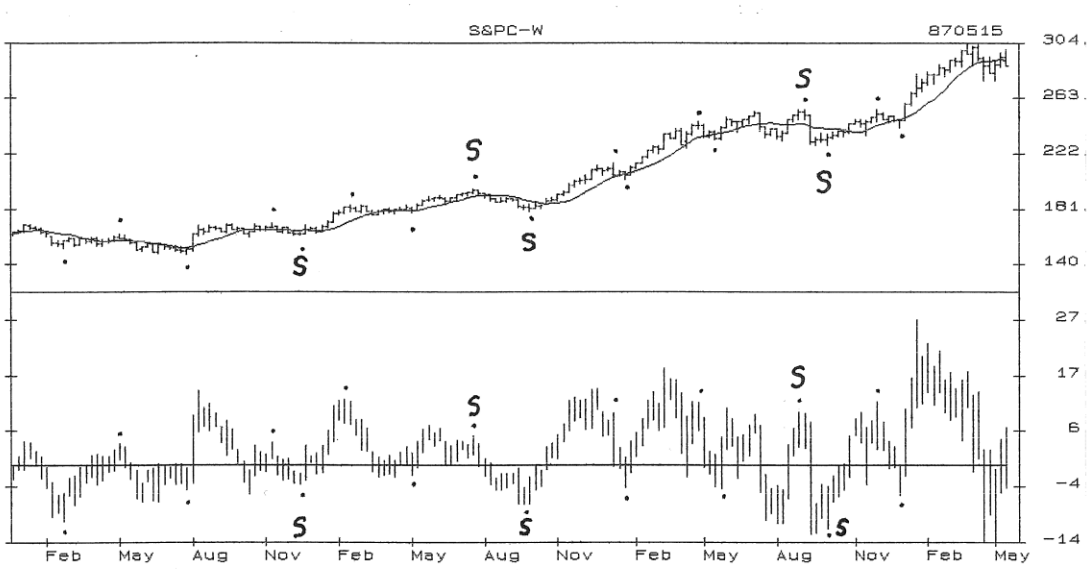


Chart D-18

Current-time Detrends have another characteristic that turns detrending into an important oscillator by itself. The Detrend highs and lows tend to move to "Levels" above and below the moving average that are often indicators that a cycle high or low is forming, or about to form.

CHART D-19 ••• is Chart D-18 with 4 Levels drawn in.

Weekly S&P Index
12/83-5/87
with Levels and 10-Week Detrend

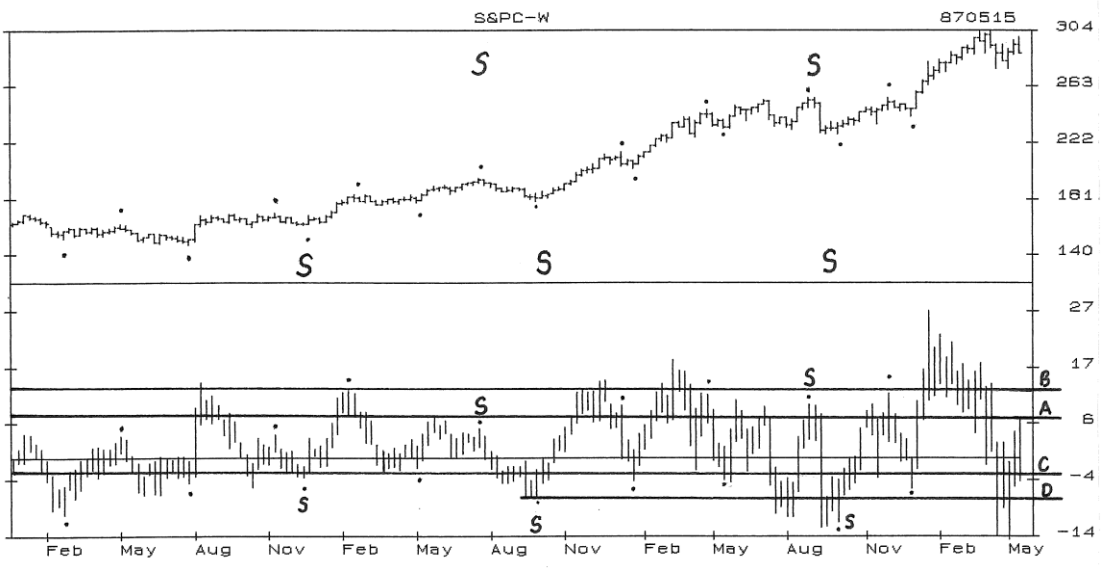


Chart D-19

LEVEL A was met or exceeded following every Primary Cycle low but one in this chart. The expectation is that following a Primary Cycle low a Primary Cycle high will not be made until Level A is reached or exceeded.

LEVEL B was met or exceeded as 5 of the 8 primary Cycle highs were made. When this overbought level is reached late in the timing for a cycle high it can be time to begin looking for a top.

LEVEL C was met or exceeded on the downside following every primary Cycle top, and was the approximate level for 6 of the 9 Primary Cycle lows in this bull market. The expectation here is that following a primary cycle high, the Primary Cycle low will not occur until the Detrend drops to or below Level C. This Level would normally be expected to change in a bear market but become active again in another bull market.

A drop to, or below, LEVEL D would indicate that a bottom is imminent.

Similar types of Levels occur in Detrends of most markets and are often good indicators that a top or bottom is near, depending upon other oscillators and time periods.

CHART D-20 ••• is a plot of a 10-Week Detrend (non-centered) from 860919 through 900209. The A and B Lines show the Levels for the upside and downside, but the magnitude of the October '87 low leaves little room to see the true fluctuations.

Weekly S&P Index
8/86-2/90
with 10-Week Detrend

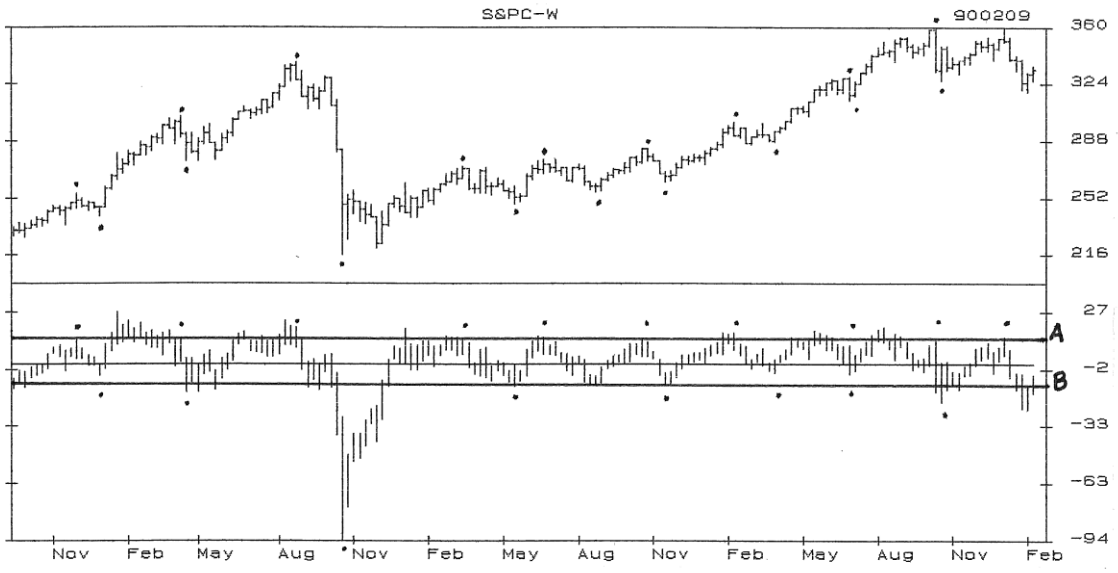


Chart D-20

CHART D-21 ••• *is* of the same time period as 0-20, but the October '87 low has been left out to show the consistency of the overbought and oversold levels. Many of the highs and lows at the A, Band C Levels were primary Cycle tops and bottoms, some were not. Detrends of other time periods should also be used to indicate potential tops and bottoms, as well as Seasonal highs and lows.

Weekly S&P Index
8/86-2/90
with 10-Week Detrend

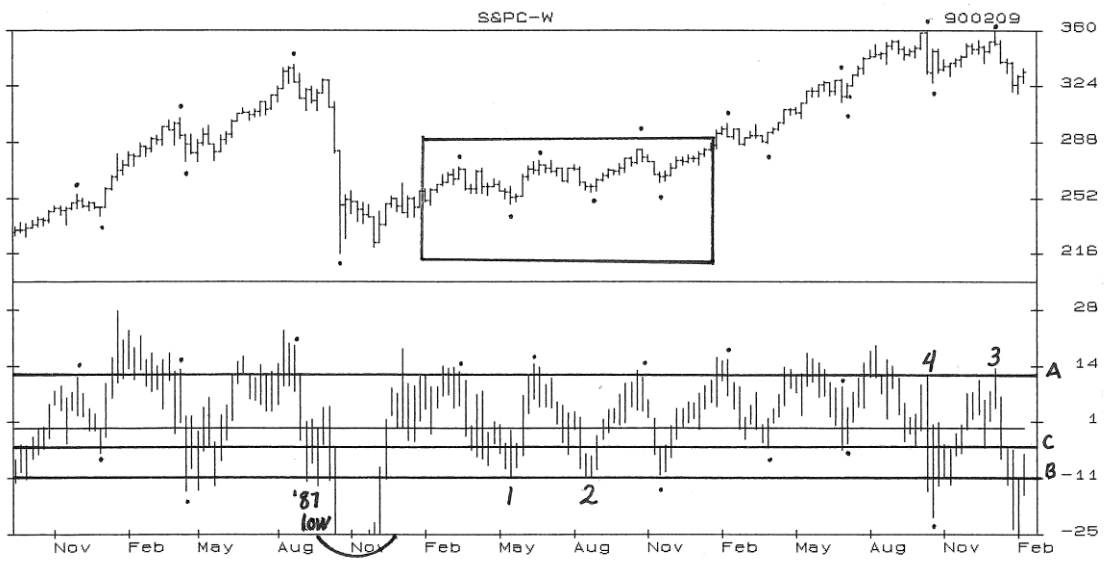


Chart D-21

CHART D-22 ••• on the following page shows a 40-Week Detrend in the bottom panel. The arrows indicate the Seasonal highs and lows of the S&P Index. Notice that 7 of 8 Seasonal lows occurred below the 40-Week Moving Average and all of the Seasonal highs occurred above the Moving Average. Only the first Seasonal low at A, following the 8-Year Cycle bottom in 1982, was above the moving average. This illustrates a tendency seen in many oscillators to have greatly increased amplitude to the upside following a major low.

The rectangular area in D-21 and the circled area in D-22 illustrate how the 40-Week Detrend and the l0-Week Detrend can combine to indicate the timing for a bottom and the potential for a sizable upmove. In Chart D-22 the two previous Seasonal bottoms at Band C dropped only slightly below the 40-Week Moving Average. The low at 1, also slightly below the 40-Week Moving Average, combines with the 10-Week Detrend at Level B in Chart D-21 and the timing for a Primary Cycle low, to make this bottom picking relatively low risk. The low at 2 is the same type of situation.

The high at 3 in Chart D-22 offers the potential for a short at the top of the 22-Week Primary Cycle. You can see a much lower detrended high at 3 than at 4, indicating that a Primary Cycle top at this Level could have a sharp downside move. Also, in Chart D-21 the price high at 3 is below the previous primary Cycle high at 4 and the Detrend high just barely reached Level A, which was reached or exceeded at every Primary Cycle top in the chart.

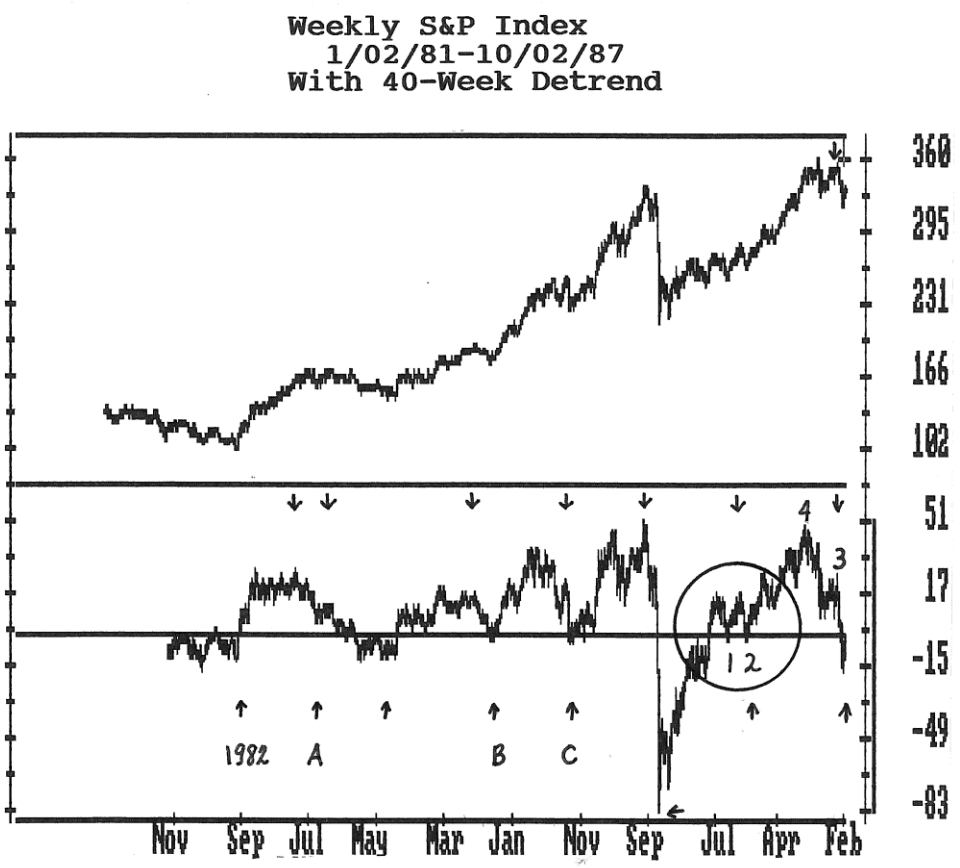


Chart D-22

CHART D-23 ••• has a 20-Week Detrend in the lower panel. Level A at -7 was a bottoming Level for 7 Primary Cycles at the -7 to -9 range. Level B at 13 was a topping level for 6 Primary Cycle highs, and the 20-30 range was the upper level for most of the other highs. The high at 3 in this Detrend was at this Level indicating the potential for a top.

Weekly S&P Index
3/83-2/90
with 20-Week Detrend

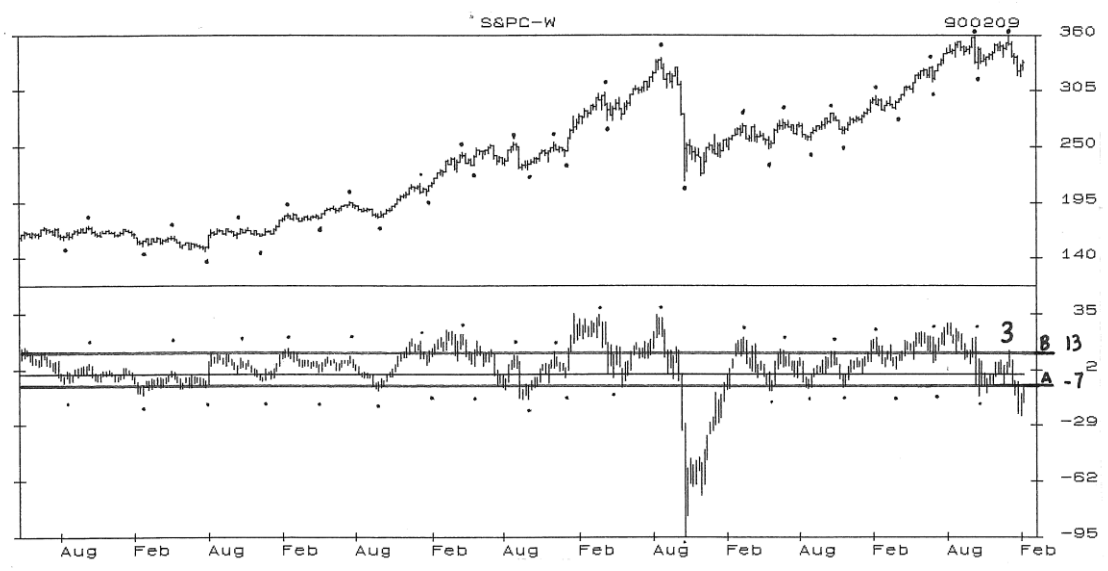


Chart D-23

In considering the possibility of having a cycle high and establishing a short position, both the 10-Week and 20-Week Detrends were at Level as the first *lower* price high since the 1987 low was occurring. The 40-Week Detrend would seem to indicate that a decline would be likely to at least drop below the Zero Line. Additional oscillators, both weekly and daily, would need to support this analysis and trigger a short sale, but as seen here the potential for a decline would look good.

MONTHLY

The weekly charts and oscillators, including the Detrends are the most important and accurate for indicating Seasonal and Primary Cycle tops and bottoms. But the monthly charts show the longer-term cycles and the potential for the major tops and bottoms that are followed by the really big moves.

CHART D-24 ••• shows the monthly chart of the cash S&P Index from 1960 through January 1990 in the upper panel. The dots mark the highs and lows of the 4-Year Cycle, and the circled dots indicate the lows of the 8-Year Cycle. The second panel is a Detrend using a 40-Month Moving Average. The third panel is a 20-Month Detrend, and the bottom panel is a 10-Month Detrend.

LEVEL A in the second panel of Chart D-24 is a -7 derived from the lows made in the 1960s. As viewed from this longer-term perspective, the 1987 low was not all that unusual. Level A is not a Level that can be expected to *stop* a market's decline. But 4-Year and 8-Year lows can be expected to make bottoms *below* this level.

LEVEL B, at 14, was exceeded by every 4-Year Cycle high. This Level is not of much use now, but may come back into play at some time in the future.

The third panel shows a 20-Month Detrend, and the bottom panel shows a 10-Month Detrend. Four of the last five 4-Year Cycle lows occurred as the 20-Month Detrend dropped below Level C at -20, and the next 4-Year Cycle low might also do so. Level D was about as high as the Detrends got until the early 70s, and then this Detrend saw each successive 4-Year top move higher than the previous one. Would it be possible that the 1987 Detrend highs will set the next Level, as the Detrend highs in the early 1960s set the Level for the '60s and '70s?

Ideally, when the 10-Month Detrend is below Level E, and the 20-Month is below Level C *and* the 40-Month drops below Level A, a 4-Year or 8-Year cycle bottom may be expected.

Monthly S&P Index
7/75-3/83
With 40, 20, and 10 Month Detrends

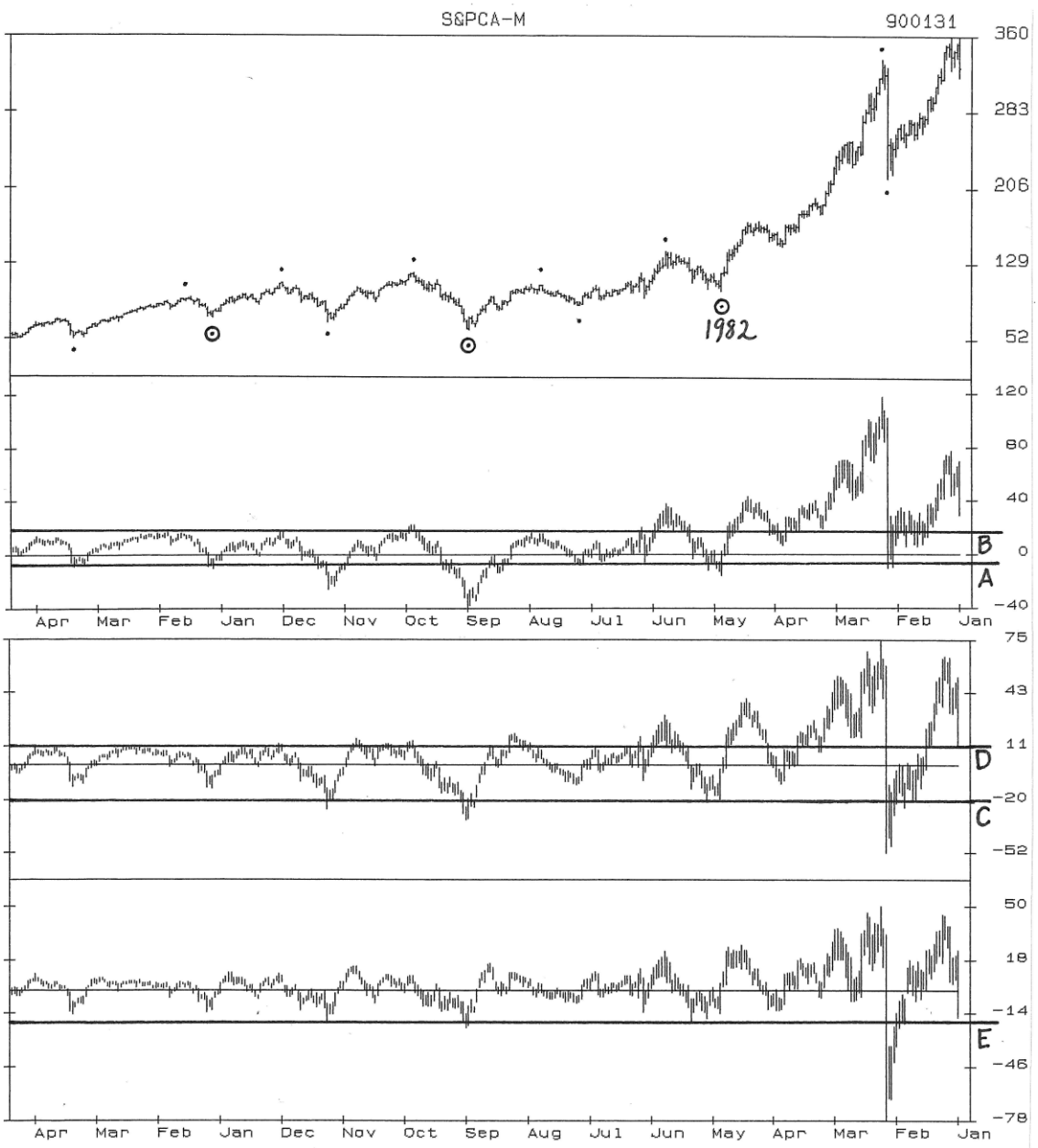


Chart D-24

CHART D-25 ••• the 1982 low is reproduced in a more detailed scale in Chart D-25. The 10-Month Detrend in Panel 4 made 2 lows at 9/81 and 3/82 before the third and final low on 8/82 at -13. The first low was the lowest low. The 20-Month Detrend in Panel 3 also made 3 lows and the second low was the lowest low. The 40-Month Detrend in Panel 2 also made 3 lows with the lowest low on 8/82 at the actual price low of the 4-Year and 8-Year Cycles. These three Detrends indicate a pattern to watch for the shorter-term Detrends bottoming before the longer-term Detrends.

To discover Levels and find patterns that may help identify tops and bottoms, run 40, 20, and 10-term Detrends for monthly, weekly and daily charts in a condensed scale, as in Chart D-22, to include as much history as possible. Once you have determined the Levels and marked the patterns on these charts, use a much more detailed chart as with Chart D-25 of the '82 bottom. Keep a notebook with the Levels recorded and draw them on new charts. It is also profitable to review these long-term charts every quarter or so. You will be amazed at the insight they will often give you relative to current markets.

Monthly S&P Index
7/75-3/83
With 40, 20, and 10 Month Detrends

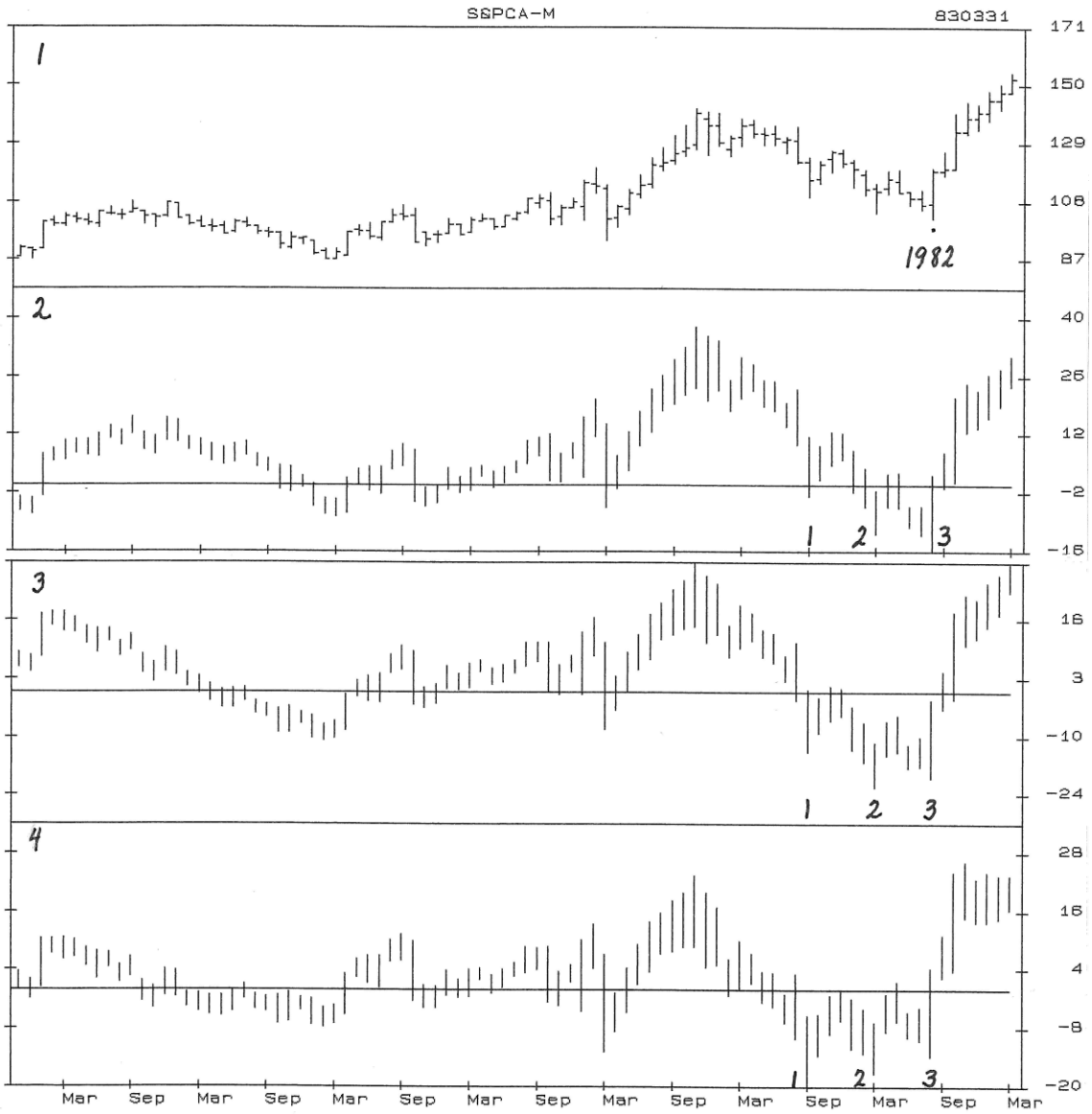


Chart D-25

Chapter Six

DETRENDING OSCILLATORS

The Detrend is both an oscillator and a tool to improve the performance of individual oscillators.

Initially, to see the effectiveness of the Detrend a long time period is necessary, and the following weekly charts are from 1981 through February 1989. Detail is lost, but this can be overcome by evaluating each top and bottom using expanded charts that cover less time and show more detail. Once Buy and Sell Levels have been established the more detailed charts can be used for your regular oscillator runs.

As a tool to improve oscillator performance, the Detrend should be plotted directly below the oscillator and evaluated using Buy/Sell Lines, the Zero Line, and divergence with the oscillator.

An Oscillator Detrend is the difference, or spread, between two values, or two components of an oscillator. In COMPUTRAC, the Spread Tool allows the detrending of oscillators.

The MACD, which is based on exponential moving averages, is detrended by subtracting one exponential moving average from the other. Chart DO-1 shows the Weekly Japanese Yen 810102 through 900209 in the top panel. The middle panel shows the COMPUTRAC MACD, and the Detrend of the MACD is in the bottom panel.

More Detrend analysis of the MACD is covered in Chapter 9. Several characteristics of the MACD are –

- A crossing by the solid line (the MACD) of the dashed slower line (the Crossover) often confirms tops and bottoms, usually well after the market has turned.

- A downturn in the MACD line often occurs at, or shortly after, a top; an upturn at, or shortly after, a bottom.

The Detrend tends to turn slightly before the MACD, often exactly at tops and bottoms. It also has the benefit of Buy/Sell Lines that help identify major tops and bottoms. A rise above a Sell Line followed by a downturn of the Detrend often indicates a top; a drop below a Buy Line followed by an upturn often indicates a sizable bottom.

Weekly Japanese Yen
1/2/81-2/9/90
with MACD and Detrend

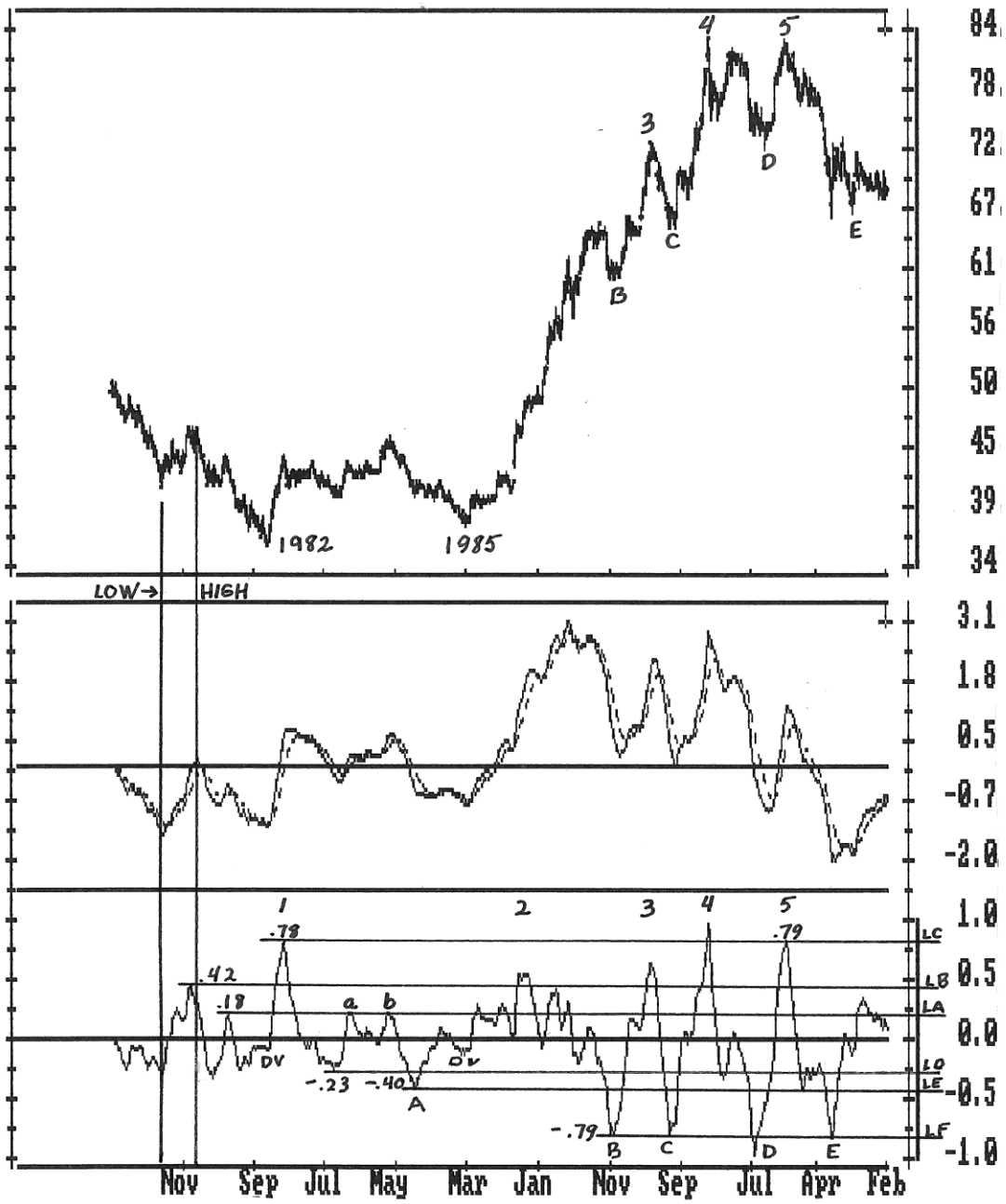


Chart DO-1

Make several copies of Chart DO-1, and with a colored pencil draw horizontal lines from the important lows through the MACD and the MACD Detrend similar to the line marked 'low.' Then, using a different color, draw a horizontal line from the important highs similar to the line marked 'high.' This will allow you to get a feel for how the MACD and Detrend coincide with the highs and lows.

CHART DO-1 ••• notice in Chart DO-1 that the major tops and bottoms occur at, or before, turns of the MACD. Unfortunately, there are also a number of wiggles, or false turns, between these tops and bottoms. While the MACD does turn close to the major highs and lows, it does not give any indication of the Level at which a high or low might occur. The Zero Line seems to act as a Support/Resistance level, but unless the Crossover is used to setup a Trigger entry, the MACD itself does not indicate whether a top or bottom is likely to occur with the oscillator near the Zero Line.

Use of the Detrend will turn the MACD into a much more powerful oscillator that will frequently generate Trigger entries well before the MACD Crossover with a much smaller dollar risk.

One of the first things to do with an Oscillator Detrend is to determine Levels that will function as Buy and Sell Lines. A general guideline is that when a Buy Line is exceeded, the first downturn and Trigger entry will often confirm the high. The mirror image applies to the downside. Turning points of the Detrend that were made near major tops and bottoms often develop into valid Levels for years to come. 1982 was a major low in the Yen, and several Levels established from this time period were important as Buy/Sell Lines years later.

Important highs, lows and Levels are indicated in Chart DO-1.

LEVEL LA, taken from the Detrend high at .18 started out as a valid Sell Line for the highs at 'a' and 'b', then lost its effectiveness in the powerful bull market that followed until February 1987 when it slowed prices to form a Kiss Pattern described below.

LEVEL LB at .42, from the major high preceding the 1982 low, was exceeded 5 times, and 4 of the 5 made sizable tops when the oscillator turned down at 1, 3, 4 and 5.

LEVEL LC at .78 was exceeded only twice, once by only .01 as the Detrend high at 5 was made at .79. Both turning points occurred the same week as the price high. This Level was set by the reaction high out of the '82 low. It is not uncommon for the first reaction following a big decline to dwarf the subsequent Detrend turning points, but it often does act as a resistance level at some point in the bull market that eventually follows.

LEVEL LD was set by the first major low following the 1982 low at -.23. Of the 7 Detrend lows below it, 5 were sizable bottoms.

LEVEL LE was set at a sizable price bottom with a Detrend low at -.40. Level LF at -.79 was nearly twice the previous Detrend low at -.40.

All of these Levels are likely to be important in the future and should be drawn on current charts.

Another interesting aspect of this chart is that both the 1982 and the 1985 lows were made with price/oscillator divergence, indicated by the DV. This pattern may not repeat, but if it does show up following a major decline, you will be prepared for it if you record it in a notebook for future reference.

CHART DO-2 ••• the overview comes from the longer-term charts; the detail work for analysis comes from the shorter-term but more detailed charts. Chart DO-2 includes the time period from September 1986 through January 1990. The Buy and Sell Levels from DO-1 are drawn in the chart and the highs and lows are labeled the same. A 5-term Crossover of the Detrend has been added to this chart. Draw another set of colored horizontal lines from the highs and lows in the price chart and it becomes apparent that the Detrend is much more exact in identifying the highs and lows as they occur than the MACD itself.

At HIGH 3, the Detrend high was the week of the high. The MACD high occurred 2 weeks after the high. The downside penetration of the Crossover by the MACD, which is easily seen in the Detrend as it crosses the Zero Line, was not even close to the price high.

At HIGH 4 the Detrend high was also the same week as the price high, as was the high of the MACD. The downside penetration of the Crossover by the MACD occurred well after from the price high was made.

At HIGH 5 the Detrend high was again the same week as the price high, and the MACD high was made 2 weeks later. The downside penetration of the Crossover by the MACD was again well after the high.

The Detrend, at least for these 3 highs, is clearly the most exact indicator of the top when qualified that it requires a downturn above a specific Sell Line. Market entry will be discussed later.

Weekly Japanese Yen
9/86-1/90
With MACD and Detrend

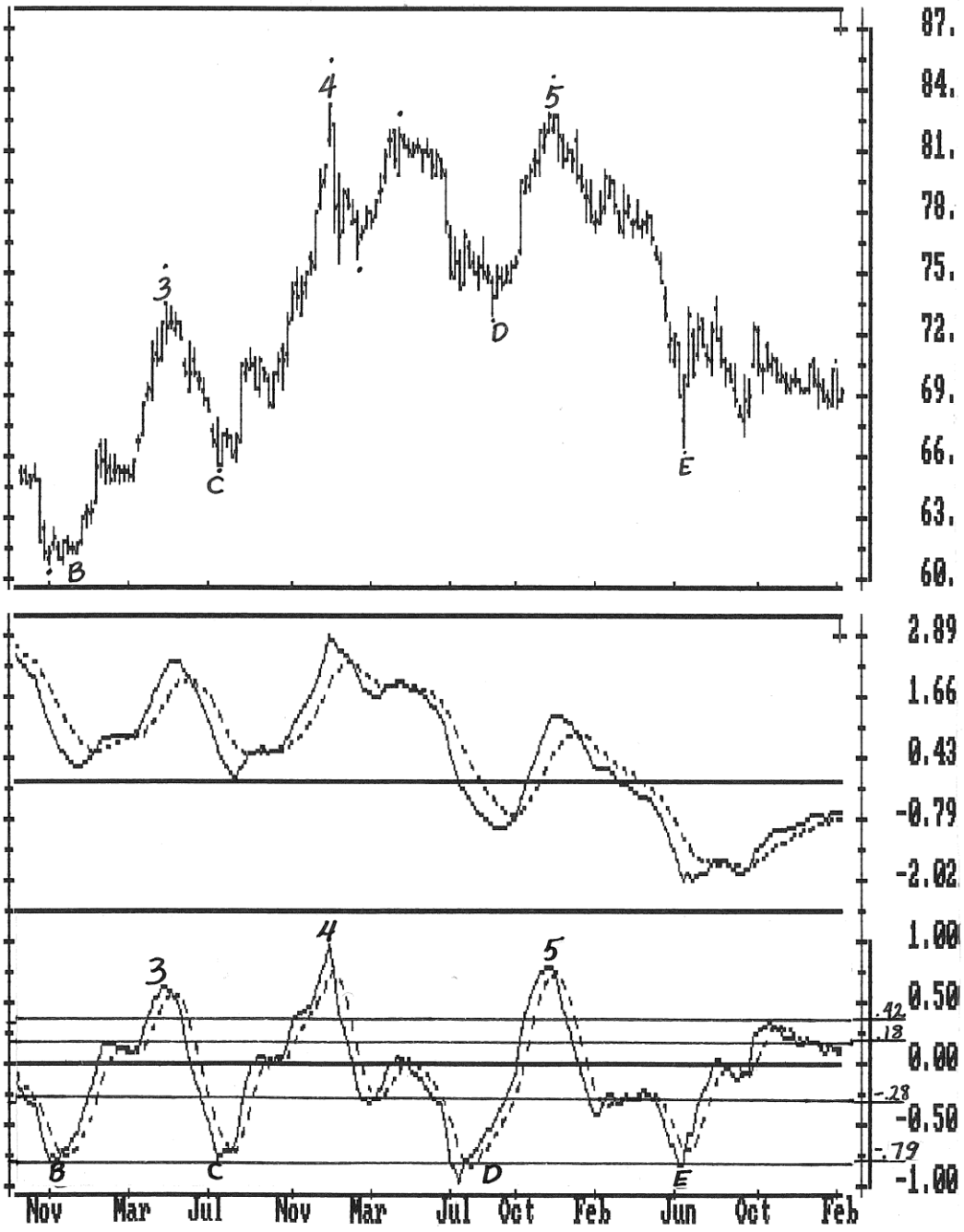


Chart DO-2

The difference between the MACD and the Detrend in the identification of the lows shows even more clearly in this chart. Of the 4 lows at B, C, D and E, 3 made the price low the same week that the Detrend bottomed. The MACD low was made weeks following these lows, and the upside Crossover would actually have bought tops following 3 of the lows.

The potential exists for early top and bottom identification, but how can these turning points be confirmed and the market entered? A visual inspection of the Detrend shows 3 possible entry patterns.

1) Sell the low of the week of the Detrend downturn; or buy the high of the week of the upturn.
2) Sell the low of the week that completes the downside Crossover of the 5-term Moving Average of the Detrend; or buy the high of the week that completes an upside Crossover.
3) Following an overextended Detrend high or low, sell the week of the MACO downturn; or buy the high of the week of the upturn.

These entry patterns can be examined in greater detail in Charts 00-3 and 00-4.

CHART DO-3 ••• shows the price low at B and the high at 3 in the top panel. The lower panel shows the Detrend as a solid line and the 5-term Moving Average of the Detrend (the Crossover) as a dashed line. A Detrend low was made at B the week of the price low at 60.73, and the Detrend turned up the following week, which had a high at 62.53. The upturn is the Setup, and the price high of that week is the Trigger to enter the market, which in this case, would have occurred 6 weeks later. Following entry, a protective sell stop would be placed just below the 60.73 low.

The day after the upturn actually made a slightly lower Detrend low, but the 60.73 price low was not taken out. In such a case, continue to use the price low as the protective sell stop.

Another Setup/Trigger combination is to use the upside crossing of the Crossover as the Setup and the price high of that week as the Trigger entry. In this case the Crossover week following B would have the third week following the price low (indicated by the dashed vertical line) with a high at 61.88 that was exceeded the following week. The protective sell stop would have been placed just below the 60.73 price low.

The price high of 73.47 at 3 was followed by a downturn in the Detrend the following week. The low and Trigger entry of the downturn week at 72.32 was taken out the following week, which was also the Crossover week (dashed vertical line). The low of Crossover week at 72.09 was taken out the following week. The protective buy stop for both entries would have been the price high at 73.47.

Setup and Entry Combination
From Chart DO-2

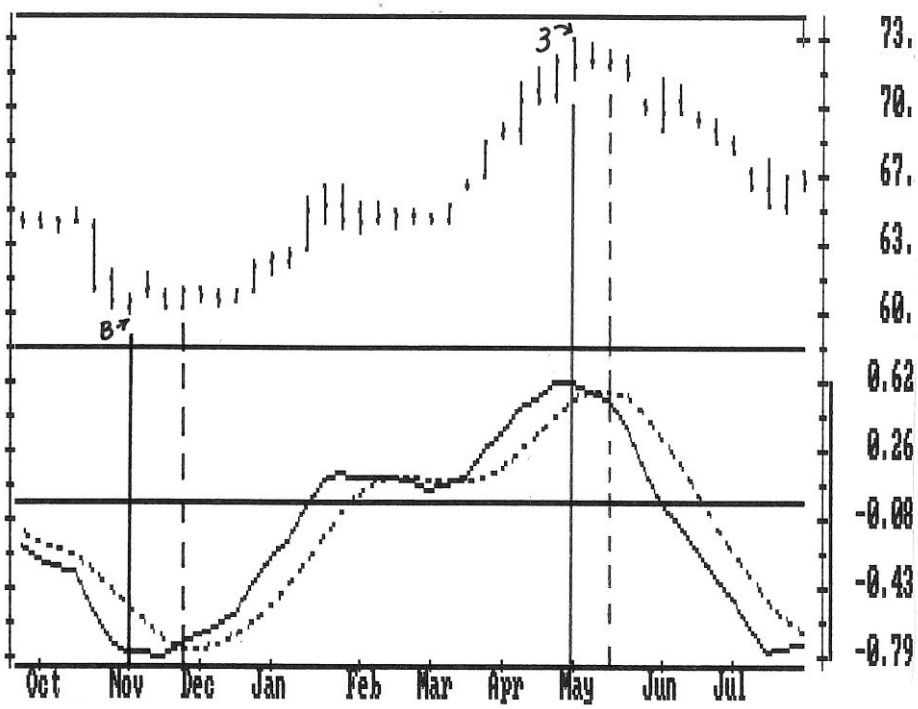


Chart DO-3

CHART D0-4 ••• has an interesting situation at the Detrend low at 'a', with a price low at 74.27 made on 880715. The Detrend turns up the following week to form a Setup with a high at 77.06, which was not exceeded. The high of the Crossover 2 weeks after the low would have offered a lower entry price at 76.57, which was exceeded by .03 three weeks later at 'b', and promptly followed by a plunge to new lows. An entry and loss could have been avoided by a policy of placing the entry order 4 to 11 points above the high of the setup week, depending upon volatility.

Weekly Japanese Yen
with MACD and Detrend

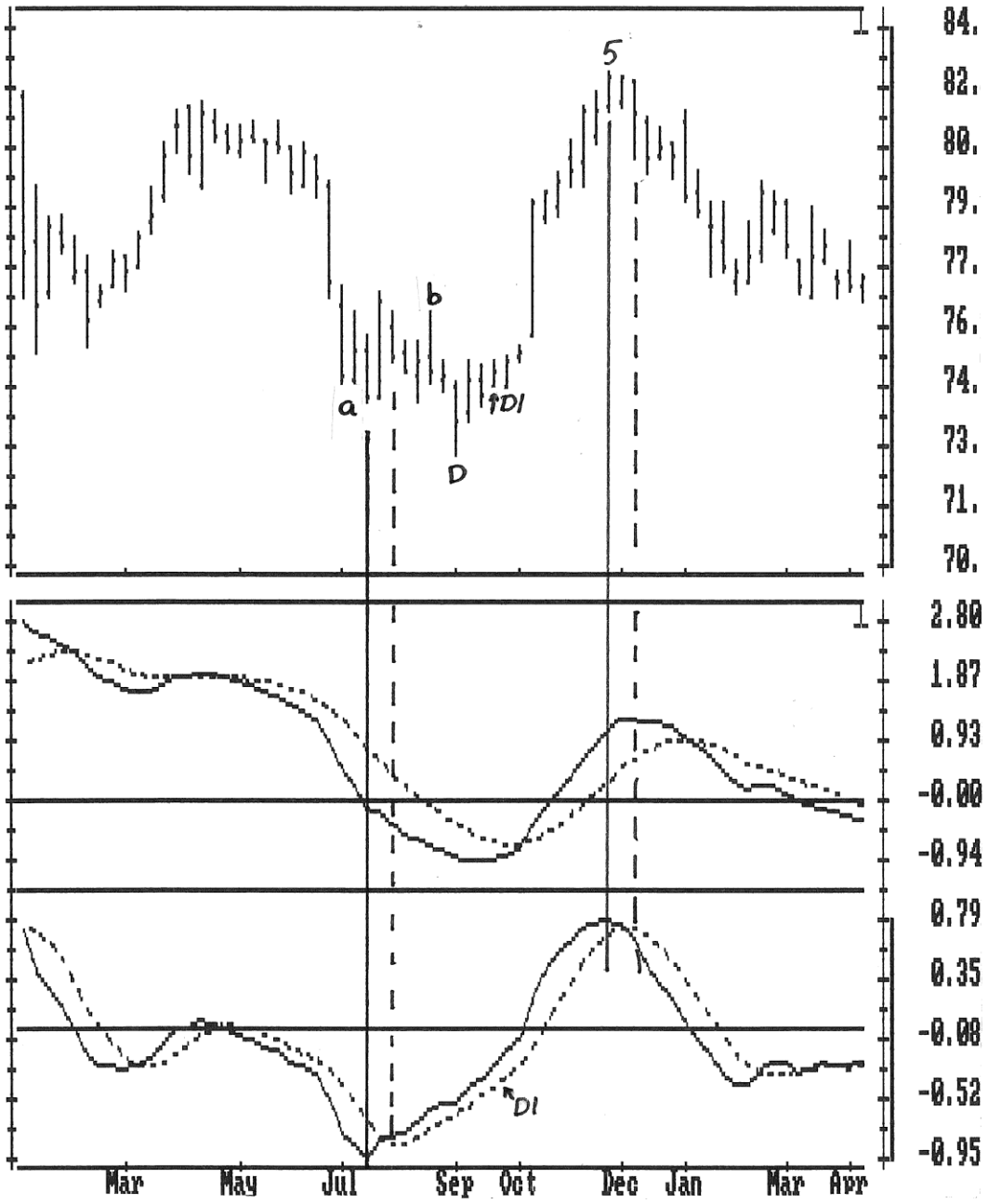


Chart DO-4

Weekly Japanese Yen
With MACD and Detrend

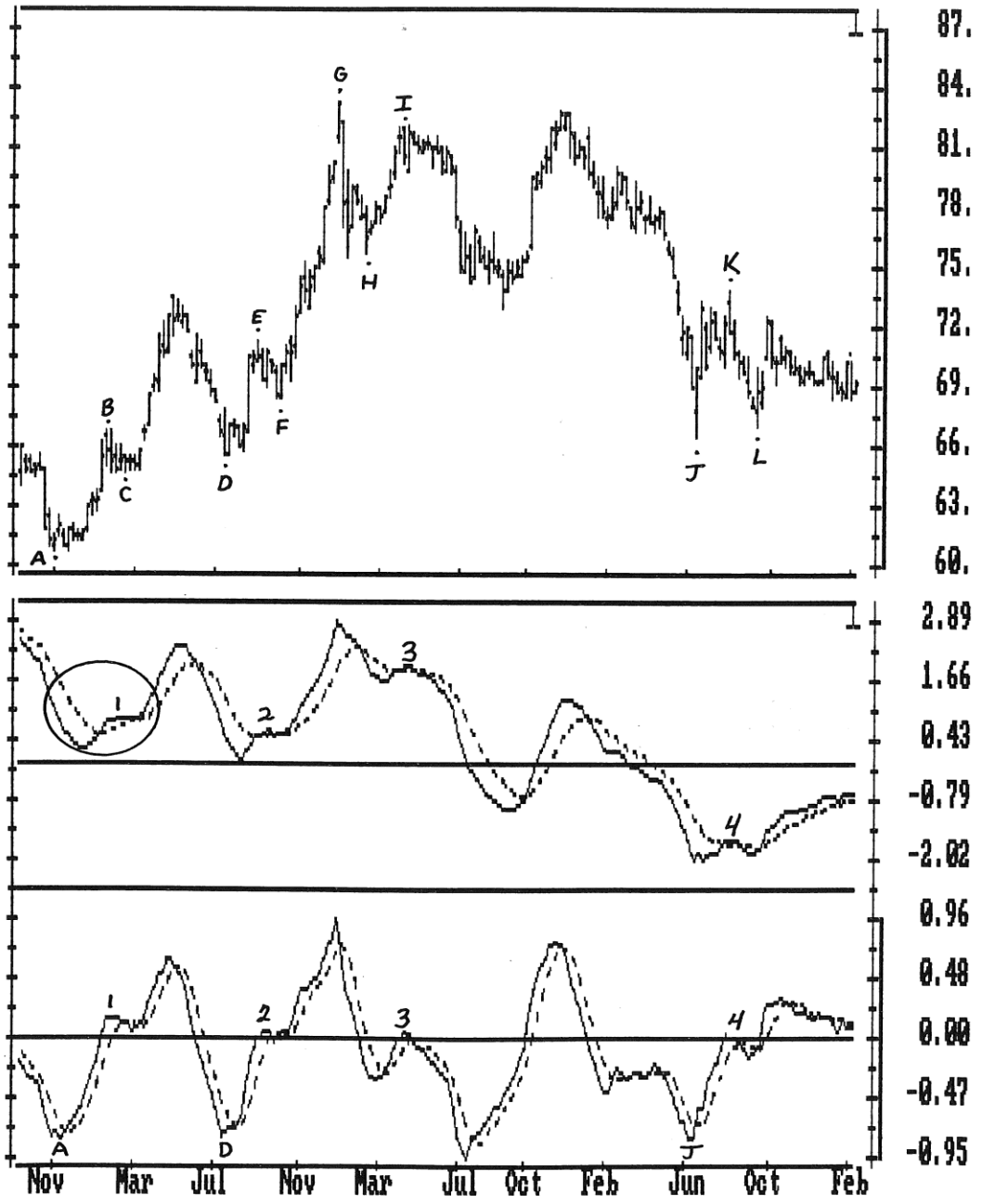


Chart DO-5

However, another Setup presented itself when the MACD turned up the week of D1, the third week following the actual price low at D. The high of the MACD upturn week at 75.34 was exceeded the following week and followed by a subsequent move of nearly 8 cents. The protective sell stop could have been placed below the low at D1, or the low of the week immediately following that low. Of course, other oscillators should also have been considered in the decision to take this trade.

The high at 5 provides an uncomplicated top with a selling opportunity that offers a risk of less than one cent. The Detrend high was made the same week as the price high at 82.88. The low of the downturn week at 81.98 was taken out the following week, which was also the Crossover week. Prices never came close to the initial protective buy stop above the 82.88 high.

KISS PATTERN

The Kiss patterns form the appearance of the MACD bouncing off, or 'kissing', the MACD Crossover. The two basic Kiss patterns are bull patterns and bear patterns. Chart DO-5 has 4 Kiss patterns labeled in the MACD and Detrend chart that will be examined in detail.

Kiss Pattern 1 is a bull pattern because prices are rising from a price low at A that is above the previous price bottom. The Detrend is also at an extreme oversold Level at A in the Detrend chart. Because the Detrend peaked just below the Sell Line at .18 (see Chart DO-1) the formation of this pattern must also be evaluated as a possible top as the pattern is forming.

CHART DO-6 ••• shows Kiss Pattern 1 in greater detail that will allow the formation to be more easily followed. The bottom panel shows the MACD Detrend as a solid line with the Crossover as the dashed line. Following a low at A, the Detrend rises above the Zero Line, then turns back down to test, or drop below, the Crossover. This sets up the Kiss pattern.

NUMBER 1 in the price chart indicates the week of 870206 that turned the Detrend down. The price low of this week was 64.60, which was not taken out. Had it been taken out, a short position might have been entered because of the proximity to the Sell line at .18 in Chart DO-1.

NUMBER 2 is the week 870220, which made the downside Crossover in the Detrend chart. The price low of this week at 64.74 also held. Had it been taken out, a short position might also have been entered.

NUMBER 3 is the week of 870313, which was the setup week of the Detrend upturn (the week the Detrend turned up). Exceeding the high of this week at 65.73 triggered a buy the following week which was also the week of the upside Crossover.

The protective sell stop could have been placed below the downside Crossover week (2) at 64.74, or below the earlier oscillator downturn week (1) at 64.60.

This pattern could have produced a sell if the lows at 1 or 2 above had been taken out. They were not taken out, but if they had been and a short position established, it would have been liquidated as the long position was established.

Kiss Pattern 1

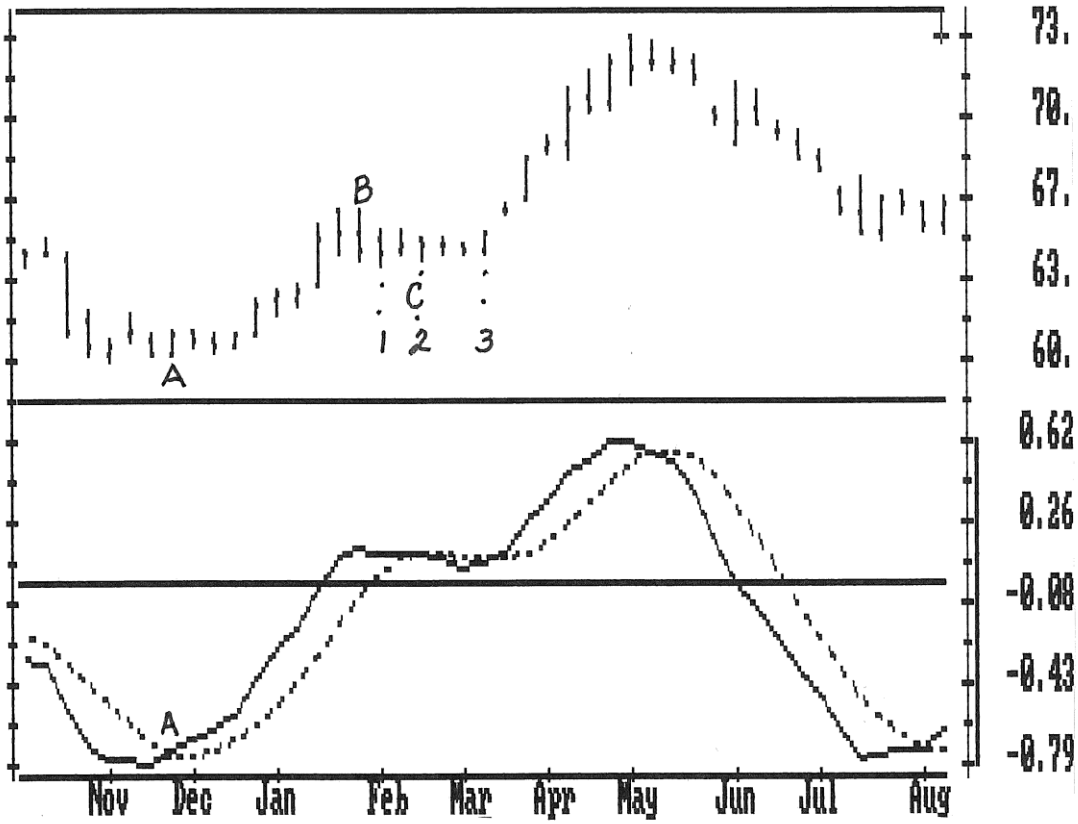


Chart DO-6

CHART DO-7 ••• KISS PATTERN 2 in Chart DO-7 is also a buy pattern as it followed price low D which was above the previous bottom at C. While it is not absolutely necessary that the price low before the Kiss pattern be above the previous price low, it is generally a more reliable signal in most markets.

Kiss Pattern 2

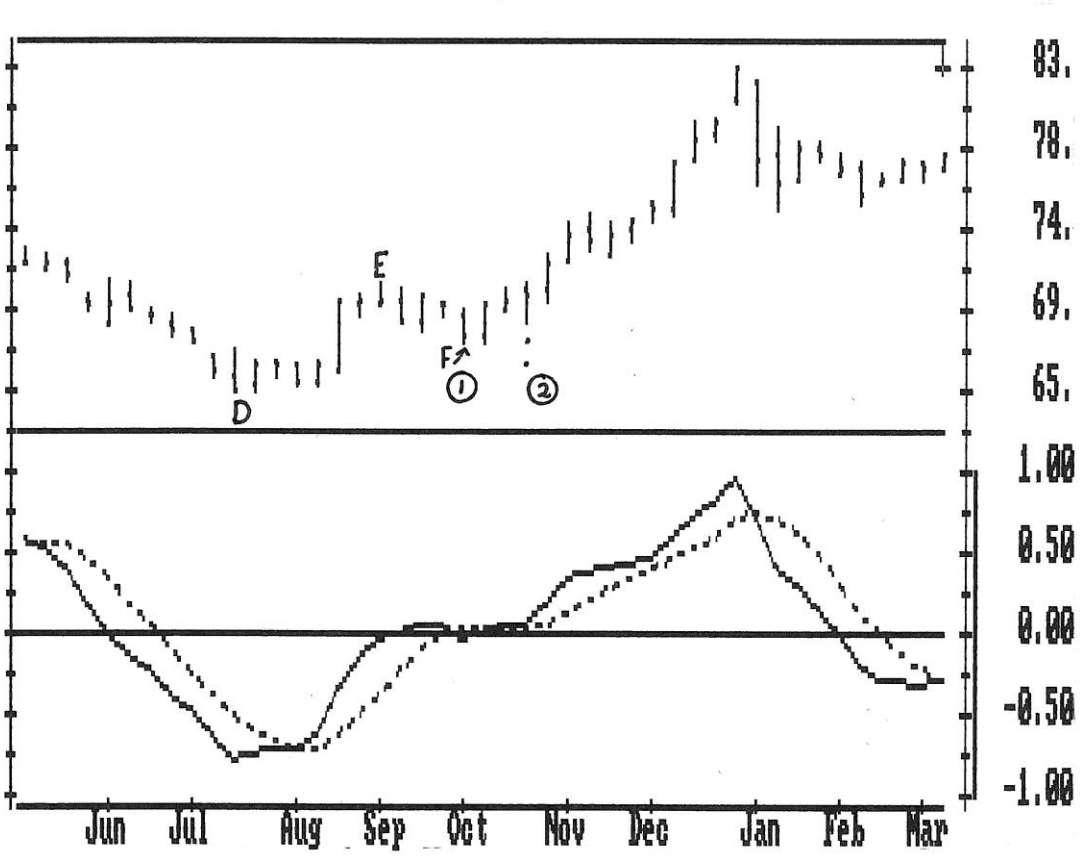


Chart DO-7

NUMBER 1 in the price chart indicates the week of 871002 that turned the Detrend down and was also the week of the downside Crossover. The price low of this week was 68.40, which was not taken out. Had it been taken out, a short position might have been entered.

NUMBER 2 is the week of 871016 which was both the week the Detrend turned up and the week of the upside Crossover. Exceeding the high of this week at 71.10 triggered a buy the following week. The initial protective sell stop could have been below 68.40 and raised to 69.84, the low of the Detrend upturn week, after the highs of entry week were exceeded.

CHART DO-8 ••• KISS PATTERN 3 in Chart DO-8 is a bear pattern because the price high at I in Chart D-05 failed to exceed the previous high at G.

Kiss Pattern 3

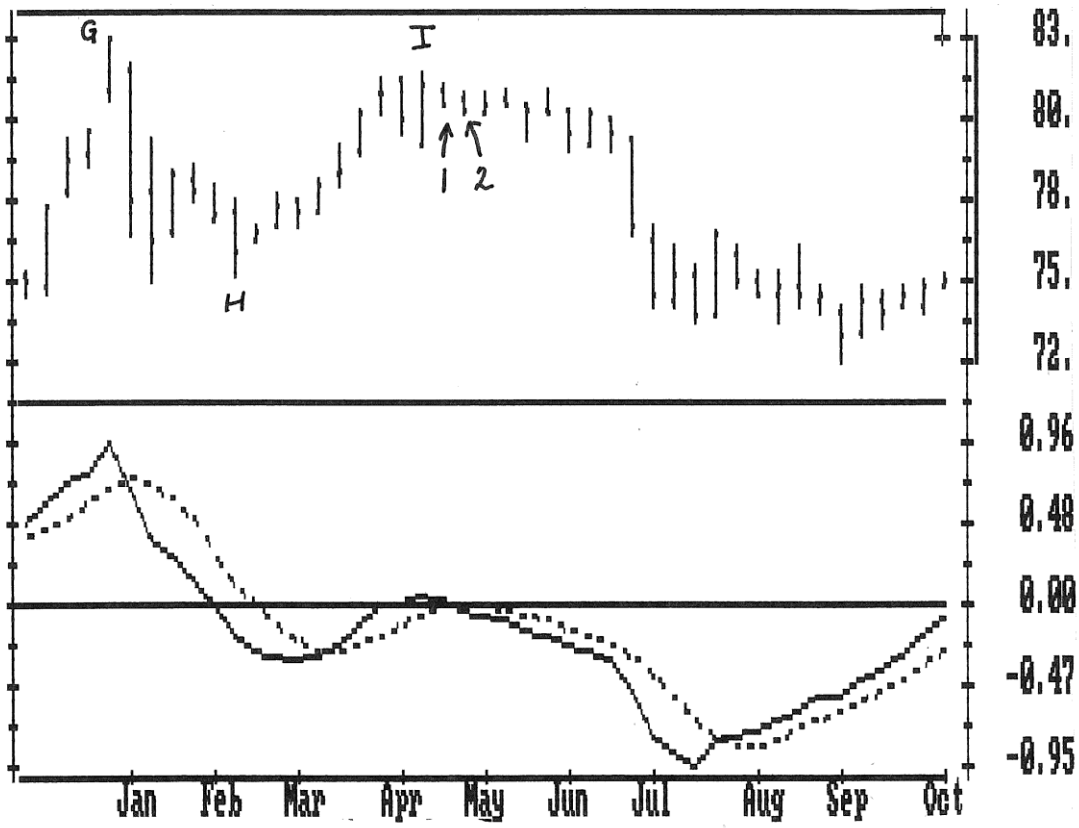


Chart DO-8

NUMBER 1 in the price chart indicates the week of 880422 that turned the Detrend down. The price low and Trigger entry of this week was 81.13, which was taken out the following week (Week 2). The high at 82.10 made the week of 880415 would have been the initial protective stop.

NUMBER 2, which is the entry week, is also the week of the downside Crossover. The low of the week at 80.73 was taken out the following week, which was additional confirmation that a high had occurred.

Chart DO-9 ••• KISS PATTERN 4 in Chart DO-9 is somewhat questionable, giving a sell pattern when the MACD is so overextended to the downside (see Chart DO-5). A decision to enter the market should be confirmed by other oscillators, and especially with a sell pattern at such an overextended level.

Kiss Pattern 4

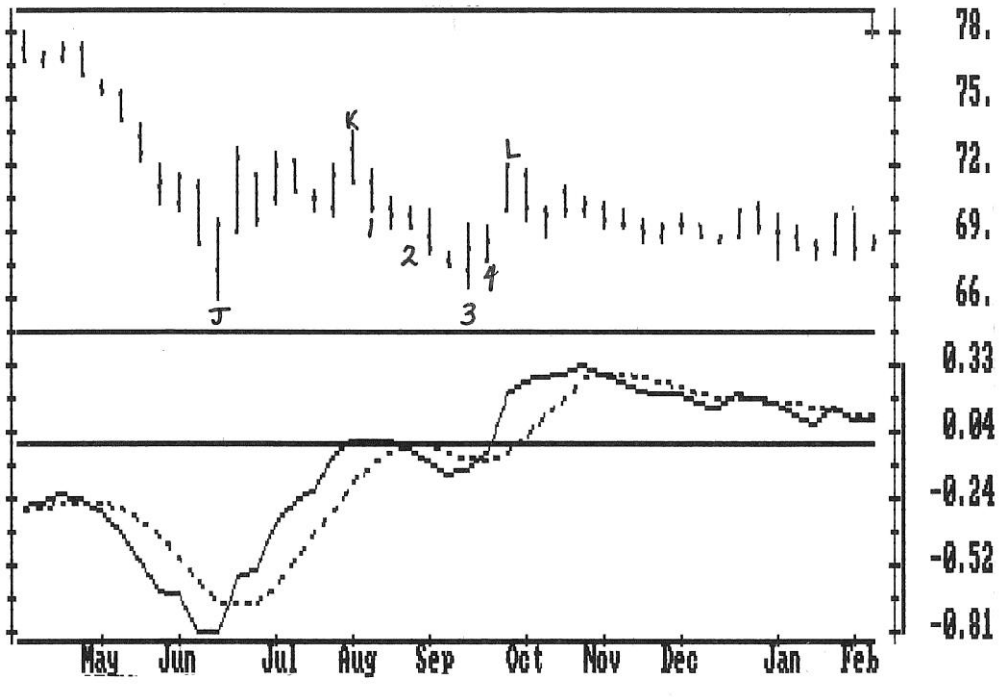


Chart DO-9

NUMBER 1 in the price chart indicates the week of 890811, the Setup week that turned the Detrend down. The price low and Trigger entry of this week was 70.51, and was taken out the following week. The high at K, the week of 890804 at 73.90, would have been the initial stop.

NUMBER 2, the week of 890825, was the week of the downside Crossover. The low of the week at 69.66 was taken out the following week.

NUMBER 3 is the week of 890915, which was the Setup week of the Detrend upturn, and had a high of 69.85.

NUMBER 4 is the week of the upside Crossover with a high of 69.68 that was exceeded the following week, which was also the high of the move. The initial protective sell stop could have been placed below 67.14, which is the low of Week 3, or at 70.50, the low of the upside Crossover week.

As an indicator of longer-term tops and bottoms, this Detrend and Crossover of the COMPUTRAC MACD works well. You should research it with different input factors for the MACD, and on daily and monthly data.

CHART DO-10 ••• illustrates a more sensitive oscillator, the 3-Day Average minus a 10-Day Average with a 16-Term Moving Average of the 3-10. The middle panel is the oscillator and the bottom panel is the Detrend. The time period of the chart and oscillators is the same as in the MACD detrend analysis.

The 3-10 Oscillator in the middle panel sets Levels much the same as the Detrend. Using the peaks made near the 1982 low gives 2 Levels to use as Sell Lines, 1.50 at S1 and 2.60 at S2. Buy Line B1 is at -1. 60.

The Detrend Sell Lines are S4 at 1.29 and S5 at 2.44. Line is B2 at -1.50.

One aspect of powerful moves is that the 3-10 has a tendency *not* to drop below the Zero Line in a strong rising market as indicated by the up-pointing arrows. When this happens, because most of the previous lows were accompanied by a drop below Zero, there is a tendency to think that the downmove will continue after a brief rally ••• and the market roars up without you in it. The arrows in the Detrend show that 5 of the 6 did drop below the Detrend Zero Line, which is the 16-term Average for the 3-10. Two actually dropped to the Buy Line, which usually improves the odds of a sizable upmove.

So, a good rule to follow is that the Detrend low must drop below the Detrend Zero Line to have a bottom worth buying. The mirror image is true for the downside, as indicated by the single down-pointing arrow, which indicates the only high of significance that did not exceed the 3-10 Zero Line. Following this guideline you will miss few moves of consequence, and by waiting for a decline below the Buy Line, you will reduce the number of losing trades inherent in bottom picking. Different markets have different characteristics and you should thoroughly research this guideline before you use it.

Weekly Japanese Yen
1/2/81-2/9/90
with 3-10 Moving Average and 16-Term Crossover Detrend

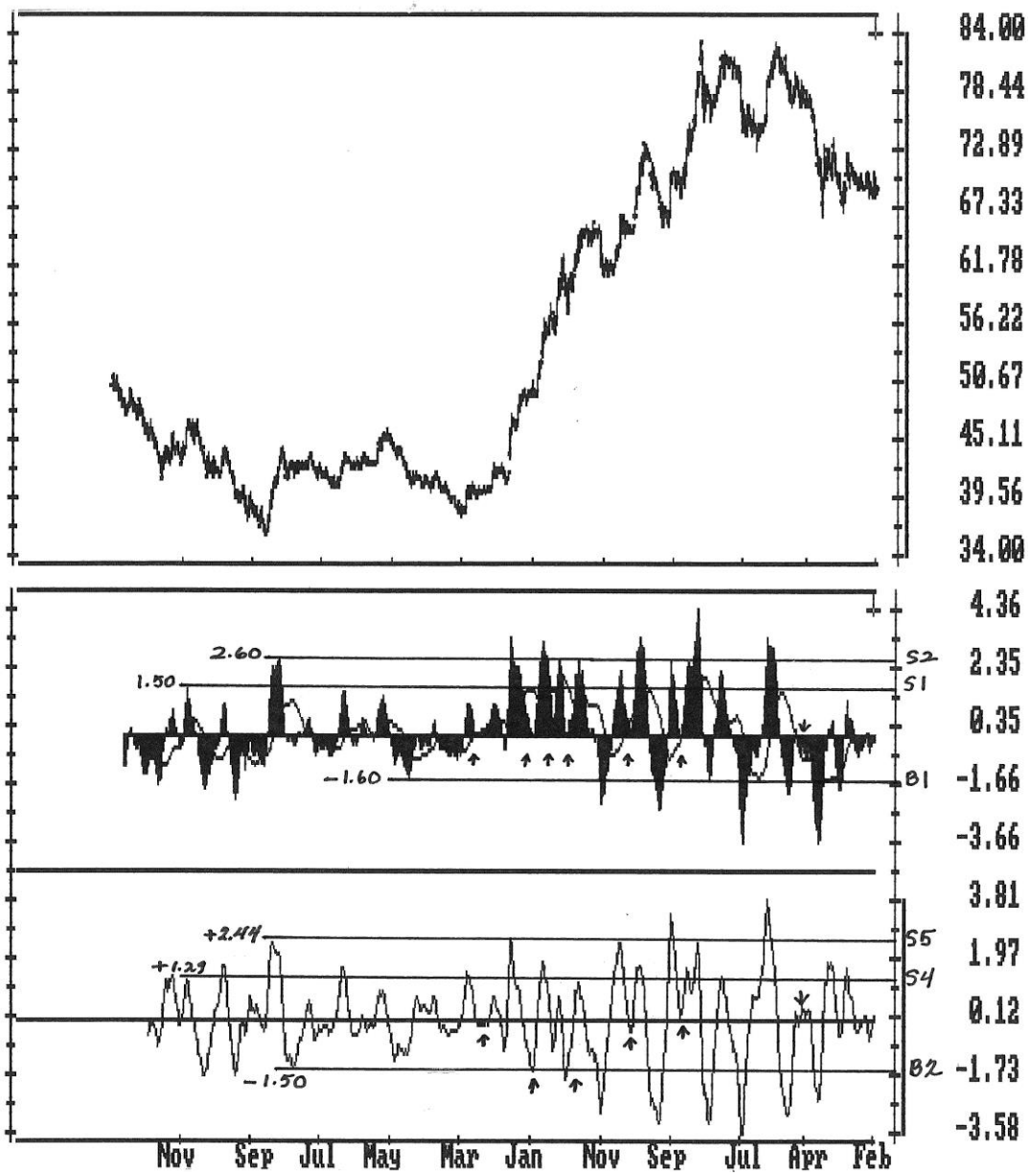


Chart DO-10

CHART DO-11 ••• on the following page shows the weekly Japanese Yen in Panel A with a 3-10 Detrend in Panel B, the MACD Detrend with a Crossover in Panel C, and a real-time 10-Week Detrend in Panel B.

In Panel B, every drop below Buy Line B2 indicated a bottom when the Detrend turned up. Every downturn above Sell Line S4 indicated a top.

Every high in the bull market saw the Detrend rise above Sell Line S4 until the high at X, which failed to rise above Sell Line 4 for the first time. Depending upon the position of other oscillators, this could be an indicator that the bull market was over and that prices would drop below the 3-point trendline to confirm the top.

The same Setup and Trigger entry rules used with the MACD can be used with this Detrend, and a Crossover line could also be added. In general, when the Detrend was above the Sell Lines, or below the Buy line, a turn in the Detrend would indicate a top or bottom.

PANEL C is the Detrend of the same time period for the MACD with a 5-Term Crossover. Notice how the 3-10 Detrend highlights the shorter term moves and combines with the MACD Detrend to help identify the more sizable highs and lows.

The 3-10 Detrend supports the buy at Kiss Pattern 1 (K1) with an upturn following a drop below the Zero Line.

In the MACD Detrend, the top at 3 is above the Sell Line at .42 (from Chart DO-1), indicating a top is due. The top at 3 is a divergent high in the 3-10 Oscillator, supporting the downturn in the MACD Detrend.

In both the MACD Detrend and the 3-10 Detrend, the drop from the high at 4 to the C1 low is so sharp that both Detrends are slow in identifying the bottom. But the 3-10 Detrend turns up well before the MACD Detrend, as would be expected in a more sensitive oscillator. Also, the C1 low in the 3-10 Detrend is at the lowest Level reached, supporting the possibility of a bottom rather than a pause in a declining market.

The K3 Kiss Pattern Sell in the MACD Detrend is confirmed by the downturn in the 3-10 Detrend being *above* the Sell Line.

Weekly Japanese Yen - 9/86-1/90
With 3-10 Detrend, MACD Detrend
with Crossover and 10-Week Detrend

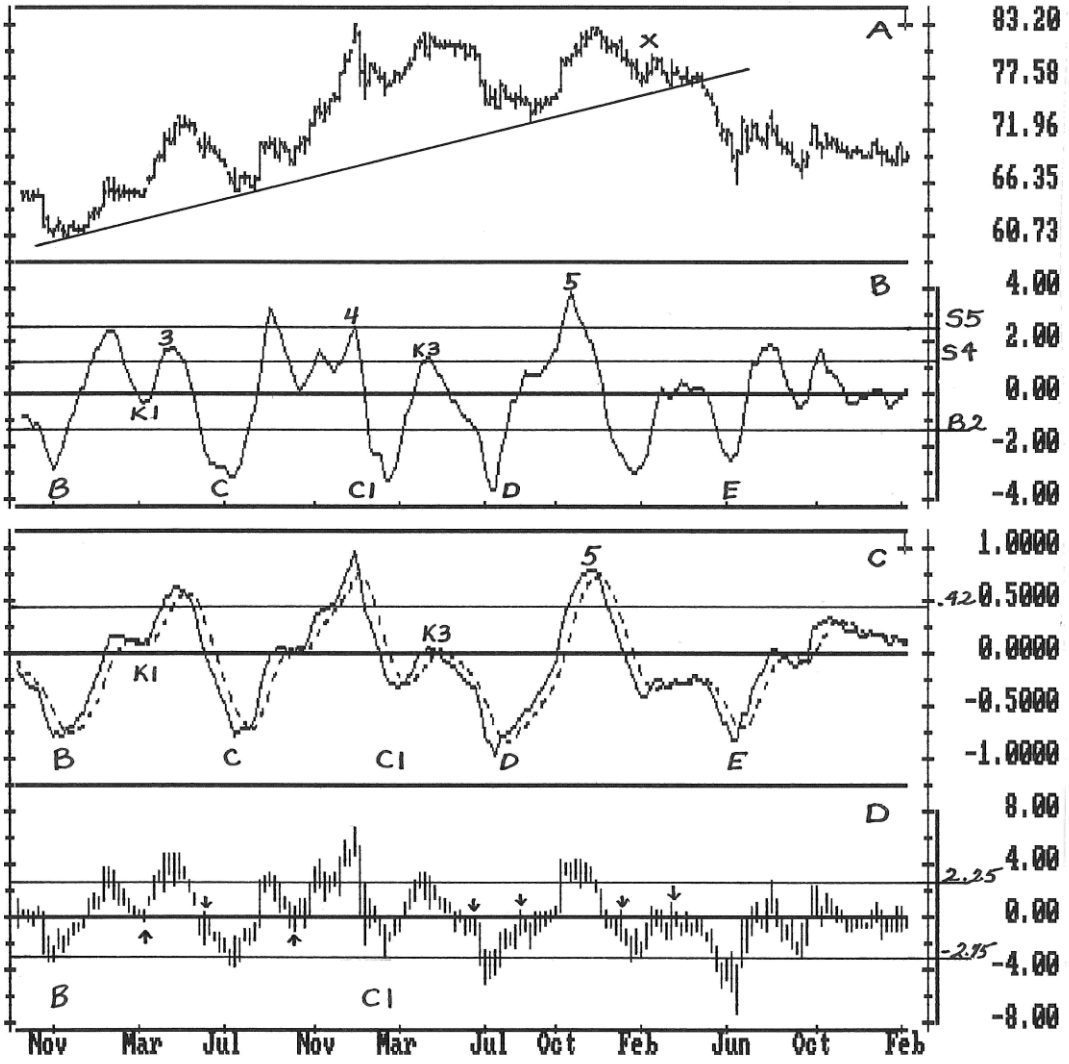


Chart DO-11

PANEL D—Now, add the 10-Week Price Detrend with a Sell Line at 2.25 and a Buy Line at -2.75. These Levels were derived from turning points near the 1982 and 1985 lows. Several things stand out:

The low at B, which was the first Detrend low for the 3-10 and MACD Detrends was at an existing Level in the rice potential indicator of a bottom by itself.

The arrows show how the 10-Week Moving Average, which is the Zero line in this Detrend, acts as a natural support and resistance level.

The low at C1 at the Buy Line occurs just before the upturn in the 3-10 Detrend, lending support to the formation of a bottom rather than a short pause in a downmove.

On your own, continue to add in some of the other oscillators and Detrends described in other chapters, and you will get a true feeling for the use of multiple oscillator analysis in the 3-Dimensions of daily, weekly and monthly charts.

Chapter Seven

3-DIMENSIONAL ANALYSIS

Three dimensional (3-D) oscillator analysis involves the evaluation of markets on 3 different levels—long-term, intermediate term and short-term. When oscillators are run on 3 different time periods each level gives a different picture of the market. The longer and intermediate-term time periods generally indicate the tops and bottoms of the longer-term cycles. The shorter-term time periods indicate the highs and lows of the shorter-term cycles and often generate entry and exit patterns with a lower dollar risk than the longer time periods.

Monthly data is used for the long term, showing the highs and lows of cycles longer than one year, and is also useful for identification of the Seasonal Cycle. Weekly data is best for identification of the highs and lows of the Seasonal Cycle and also the weekly Primary Cycles. Daily data is used to identify the Primary Cycle and the daily Trading Cycles. Intra-day data can also be used to identify and trade the Trading Cycle, as well as shorter-term daily and intra-day cycles using the same concepts.

This book is oriented towards intermediate and long-term positions dependent upon the yearly cycles, Seasonal Cycles, Primary Cycles and Trading Cycles. However, for shorter-term traders the same concept—long-term, short-term, intermediate-term—can be applied on various short-term combinations such as weekly, daily, hourly; or daily, hourly, 13 minute time periods.

The following soybean charts illustrate the use of 3-D analysis to identify the long-term cycle highs and lows through the use of overbought and oversold levels of different time periods. The examples show one oscillator for each time period. In normal analysis at least several oscillators should be used for each time period, and some of these would have high probability Setup/Trigger entry combinations to eliminate judgment calls. To get the most from 3-D analysis:

1) Use the monthly oscillator to establish parameters that indicate overbought and oversold levels of longer-term cycles.

2) Use weekly oscillators to establish parameters that indicate overbought and oversold levels of the Seasonal Cycles and/or the weekly Primary Cycle.

3) Use daily oscillators to establish parameters that indicate the overbought and oversold levels of the Primary Cycle and/or the Trading Cycle.

MONTHLY

The soybean market has long-term cycles of 24 and 39 months that combine to produce oversold bottoms followed by major bull markets and overbought tops followed by extended bear markets.

CHART 3D-1 ••• shows a monthly chart of soybeans from 3/61 through 3/90 in the top panel. Specific tops and bottoms are identified and will be referenced below. The bottom panel is a Detrend of the COMPUTRAC MACD with a 5-term Crossover, which is the darker line.

Monthly Soybean Chart
with MACD Detrend

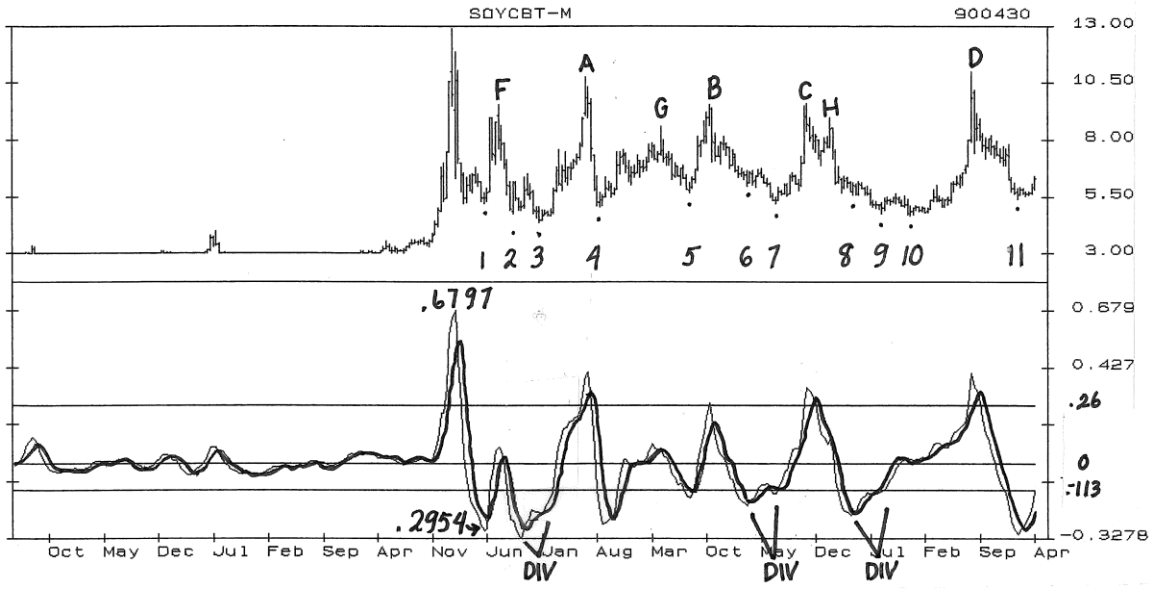


Chart 3D-1

The Sell Line at .26 was determined by multiplying the 1973 oscillator high at .6797 by .618 and subtracting the result from .6797. Four major cycle highs at A, B, C, and D were made as the oscillator was above the Sell Line. Each high above the Sell Line was confirmed by a downturn of the Detrend and a drop below the low of the downturn month. Two other 24/39-Month Cycle highs occurred at F and G as the Detrend was above the Zero Line but below the Sell Line, and would need to be identified by other oscillators. The high at H was a Seasonal high in the same long-term cycle as the high at C.

The pattern that clearly identified the highs of the 24/39-Month Cycle was a rise above the Sell Line followed by a downturn in the oscillator, and the Trigger entry of a drop below the low of the downturn month. A rise above the Zero Line followed by a downturn may be a secondary indicator of a top identified by other oscillators, but would not be an indicator by itself.

The Buy Line at -.113 was determined by multiplying the first low following the 1973 high at -.2954 by .618 and subtracting the result from -.2954. Of the 11 major lows, 4 (1, 4, 5, and 11) were identified by an upturn of the oscillator below the Buy Line followed by a rise above the high of the upturn month. A secondary confirmation was made by the oscillator rise above the Crossover, and a price rise above the high of the month of the crossover. Lows 2 and 6 would have been false indicators of the bottom and lost money. Low 8 was a non-performer as the Trigger entry of exceeding the high of the upturn month was not completed.

Lows 3, 7, and 9 were all divergent patterns of lower prices and a higher oscillator low that was also a Kiss pattern (described in Chapter six on 'Detrending oscillators'). Lows 3 and 7 were the cycle bottoms, but Low 9 was followed by one more Seasonal decline to new lows as a long-term cycle bottom was made.

Of the 7 major 24/39-Month Cycle bottoms indicated by the dots, 6 were identified by either an upturn and Trigger entry below the Buy Line, or a price/oscillator divergence with a Kiss pattern. Only the extended decline into the 1986 bottom that included Seasonal lows at 8, 9, and 10 was not identified by this approach.

As the monthly oscillator is at levels that would indicate a potential top or bottom, the weekly oscillators may complete entry patterns that would indicate or confirm the top or bottom before the monthly pattern is completed. Also, once a monthly pattern has been completed, weekly patterns can give additional high probability Trigger entries as the market trends to the next top or bottom.

WEEKLY

CHART 3D-2 ••• shows weekly soybean price data in the top panel from 5/83 through the week of 2/9/90. The highs and lows are labeled the same as in the monthly chart—C, D, and H for the highs; 8, 9, 10 and 11 for the lows.

The weekly COMPUTRAC MACD (26, 12 and 9 weeks) in Panel B clearly indicates that the highs at C and D are likely to be major ones by the height of the MACD above the Zero Line at the same time that the monthly Detrend in Panel C is above the Sell Line. At both C and D a simple downturn of the MACD followed by a Trigger entry at the price low of the downturn week would have confirmed the top of the long-term cycles. A downturn and Trigger entry would have also been a good indicator of the Seasonal high at H. But the MACD would not have been of much help in identifying the bottoms.

Weekly Soybean Chart
with MACD and Detrend

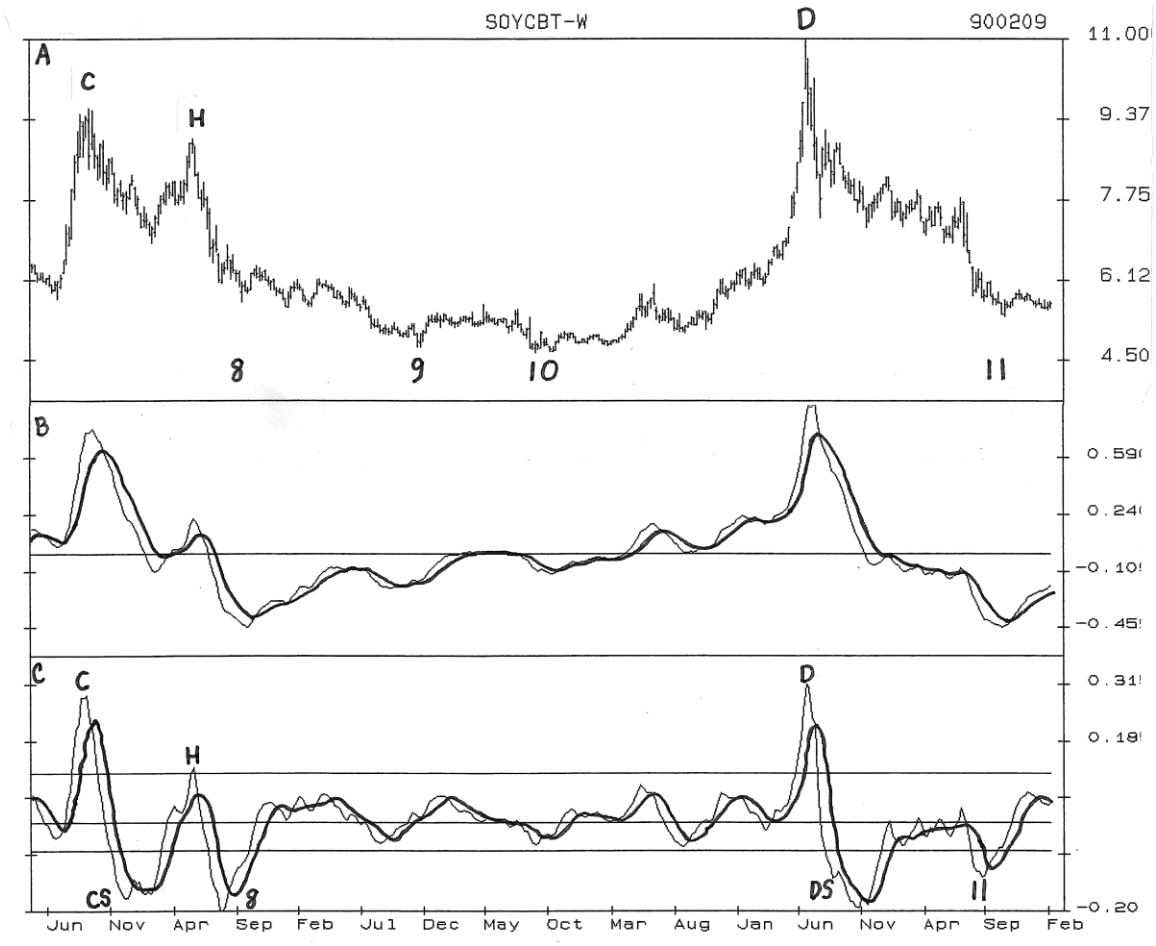


Chart 3D-2

The Detrend of the MACD and Crossover in Panel C has a Sell Line at .111 calculated by multiplying the oscillator high of .2900 at C by .618 and subtracting the result from .2900. The Buy Line at -.07 was calculated by multiplying the Detrend low of -.1840 at CS by .618 and subtracting the result from - .1840. In real-time analysis Buy and Sell Lines would have been established in earlier years by using this same method at an earlier high, or by using an earlier oscillator high as the Level. Unfortunately, price data of earlier years is not always readily available, and when in doubt Fibonacci calculations work reasonably well. In either case the oscillator highs at C and D would have been well above the Sell Line, and the high at H would probably have also been above it.

Our intent is to see if the highs of the weekly oscillator can be used, as the monthly oscillator is above the Sell Line, to indicate or confirm the top before the monthly oscillator confirms it. At Highs C and D a simple downturn followed by a Trigger entry of a drop below the low of the downturn week would have been an earlier indicator and entry than the monthly chart. Seasonal High H would also have been confirmed by a downturn and Trigger entry. Other oscillators would be used to identify and trade the other Seasonal highs that occurred with oscillator highs below the Sell Line, but you can see that the Seasonal highs and lows tend to occur near Detrend highs and lows.

Once a longer-term cycle high has been identified, Seasonal, Primary Cycle and Trading Cycle highs can be sold until the longer term cycles bottom. Guidelines for an early identification of the highs of the 24/39Month Cycles are –

- A rise in the monthly oscillator above the Sell Line. At times this may require the assumption of a month-end close above or below a certain price level.

- A rise above the Sell Line in the weekly Detrend followed by a downturn in the oscillator, and

- A Trigger entry of a drop below the low of the week that turned the oscillator down.

This combination gave an earlier entry than the monthly chart at both C and D, and a downturn in the weekly MACD would have been additional confirmation of the cycle highs.

Of the lows in the monthly chart that occurred below the Buy Line, only 7, 8, and 11 are below the Buy Line in the weekly Detrend chart, offering an opportunity to anticipate an upturn and confirmation in the monthly chart. (The price low at 7 is not shown in the weekly chart, but can be seen by using the data in your own analytical program.)

The Detrend bottoms tend to occur before the actual price low, so an 8-term Crossover of the Detrend is used for the Setup. The Trigger entry of exceeding the price high of the week that made the Crossover identified the bottom in 7 and did not enter the market at 8 and 11, both of which had relatively small upside moves.

Using a drop below the Buy Line to identify the Seasonal lows at CS and DS would have confirmed the lows and resulted in profitable trades. Since the monthly oscillator was not below its Buy Line, these lows would not have been considered as potential 24/39-Month lows. Other oscillators would be used to identify the remaining lows.

When the weekly oscillator is at levels that would indicate a potential top or bottom, the daily oscillators may complete entry patterns that would indicate or confirm the top or bottom before the weekly pattern is completed. Also, once a weekly pattern has been completed, daily patterns can give additional high probability Trigger entries following a top or bottom.

DAILY

The highs and lows of the 14-Week Primary Cycle are relatively easy to identify through the use of the daily oscillators. The low of the 24/39-Month Cycle at 11 is also identified and could have been bought within days of the low.

CHART 3D-3 ••• the top panel of Chart 3D-3 shows daily soybeans from 9/88 through 2/8/90 with the Primary Cycle highs indicated by the dots above the highs. The Primary Cycle lows are indicated by the number of weeks from low-to-low below each low.

The MACD was not a very good indicator of the Primary Cycle highs or lows, but two other oscillators described below combine exceptionally well to identify the highs and lows of the primary Cycle and generate buy and sell signals. These patterns would not have helped identify the 1988 high at D, which was nicely identified and sold using the weekly MACD. However, they do give excellent sell signals at the Primary Cycle highs that followed the high.

Panel B shows a 40-day CCI with the Sell Line at 150 and the Buy Line at -150 instead of the normal +/- 100. A 4-term Crossover has been added because the lows of the CCI tend to occur early and often wiggle.

The Primary Cycle highs are identified by the following Setup:

- a rise above the Sell Line at 150,
- followed by a downturn in the oscillator,
- with a Trigger entry of a drop below the low of the downturn day

A continued decline below the Crossover and a drop below the price low of Crossover day give additional confirmation of the Primary Cycle top at the 3 highs which had a rise in the CCI above the Sell Line.

Daily Soybean Chart
with a 40-Day CCI, and an 8-Day RSI

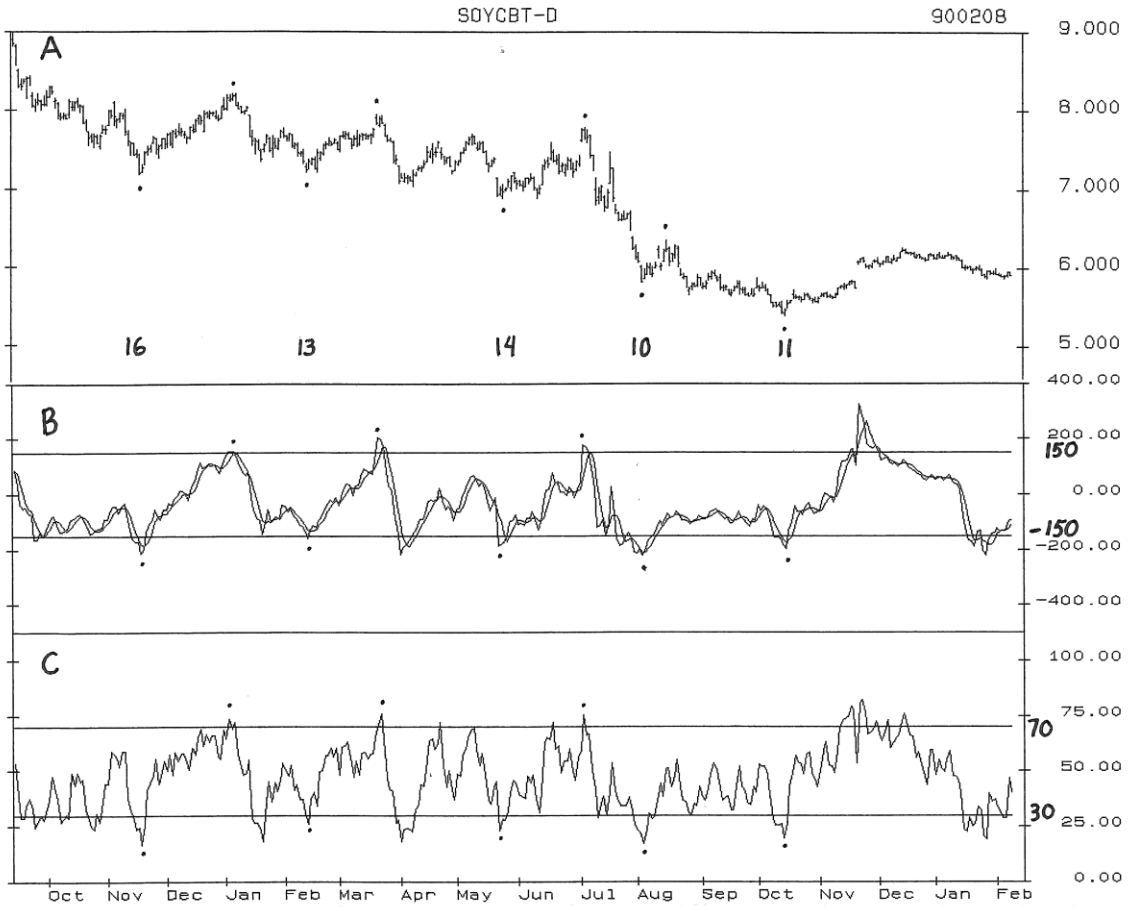


Chart 3D-3

The Primary Cycle lows are identified by the following Setup:

- Prices must bottom within the Timing Band of 11 to 20 weeks from the previous Primary Cycle low, and
- the CCI must decline below the Buy Line at -150,
- which must be followed by a rise above the crossover,
- with a Trigger entry of a rise above the price high of Crossover Week.

All 5 Primary Cycle lows were identified within days of the bottom, which would have allowed profits on short positions to be taken and/or long positions to be established. The low of the 24/39-Month Cycles and the Seasonal low at 11 could also have been bought only days from the price low.

Panel B shows an 8-day RSI that exceeds the Sell Line at 70 as each Primary Cycle high is made, and drops below the Sell Line at 30 as each Primary Cycle low is made. A requirement that a rise above the Buy Line or a drop below the Sell Line of this RSI should be added to the setups above. By itself the RSI is not a powerful indicator of cycle highs and lows, but when combined with Timing Bands and one or more other oscillators it can increase both the probability of success and the confidence necessary to take a trade.

Another aspect of 3-D analysis is to run oscillators that are time dependent, such as the RSI, Detrend, Stochastics and Momentum in 3 different time lengths: 5, 8, and 13; or 10, 20 and 40. Use the longer-term time periods to help identify the major overbought and oversold levels, and use the shorter-term time periods to identify the shorter cycles and enter the market and to trade.

Chapter Eight

THE PRIMARY CYCLE IN GOLD

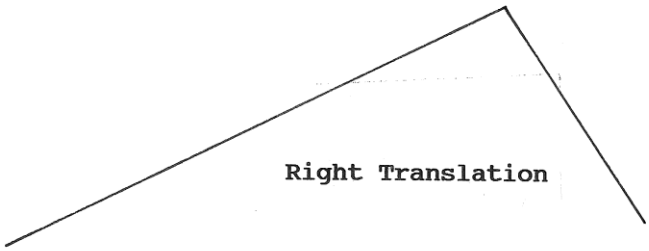
The dominant weekly cycle in gold is the 18-Week Primary Cycle as measured from low to low. The Primary Cycle is actually a summation of many shorter term cycles, and as such it often contracts, extends and sometimes seems to skip a beat. Eighteen weeks is an average, and 90% of all Gold Primary Cycles since 1972 have bottomed within a Timing Band of 11 to 23 weeks from the previous low. While this is a broad period of time, there are ways to greatly improve the probability of identifying Primary Cycle lows and highs shortly after they occur.

Cycles can simply be counted on a weekly chart from low-to-Iow or high-to-high; or a more accurate count can be obtained using the component parts of a cycle as described in the use of Timing Bands in Chapter One. The use of oscillators with historically researched patterns allows a more exact and timely identification of the highs and lows of this cycle. But first, a brief review of several important concepts will insure an understanding of how to work with cycles.

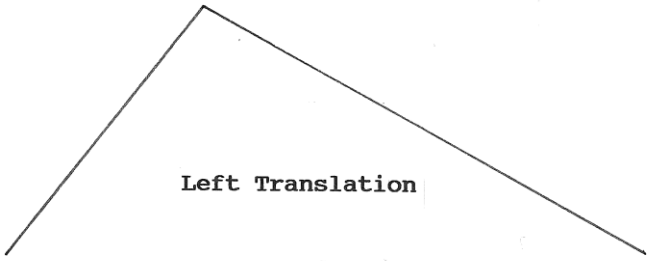
RIGHT AND LEFT TRANSLATION

One of the many advantages of cycle analysis is that realistic expectations for time and price moves can be established. A basic understanding of the concept of Right and Left Translation provides additional input to determine your trading strategies and money management.

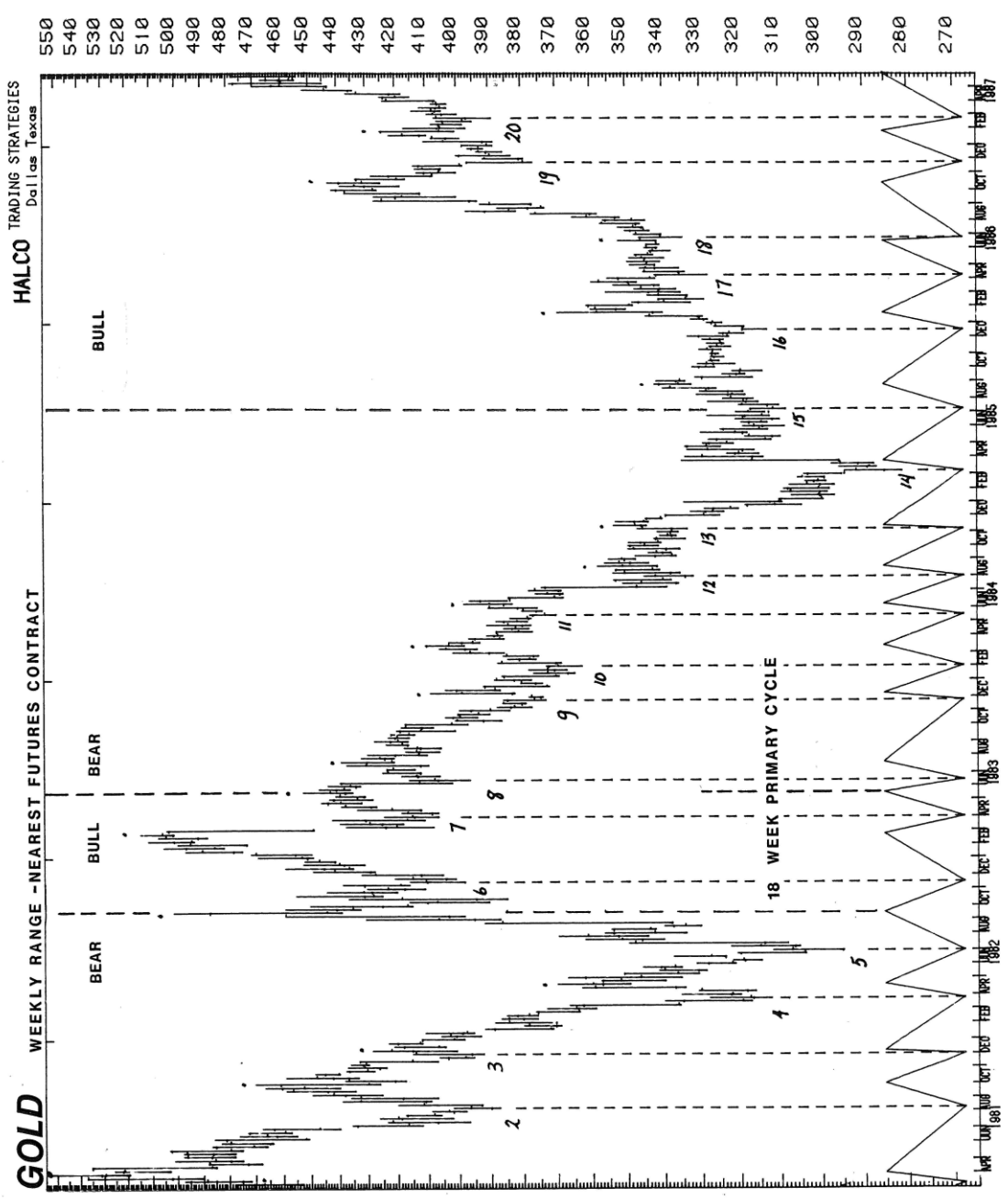
As a market is rising, prices tend to go up for a longer period of time than they go down. This is called Right Translation, and it can be restated that in a bull market the up-phase of the cycle will last longer than the down-phase.



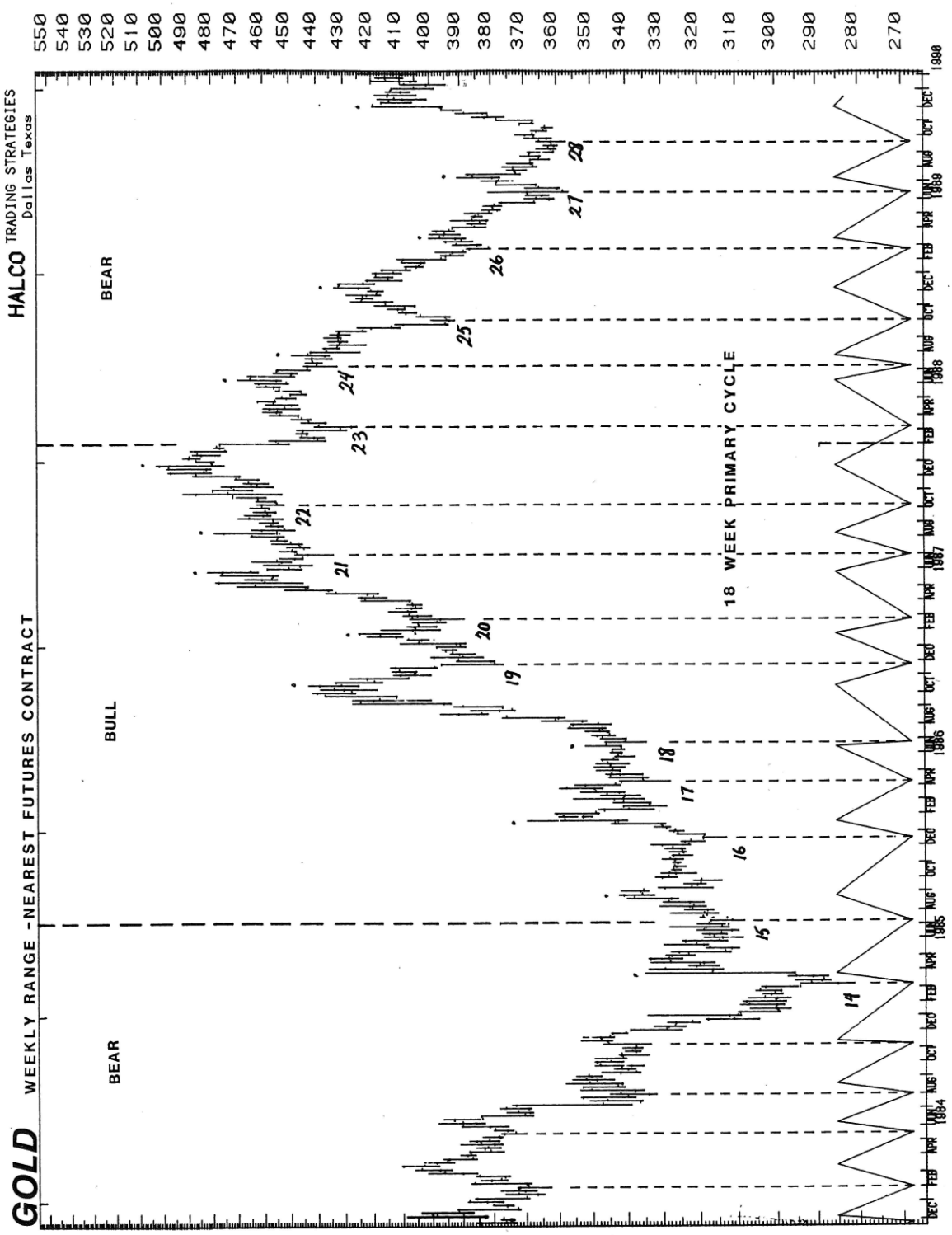
In a falling market, prices tend to go up for a shorter period of time than they go down. This is called Left Translation, and it can be restated that in a bear market the down-phase of the cycle will last longer than the up-phase.



The weekly gold charts, G-1 and G-2, are from 3/81 through 2/90.
The Primary Cycle highs and lows are shown by the dots, and the dashed vertical lines separate the bull market and bear market phases as determined by an oscillator described later in this chapter. Notice how most of the cycle highs in the bear phase lean to the left, and most of the highs in the bull phase lean to the right.



Weekly Gold
Chart G-1



Weekly Gold
Chart G-2

An analysis of the average time and price moves from the Primary Cycle lows to the highs and the highs to the lows shows a distinct difference between those cycles in bull markets and those in bear markets. Table GT-l lists the 28 primary Cycles for this time period, and the basic components of each cycle.

Gold Primary Cycle
Time Count and Price Movement

1	2	3	4	5	6	7	8	9	10	11	12	13
Number	Date Low	Price Low	Date High	Price High	% L - H	Weeks L - H	Date Low2	Price Low2	PT DIF H - L	% H -L	Weeks H - L	Bull Bear
1	810306	453	810327	534	17.88%	3	810807	387	147	27.5%	19	Bear
2	810807	387	810925	470	21.45%	7	811127	392	78	16.6%	9	-
3	811127	392	811204	428	9.18%	1	820319	312	116	27.1%	15	-
4	820319	312	820416	370	18.59%	4	820625	295	75	20.3%	10	-
5	820625	295	820910	501	9.83%	11	821112	398	103	20.6%	9	820827
6	821112	398	830218	514	29.15%	14	830325	406	108	21.0%	5	Bull
7	830325	406	830513	452	11.33%	7	830610	396	56	12.4%	4	830603
8	830610	396	830715	439	10.86%	5	831118	373	66	15.0%	18	Bear
9	831118	373	831202	408	9.38%	2	840127	364	44	10.8%	8	-
10	840127	364	840309	410	12.64%	6	840511	370	40	9.8%	9	-
11	840511	370	840601	398	7.57%	3	840727	332	66	16.6%	8	-
12	840727	332	840817	358	7.83%	3	841102	333	25	7.0%	11	-
13	841102	333	841109	353	6.01%	1	850301	281	72	20.4%	16	-
14	850301	281	850322	335	19.22%	3	850703	308	27	8.1%	15	-
15	850703	308	850823	342	11.04%	8	851213	313	29	8.5%	15	850809
16	851213	313	860117	369	17.89%	5	860404	328	41	11.1%	11	Bull
17	860404	328	860613	352	7.32%	10	860620	334	18	5.1%	1	-
18	860620	334	861010	443	32.63%	14	861121	376	67	15.1%	8	-
19	861121	376	870123	425	13.03%	9	870220	389	36	8.5%	3	-
20	870220	389	870522	481	23.65%	13	870626	434	47	9.8%	5	-
21	870626	434	870807	479	10.37%	6	871002	452	27	5.6%	8	-
22	871002	452	871218	502	11.06%	11	880304	425	77	15.3%	11	880219
23	880304	425	880603	469	10.35%	13	880701	432	37	7.9%	4	Bear
24	880701	432	880722	449	3.94%	3	880930	391	58	12.9%	10	-
25	880930	391	881202	433	10.74%	9	890217	380	53	12.2%	11	-
26	890217	380	890310	400	5.26%	3	890609	356	44	11.0%	13	-
27	890609	356	890707	390	9.55%	4	890915	357	33	8.5%	10	-
28	890915	357	891124	419	17.37%	10	900105	394	25	6.0%	6	891117

The column headings are fairly clear. Column 2 is the Friday date of the PC low, the date of the price high is in Column 4, and the following PC low is in Column 8.

Table Summaries
Average Number of Weeks and
% Moves From Low to High and High to Low

	Weeks Low To High	% Low To High	Weeks High To Low	% High To Low
Bull Market	9.5	21.5%	6.4	11.6%
Bear Market	4.4	11.3%	11.6	14.4%

In the bull markets the average number of weeks from low to high is more than twice the number of weeks in the bear markets, and the percentage rise is almost double that in a bear market. The number of weeks from high to low is about half the number of weeks in a bear market, and the percentage decline is 20% less than in a bear market.

Additional analysis of the primary Cycles in this time period shows that 90% of the highs in bull markets were made 5-14 weeks from the Primary Cycle low. This establishes a minimum expectation of 5 weeks for a high to occur. And since the average number of weeks from low to high is 9.5 weeks, we can expect that about half of the cycles in a bull market will make the PC high 9-14 weeks, or more, from the low. This time factor alone would indicate that long-term positions in a bull market should have a relatively wide stop until Week 9, when it should be moved closer to the market each week until stopped out. The average rise of 21.5% would also indicate that sizable moneymaking moves should occur about half of the time.

In bear markets, 80% of the highs occur 1-6 weeks from the PC low, warning us to be prepared for a relatively quick top, and at an average rise of 11.3%, one that is not likely to be a big moneymaker. A long-term position should have a relatively close stop, which would be moved closer to the market beginning with Week 4 from the PC low. The bear market picture is actually saying that long positions are high risk, and that most of your effort should go into selling short at the PC tops.

Another aspect of cycles that is not part of Right and Left Translation, but is a characteristic of bull and bear markets, is the activity of the PC low at the end of a cycle. In bull markets the PC low tends to be higher than the previous PC low. Of course, all markets are somewhat different, but in the bull market phase in gold in these examples, every PC low was above the previous PC low until the market shifted into its bear phase, when about two-thirds of the PC lows were below the previous PC low. Again, this information is helpful in establishing expectations for the size and duration of a move, and the resulting changes in money management.

MACD OSCILLATOR PATTERNS

The Moving Average Convergence-Divergence, or MACD, is in most analytical programs, and its construction is explained in the Appendix.

In gold, the standard COMPUTRAC MACD was used to determine the bull and bear phases to evaluate the performance of the PC. However, the standard approach of using the crossing of the Crossover by the MACD is neither quick enough to trade, nor slow enough to determine the bull and bear phases of the markets. In this market the upward crossing of the Zero Line by the MACD ends the bear phase and begins the bull phase, while the downward crossing of the Zero Line by the MACD ends the bull phase and begins the bear phase.

Chart G-3 ••• for 810162-909209 shows the bull and bear phases of the market as determined by the MACD. The dates these phases begin and end are in Table GT-1, Column 13.

Weekly Gold
1-81-2/90
With MACD as Indicator of Bull/Bear Markets

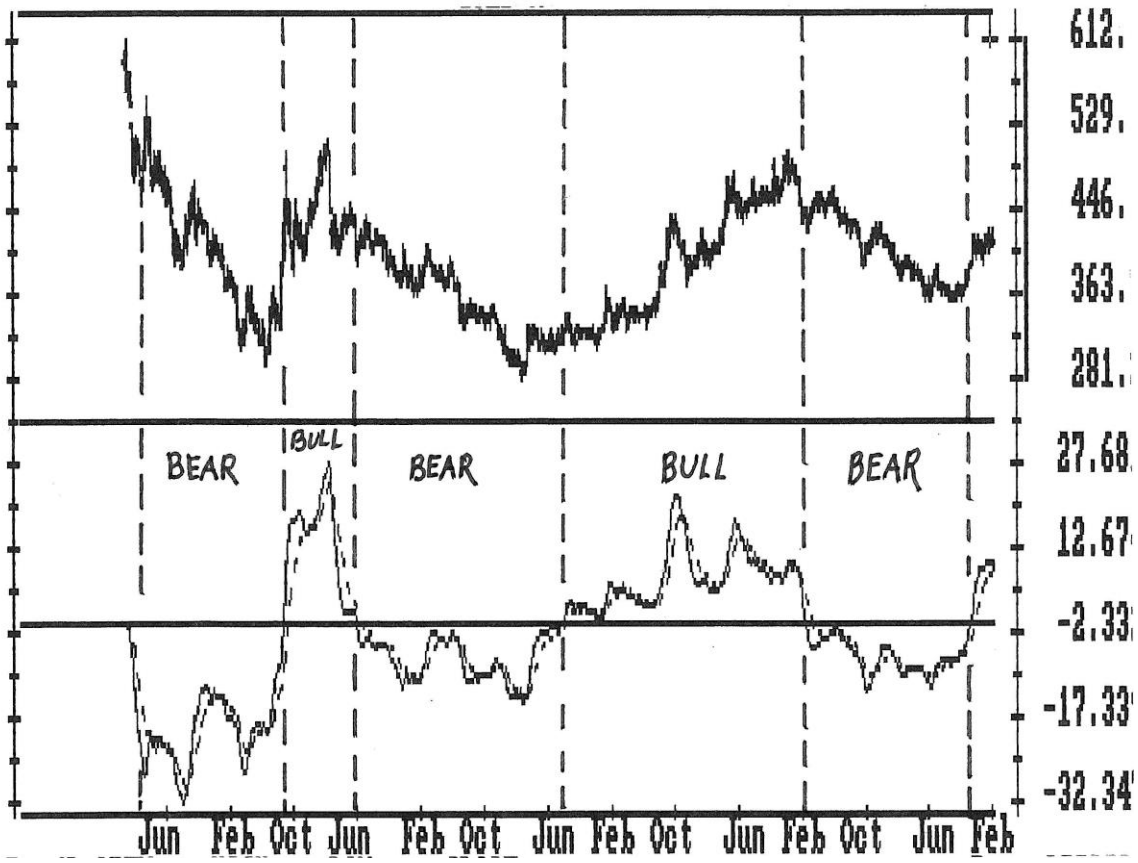


Chart G-3

The COMPUTRAC MACD is also the basis for an oscillator that has identified 80% of the PC lows and is shown in Charts G-4, G-5, and G-6. There are three steps to calculate it:

1) Run the COMPUTRAC MACD (26, 12, 9 days). Then erase it from the screen.
2) Use the Spread Study to detrend the MACD around the Crossover.
3) Calculate a 3-Term Moving average of the resulting spread and use it as a Crossover line.

Simply using the turns of the oscillator and the Crossovers does not work well. But a combination of the 11-23 Week Timing Band and the use of 3 oscillator patterns turn this oscillator into an excellent indicator of the PC lows, and gives very good entry signals for a weekly chart.

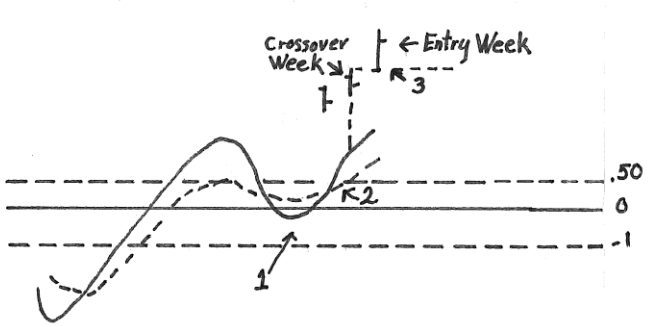
The 3 oscillator patterns are called the Oversold, the Kiss, and the Hook.

The Oversold is formed by:

1) A drop in the oscillator below -1. In the time period studied, all oscillator lows for this signal occurred at -1 to -11.

2) An upturn in the oscillator, which exceeds the Crossover and is followed by . . .

3) Prices exceeding the high of the Crossover Week.

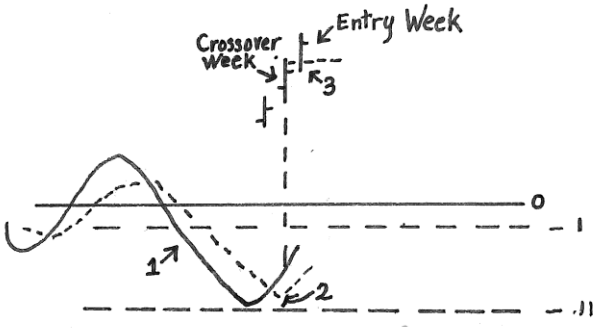


The Kiss is formed by:

1) Rising from below the Zero Line, the oscillator rises to a high above the Zero Line, then drops below the Crossover to .50 to -.99, and turns back up.

2) Exceeding the Crossover, and being followed by . . .

3) Prices exceeding the high of Crossover Week.

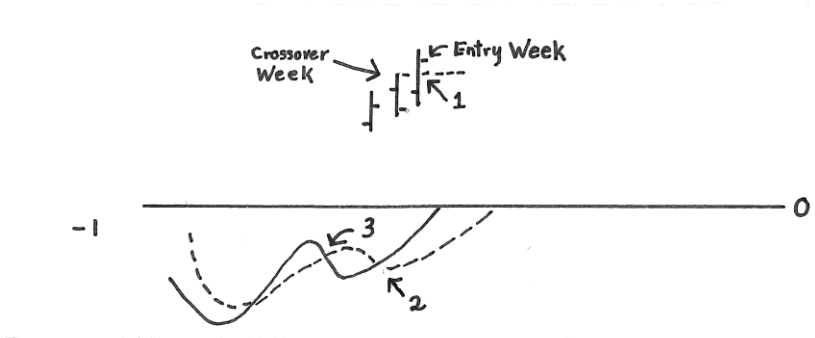


The Hook is formed by:

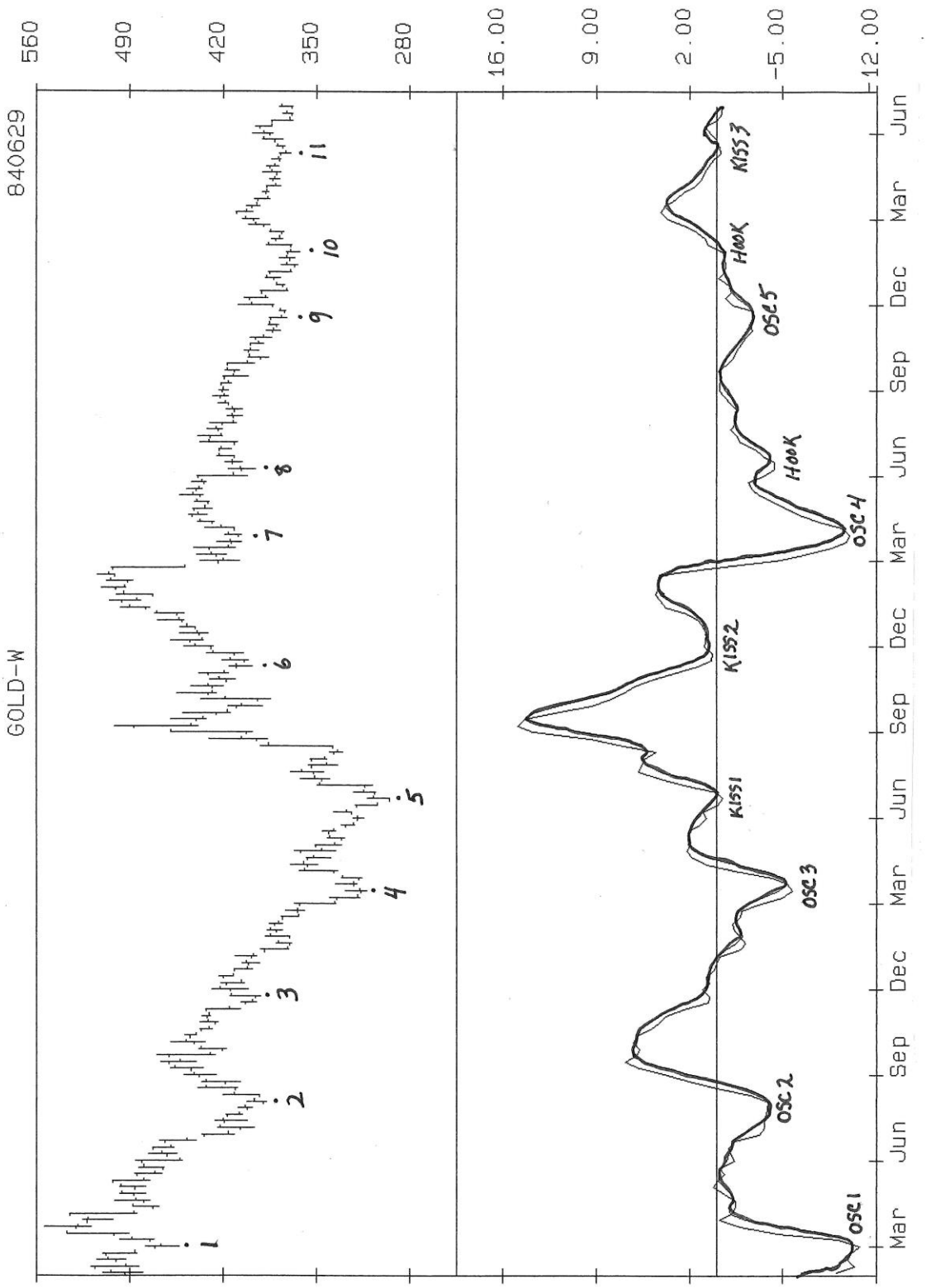
1) An oscillator low below -1 that rises to a level that is generally below 0, and then turns down,

2) Dropping below the Crossover line and rising back above it,
followed by ••.

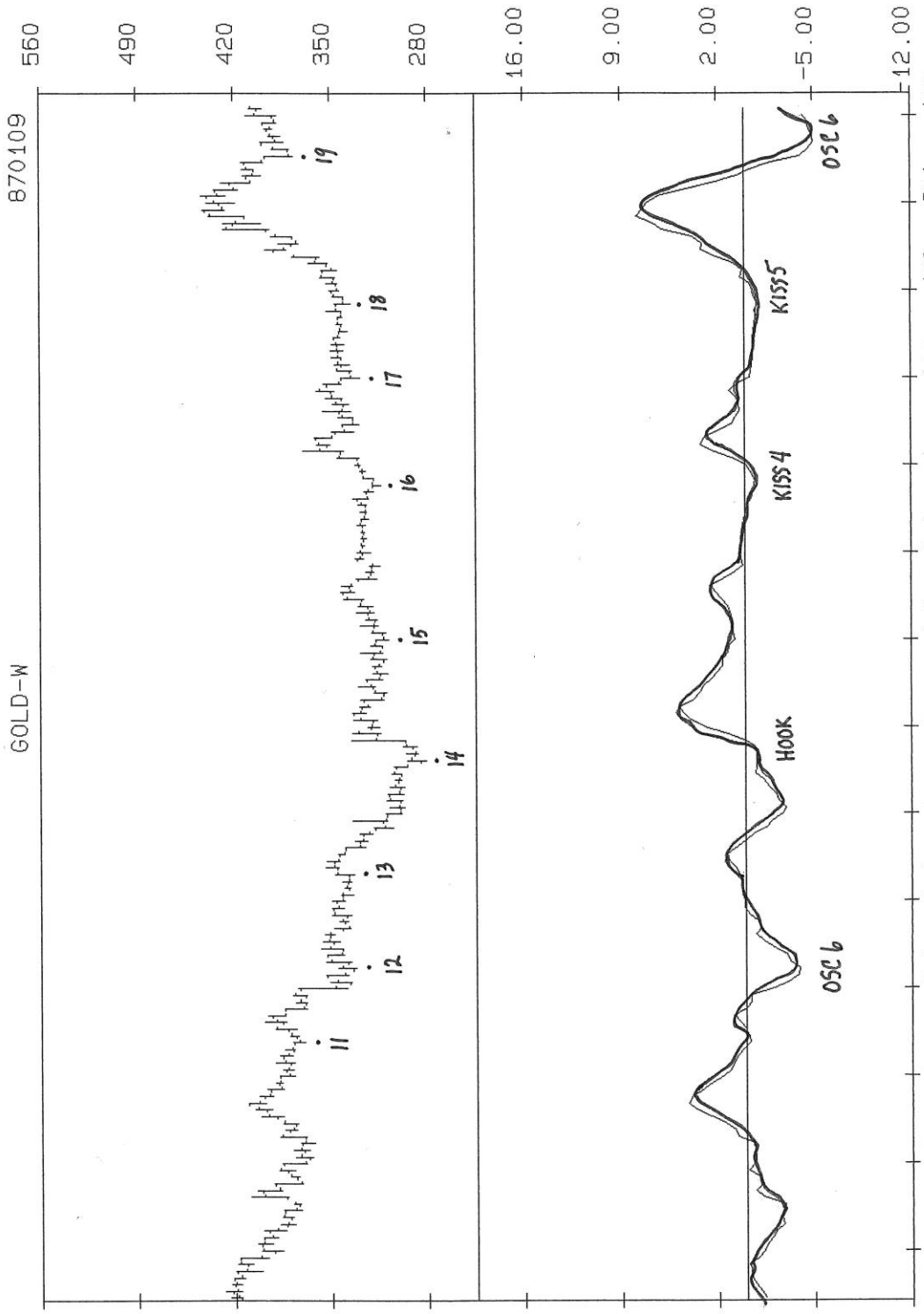
3) Prices exceeding the high of Crossover week.



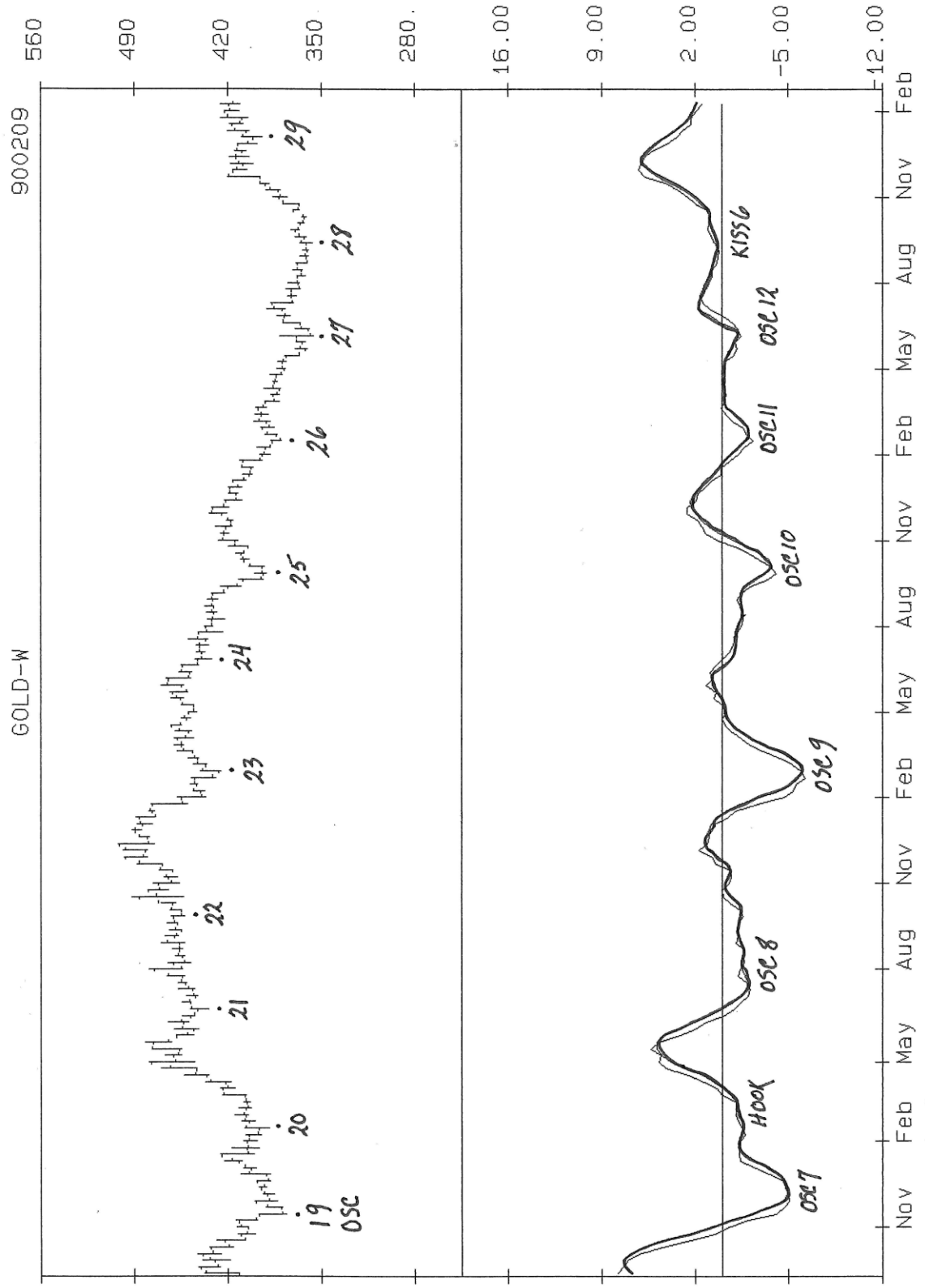
Charts G-4, G-5, and G-6 overlap and can be 'cut and pasted' together to have a continuous chart of gold from 810130 to 900209. The PC lows are numbered in the price chart. The bottom panel is the MACD Detrend with a 3-Term Moving Average Crossover. The type of pattern that occurred at the PC low, if any, is indicated.



Weekly Gold
Chart G-4



Weekly Gold
Chart G-5



Weekly Gold
Chart G-6

RESEARCH TABLES

Unfortunately, few people take the time to evaluate the use of an oscillator. Most people seem to think that by simply having an analytical package they will have the 'edge' over other traders and automatically make money. Actually, the opposite is generally true until one learns the new skills necessary to combine the chart with the oscillators. And even then, one encounters the same pitfalls outlined in THE 12 *CARDINAL MISTAKES OF COMMODITY TRADING* (see Chapter Fourteen).

It is only through the sometimes tedious, but often rewarding process of thorough research that one develops groups of patterns that are reliable indicators of tops and bottoms, as well as moneymakers. No single oscillator or pattern will work all of the time, so a variety of oscillators should be researched and followed.

Table GT-2 is used to evaluate the Oversold, Kiss and Hook patterns identified in the charts. Guidelines are developed to utilize these patterns to identify the cycle lows and determine expectations for the cycle high. With more research, these patterns can be developed into mechanical buy patterns.

Research Table for Charts G-4, G-5, and G-6 of Weekly Gold with Primary Cycle Analysis and MACD Detrend with a 3-Term Crossover												
1	2	3	4	5	6	7	8	9	10	11	12	13
Number	Date Low	OSC Low	Price Low	PL/OSC	WKS/XWK	TO/EWK	DATE High	PRICE High	% L-H	WEEKS L – H	OSC Lo	KISS
3	81127	0.53	392	0	1	-	811204	428	9.18	1	-	-
13	841102	0.79	333	-1	1	1	841109	353	6.01	1	-	-
24	880701	-	432	-	-	-	880722	449	3.94	3	-	-
17	860404	-	328	-	-	-	860613	352	7.32	10	-	-
15	850703	0.73	308	0	2	2	850823	342	11.04	8	-	-
22	871002	-1.56	452	0	1	1	871218	502	11.06	11	-	-
1	810306	-10.72	453	0	1	1	810327	534	17.88	3	1	-
2	810807	-3.93	387	-1	1	1	810925	470	21.45	7	2	-
4	820319	-5.68	312	0	2	1	820416	370	18.59	4	3	-
7	830325	-9.74	406	1	0	1	830513	452	11.33	7	4	-
9	831118	-2.87	373	0	2	-	831202	408	9.38	2	5	-
12	840727	-3.95	332	0	1	2	840817	358	7.83	3	6	-
19	861121	-5.04	376	2	4	1	870123	425	13.03	9	7	-
21	870626	-2.1	434	3	0	1	870807	479	10.37	6	8	-
23	880304	-6.28	425	-1	1	1	880603	469	10.35	13	9	-
25	880930	-4.1	391	0	1	-	881202	433	10.74	9	10	-
26	890217	-2.32	380	0	1	1	890310	400	5.26	3	11	-
27	890609	-1.42	356	0	1	1	890707	390	9.55	4	12	-
5	820625	-0.44	295	0	1	1	820910	501	69.83	11	-	1
6	821112	0.29	398	2	2	1	830218	514	29.15	14	-	2
11	840511	-0.3	370	0	2	1	840601	398	7.57	3	-	3
16	851213	-0.92	313	0	0	1	860117	369	17.89	5	-	4
18	860620	-0.95	334	0	0	1	861010	443	32.63	14	-	5
28	890915	0.25	357	-1	0	1	891124	419	17.37	10	-	6
20	870220	-1.74	389	-1	0	1	870522	481	23.65	13	-	20
10	842127	-0.65	364	-2	-1	2	840309	410	12.64	6	-	20
8	830610	-4.38	396	0	2	2	830715	439	10.86	5	-	20
14	850301	-2.9	281	1	2	1	850322	335	19.22	3	-	20

COLUMN 1 is the number of the primary Cycle bottom in the charts.
This table is sorted according to the type of pattern indicated in Columns 12 and 13.

COLUMN 2 is the Friday date of the week of the primary Cycle low.

COLUMN 3 is the value of the oscillator low at the PC bottom.

COLUMN 4 is the low price of gold at the PC bottom.

COLUMN 5 is the number of weeks that the oscillator turned up before, or after, the week of the price low. A minus (-) sign indicates the number of weeks before the PC low, a zero (0) indicates that the oscillator and the PC made a bottom the same week, and a plus (+) indicates the number of weeks the oscillator bottomed after the PC low. A good oscillator will generally turn up on, or close to, the same week the price low is made.

The cycles with no numbers are lows in which an oscillator/price pattern could not have been determined. The 6 cycles at the top of the table did not clearly complete one of the 3 patterns and are not included in the evaluations of Columns 5, 6 and 7.

Of the 22 lows that met all of the criteria for the patterns, 18, or 80%, made the oscillator low from 1 week before to 1 week after the PC low. Twenty, or 90%, made the oscillator low plus or minus 2 weeks of the price low.

GUIDELINE: Expect the oscillator to bottom plus or minus 2 weeks of the price low, with a strong tendency to bottom plus, or minus, 1 week of the low.

COLUMN 6 is the number of weeks from the price low to the week that the oscillator exceeded the Crossover Line. The weeks are counted the same as for Column 5. Nineteen of 22 weeks, or 85%, exceeded the Crossover from the week of the PC low to 2 weeks after the low.

GUIDELINE: Expect the Crossover to generally occur from the week of the PC low to 2 weeks after the PC low, but do not let one longer than that keep you out of trade.

COLUMN 7 is the number of weeks from Crossover week until the price high of Crossover week was exceeded. Twenty-one of 22 weeks saw prices rise above the high of Crossover week, and all did it by Week 2, with 85% doing it the first week.

GUIDELINE: Expect the high of Crossover week to be exceeded the first week after Crossover Week, but no later than the second. The Trigger entry should be exceeding the high of Crossover week.

COLUMN 8 is the Friday date of the week of the Primary Cycle high.
COLUMN 9 is the price of the Primary Cycle high.
COLUMN 10 is the percentage rise from PC low to PC high.
COLUMN 11 is the number of weeks from PC low to PC high.
COLUMN 12 lists the 12 oscillator/PC lows of the Oversold pattern, and allows the other columns to be scanned for additional information or patterns that might be helpful in identifying the pattern.

For example, Column 3 shows that all oscillator lows for the Oversold were between -1.42 and -10.72. Rounded off, these numbers become -1 to -11 of our pattern description above.

Column 10 shows that of 12 cycles, 9 rose 13% or less, with an average of 12.2% for all 12 cycles. Compared to the average rise of 21.5% in bull markets and 11.3% in bear markets, we would expect this pattern to occur most often in bear markets.

Column 11 shows that 11 of the 12 Oversold patterns made the PC high in 9 weeks or less, averaging 5.8 weeks which is much closer to the 4.4-week of bear markets than the 9.5 of bull markets.

As a general GUIDELINE, we would expect the Oversold to occur in the bear phase of the markets, rising 13% or less to a high 9 weeks or less from the PC low.

COLUMN 13 lists the Kiss patterns from 1 to 6, and the Hooks are numbered 20.

COLUMN 10 shows that Kiss is a powerful pattern/ with 5 of 6 cycles rising 17% or more to the PC high, including the three biggest moves of the 28 cycles in the 8-year study.

COLUMN 11 shows that 4 of the 6 patterns were followed by a rise of 10 or more weeks to the cycle high. Reviewing these entries on the chart shows that 5 of the 6 either occurred in a bull market or were major bottoms. This is clearly a pattern to be watched for and traded aggressively.

The Hook is also an interesting pattern with 3 of the 4 occurring in bear markets, yet all cycles rising 10% or more from the cycle low.

You can see how the combination of cycles and oscillators allows you to establish expectations for both time and price moves/and a high probability means of entering the market. What is not shown in this table are the price/oscillator lows that looked as though they could be PC bottoms, but were not. The Crossover, which is the Setup, and the Trigger entry of exceeding the high of Crossover week would have prevented many false entries and losses.

Daily and intra-day oscillators could have been used at many PC bottoms (as well as lows that were not PC bottoms) to get you in the market before the Trigger in this study. Your dollar risk would normally be lower than those in this study, but you would have been stopped out more often. By using the multiple contract approach (see Chapter Fourteen), you could have been well positioned by the time the PC low was confirmed, or taken profits on the shorter-term positions and been stopped out at relatively high Levels in those situations in which the PC low was not confirmed.

THE PRIMARY CYCLE TOPS

What works at PC bottoms does not always work at PC highs. The key to discovering high probability patterns is consistency, and this particular oscillator does not exhibit the same consistency at tops as at bottoms. The best that can be seen is that a type of Overbought pattern, similar to the Oversold, occurs at oscillator levels greater than 4.00. While these patterns do not occur often, they are usually good for a decline of 5 or more weeks in a bull market, and extended declines in bear markets.

Chapter Nine

MOVING AVERAGE CONVERGENCE/DIVERGENCE (MACD)

The MACD is in most analytical packages available today. Invented by Gerald Appel, it is a powerful oscillator for identifying cycle highs and lows and for developing mechanical trades. It is constructed with three exponential moving averages that make it a flexible oscillator that can be adjusted for short, intermediate, or long-term analysis.

Several characteristics of the MACD are

- A crossing of the slower line (the Crossover) often confirms tops and bottoms, usually after the market has turned.

- A downturn in the faster turning line often occurs at, or shortly after a top; an upturn often occurs at, or shortly after, a bottom.

- The Detrend between the fast line and the Crossover often indicates the tops and bottoms earlier and more accurately than the MACD alone, and works exceptionally well with Crossovers and Buy/Sell Lines.

- The MACD was used as an example in the Japanese Yen for detrending an oscillator in Chapter Six, “Detrending Oscillators.” Now let's add cycles into the analysis.

CHART MACD-I ••• is the same as Chart 00-1 in Chapter six with the Primary Cycles indicated. The dominant weekly Primary Cycle in the Yen since 1977 has an 80% Timing Band of 26 to 44 weeks from low-to-Iow, with an average of 31 weeks. The highs and lows of this cycle are indicated by the dots above and below prices. In bull markets the rise from low-to-high tends to take 17 to 28 weeks; in bear markets, or in the rise to the final high of a bull market, the rise from low-to-high has been 1 to 12 weeks. Highs and lows of the Primary Cycle can be expected to occur within these Timing Bands in future years.

Below each Primary cycle low a solid vertical line is drawn through the lower two panels. Below each Primary Cycle high is a dashed vertical line. Panel B is the COMPUTRAC MACD and Panel C is the Detrend of the two lines.

Chart MACD-I
Weekly Japanese Yen Showing Primary Cycle Highs and Lows
with COMPUTRAC MACD in Panel B,
and an Detrend of the MACD in Panel C

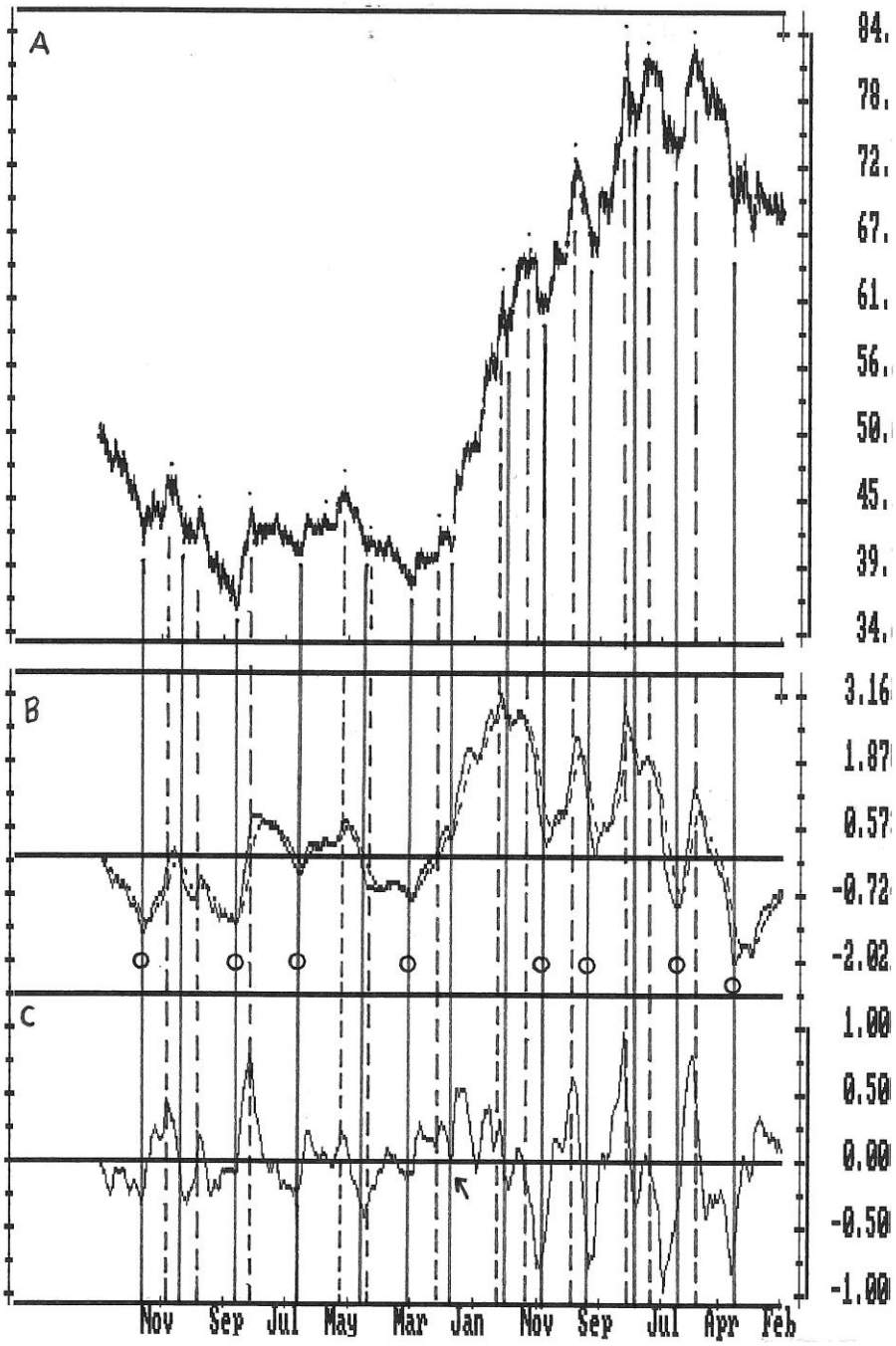


Chart 9-2

Notice how each primary Cycle low occurred at an upturn of the Detrend, and in 13 of the 14 lows the Detrend was below the Zero Line; the one that was not below the Zero Line, identified by the arrow, "kissed" it and exploded to the upside. A guideline for identifying the cycle lows is for prices to be 26-44 weeks from the previous cycle bottom, and to have the Detrend turn up following a drop below the Zero Line.

Another aspect worth noting is that 8 of the Primary cycle lows, indicated by the circles, occurred following sizable declines in the MACD. All were followed by sizable price rises from the price levels at which they occurred. S1X occurred below the Zero Line, and the two that were not below it occurred in the strong bull phase of the market, something that might recur in future bull markets. As a general guideline, expect primary Cycle bottoms at MACD lows that follow sizable declines to be followed by sizable price rises to the next Primary Cycle high.

CHARTS MACD-2, MACD-3, *and MACD 4* ••• Based on these observations this combination of cycles and oscillators has enough promise to warrant a closer look. These charts are expanded versions of Chart MACD-1, and will allow the combination of price and oscillator activity to be seen more clearly. A 5-Term Crossover has been added to the Detrend in the bottom panel.

A visual inspection of each bottom shows that the Detrend wiggles too often at the bottoms to use a simple upturn as a setup with a Trigger entry at the high of the upturn week. Using the Crossover as a Setup with a Trigger entry at the high of the Crossover week appears to work reasonably well. The Setup is that the price low must be 26 or more weeks from the previous low, and the Detrend must be below the Zero Line. This simple combination gives 10 confirmations of a bottom with the Trigger entry, eight of which would have been highly profitable; one would have been a serious loss and 3 did not enter. The lows at which the cycle bottoms were confirmed are 1, 2, 3, 4, 7, 9, 10, 11, 12, and 13.

Our first visual inspection determined that the Detrend looked as though an upturn would 1ndicate a bottom, but a more detailed look showed too many wiggles at the lows to use the upturn. The use of the Crossover developed into the appropriate Setup for the cycle bottom and mechanical entry signal.

When a Crossover setup is followed by a Trigger entry, the potential for identification of a cycle bottom and a profitable trade is good. But no single oscillator can be expected to identify every cycle low, and one or more other oscillators should combine with this MACD Detrend to confirm the Primary Cycle lows. Additional research on the MACD may also produce other bottoming indicators. For example, smoothing the Detrend with a 3-Term Moving Average may allow an oscillator upturn to be used as the setup, and a 3 or 5-Term Crossover could also be researched as another Setup.

Chart MACD-2
Weekly Japanese Yen - 1/81-5/84
Showing Primary Cycle Highs and Lows in Panel A,
COMPUTRAC MACD in Panel B
Detrend of MACD with 5-Term Crossover in Panel C

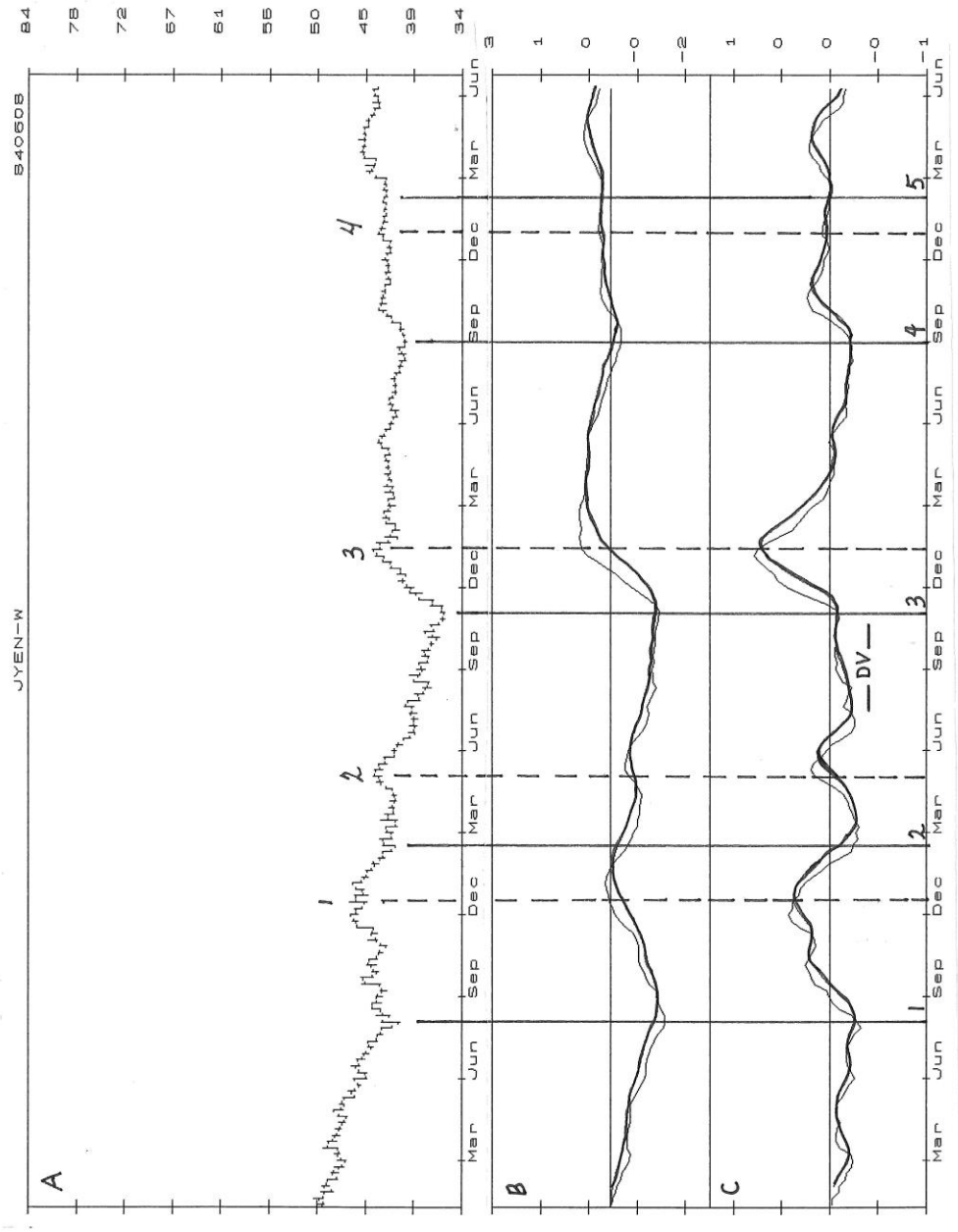


Chart 9-4

Chart MACD-3
Weekly Japanese Yen - 11/83-3/87
Showing Primary cycle Highs and Lows in Panel A,
COMPUTRAC MACD in Panel B
Detrend of MACD with 5-Term Crossover in Panel C

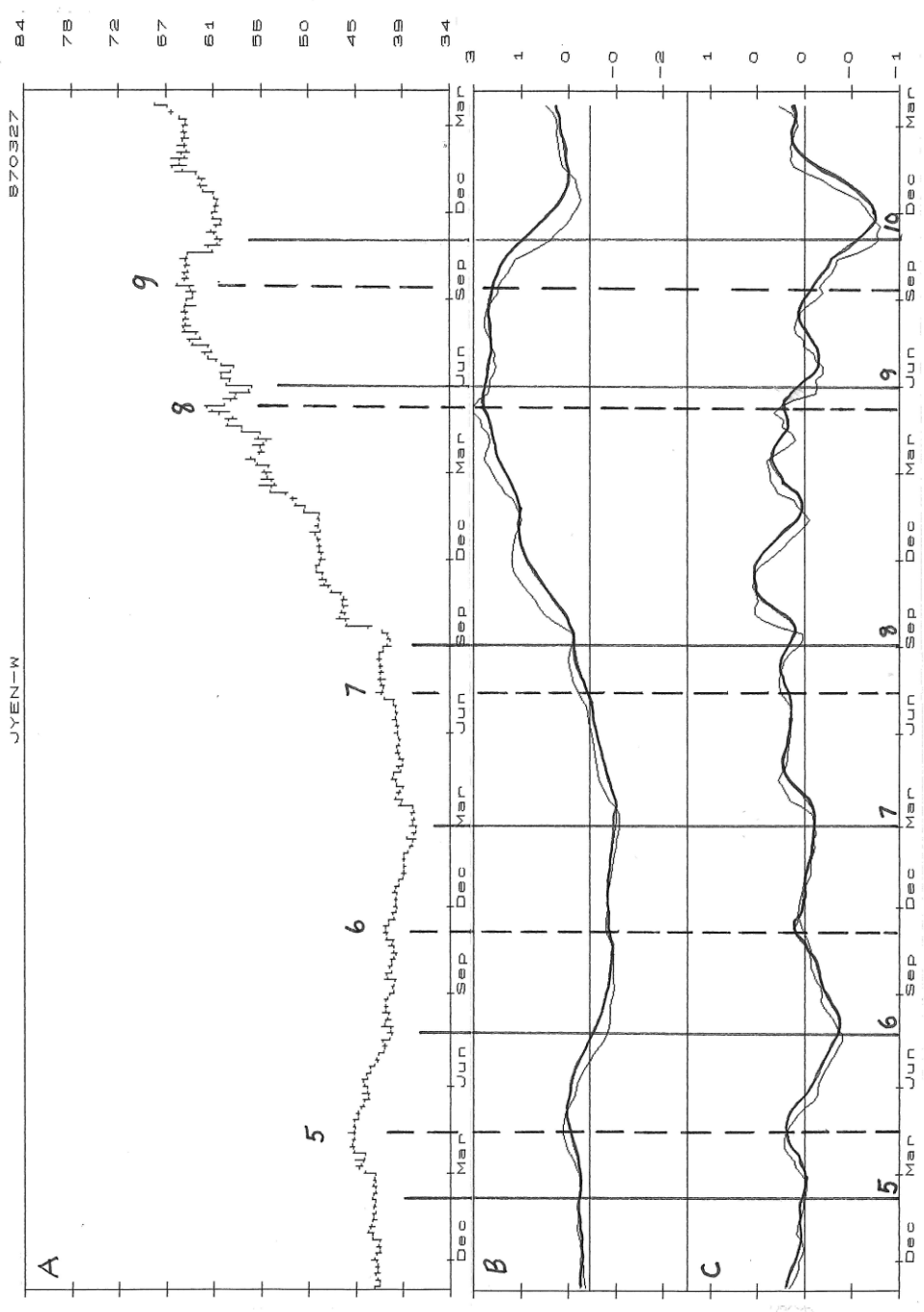


Chart 9-5

Chart MACD-4
Weekly Japanese Yen - 10/86-2/90
Showing Primary Cycle Highs and Lows in Panel A,
COMPUTRAC MACD in Panel B
Detrend of MACD with 5-Term Crossover in Panel C

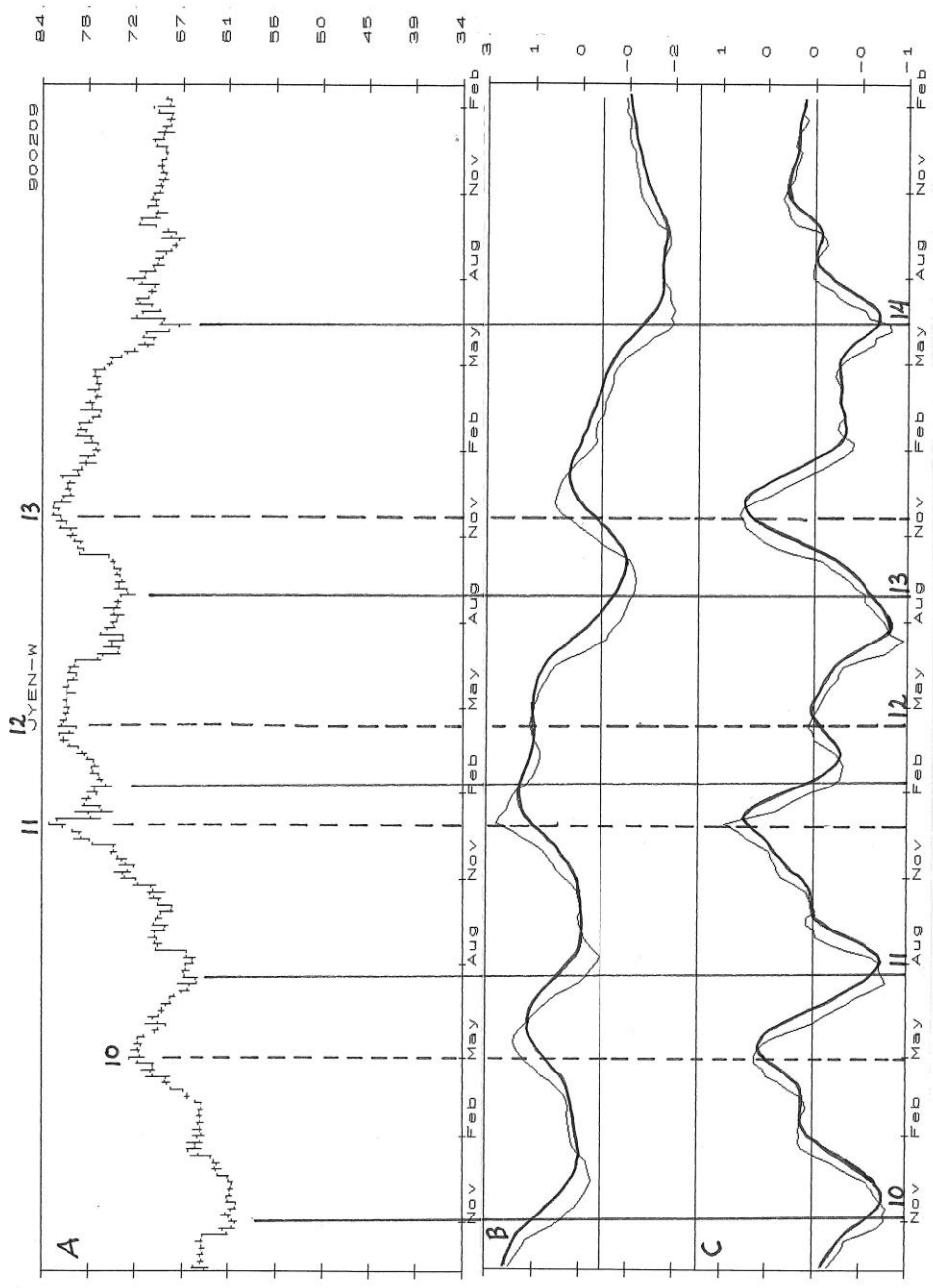


Chart 9-6

Identifying the Highs

An eyeball review of the MACD shows that a downside Crossover by the MACD is too late to be used to confirm the cycle highs. And a review of the Detrend shows that the Detrend line has too many false turns to be used as the indicator. However, visual inspection of each downside penetration of the Detrend Crossover indicates that this may be a reliable top indicator, and warrants a more in-depth review.

Table MACD-l is a preliminary research table to simply and quickly determine if an oscillator pattern has the potential for mechanical confirmation and trading signals.

MACD INITIAL PC HIGH RESEARCH WITH CROSSOVER AND TRIGGER ENTRY							
A	B	C	D	E	F	G	H
CYCLE #	DATE HIGH	WKS PC L-H	WEEKS H-X	WEEKS X-E	WEEKS E-PC LOW	PC HIGH PVS PCR	TYPE TRADE
1	811218	17	1	4	7	N	3
2	820507	8	3	1	22	N	3
3	830114	10	1	1	28	Y	1
4	831007	5	4	1	S	N	0
4	831230	17	2	1	3	Y	0
5	840413	9.32	1	1	13	Y	3
6	841109	15	3	1	12	N	3
7	850410	7	2	1	S	Y	0
7	850719	20	4	2	1	Y	0
8	860321	28	1	1	S	Y	0
8	860516	36	1	1	1	Y	0
9	860919	15	-4	5	2	Y	1
10	870130	12	3	0	0	Y	NE
10	870501	25	2	1	9	Y	3
11	871231	23	1	1	4	Y	0
12	880415	10	2	1	17	N	3
13	881125	12	2	1	26	Y	3

Table MACD-1

The research table is to evaluate the following pattern, and develop an Oscillator/Cycle Combination to identify the Primary Cycle highs.

THE SETUP

1) The Detrend must be above the Zero line, and

2) The Detrend must drop below the crossover, and

THE TRIGGER ENTRY

3) A Trigger entry occurs when prices drop below the price low of the Crossover week.

Our expectations are that this pattern will be a reasonably accurate confirmer of the Primary cycle high and also offer the potential for a mechanical entry signal. The element of time is not included in the pattern, and will be developed from our research.

This is a preliminary research table to help decide whether to spend time on a more detailed table. To quickly evaluate the profitability of the combination of the setup and Trigger entry, I use an 'eyeball' method that evaluates profitabl1ity with a 0 to indicate a probable loss, a 3 to indicate big profits, a 1 to indicate that a small profit would have been made, and a 2 for a profit that is better than small, but not big. This overview of profitability is shown in Column H. NE (no entry) means there was no completed Trigger entry.

COLUMN A is the cycle number on the chart. Those with two entries had two Setups. This occurred in 4 cycles, and in 3 of the 4, the first entry would have lost money as prices continued to rise to the Primary Cycle high. The 4th made money, but it followed a setup that did not have an entry.

COLUMN B is the date of the Primary cycle high.

COLUMN C lists the number of weeks from the Primary Cycle low to the PC high. For those cycles with 2 entries, it lists the number of weeks from the low to highest price before the downside Crossover. Cycle 5, in the heat of the market, could have been interpreted to be either 9 or 32 weeks from the PC low (it was 9).

Of the 12 cycles that made (or seemed to be making) the PC high 17 weeks or less from the previous PC low, 8 were profitable with 6 of the 8 making big profits. One was a NE, and only 3 (25%) lost money.

Of the 5 entries that made the PC high 20 or more weeks from the PC low, only one made money while 4 lost money. This indicates that following a PC high of 20 or more weeks, the Trigger entry should be used only to confirm the top, waiting to go long at the PC bottom.

GUIDELINE: Be aggressive in selling the market as long as the Primary Cycle high is 17 weeks or less from the PC low. If more than 17 weeks, stand aside and wait to go long as the PC bottoms.

COLUMN D is the number of weeks from the PC high to the Crossover. Fifteen of 17 Crossovers (88%) were made by the 3rd week following the PC high, and all were made by the 4th week.

GUIDELINE: If a Crossover is not made by the 3rd or 4th week, the upmove can be expected to continue.

Only one Crossover was made before the high, but it was not at the PC high and did not make money; so do not trust a similar pattern in the future.

COLUMN E is the number of weeks from the Crossover to the Trigger entry. Seventy-five percent entered the week following Crossover, and all entered by the 5th week.

GUIDELINE: Expect entry the week following the crossover, but no later than the 5th week.

COLUMN F is the number of weeks from entry to the PC low. An S indicates that the trade was entered before the PC top and that it was stopped out. Those that made the PC low 4 weeks or less following entry all lost money but one, which made only a small profit. Those that made the PC low 7 weeks or more from entry all made big profits but one, an unusual year in which prices traded sideways for over 6 months.

Another way to look at this aspect of time is that of the 8 trades that continued lower for more than 4 weeks after entry, 75% continued down into at least the 12th week following entry.

GUIDELINE: Depending on the number of weeks from the previous PC low and the oscillator picture, a decline past the 4th week following entry could be an indicator to establish more short positions. More research is obviously necessary here.

COLUMN G indicates whether or not the PC top exceeded the previous PC high. Five did not, and 4 of these were followed by big downmoves, 3 of them declining 12 weeks or more from entry. One was a false signal and was stopped out.

GUIDELINE: If a PC high does occur below the previous one, a sizable downside move can be expected in price and time.

Our brief research table does indicate that this Oscillator/cycle Combination has the potential to confirm Primary Cycle highs and generate mechanical entry signals that can be followed by big downmoves. The performance of this pattern may be improved by more detailed research, beginning with the addition of the Sell Lines. Combining other Oscillator/Cycle Combinations should also improve performance.

A more detailed research table would include the exact entry price, stop price, method of exit and exact price at exit.. It would also include the prices of the high and low of the Primary Cycle, % moves to the cycle high and low, as well as the % decline from Trigger entry to the PC low, and anything else that would help improve profits or help determine time and price objectives.

We have learned quite a bit from our analysis that can be summarized as**:**

- About 25% of the cycles will have a setup and Trigger before the cycle high (4 of 13 cycles), which are likely to lose money. A glance at each of these cycles in the table shows that the second entry, made at the cycle high, is not likely to make money either, even though it does identify the cycle high. This would indicate that the uptrend is likely to continue.

- Cycle highs made 17 weeks or less from the PC low have the potential for big downmoves in price and time; but highs made 20 or more weeks from the low are likely to have a small downmove to the PC low and be followed by a continuation of the uptrend.

- Following a price high, if the detrend oscillator has not dropped below the Crossover by the 3rd or 4th week, the uptrend should continue and the earlier high be exceeded.

- Lower prices more than 4 weeks after the Trigger entry are likely to be followed by a downtrend into at least the 12th week following entry.

- If the PC high occurs below the previous PC high, expect a big downmove in both price and time.

More can be learned from additional research.

Chapter Ten

RELATIVE STRENGTH INDEX (RSI)

The Relative strength Index (RSI) can be an excellent indicator of cycle highs and lows. When properly 'tuned' to an individual market, it consistently establishes parameters which will keep you out of a market until a high probability top or bottom is ready to form. But, as with other oscillators, it takes 'trial and error' research to adapt the RSI to the individual markets.

The RSI fluctuates between an upper Sell Line that is normally 70, and a lower Buy Line that is normally 30. Some adjustments you might try in adapting it to the individual markets are –

1) Use different time periods to calculate the RSI
2) Adjust the Buy/Sell Lines
3) Smooth the oscillator

One disadvantage of the RSI is that it tends to have sizable wiggles within it as prices move from cycle low to cycle high, and high to low. These wiggles also tend to occur at the actual cycle tops and bottoms. Unless the oscillator is smoothed, these wiggles eliminate the use of Trigger entries following turns in the oscillator or Crossovers.

CHART RSI-I ••• shows a daily T-Bond chart in the top panel with the highs and lows of the 4-Week Trading Cycle indicated by the dots above and below prices.

Panel B is a 3-term RSI with a Sell Line at 70 and a Buy Line at 30. A brief visual inspection shows that far too many wiggles occur above and below the Buy and Sell Lines for this RSI to be very useful. However, the result of smoothing the RSI with a 3-term moving average, shown in Panel C, turns this particular oscillator into a reasonably good indicator of highs and lows of the Trading Cycle. Declines below the Buy Line at 30 indicate that a cycle low is about to occur. Rises above the Sell Line at 75 indicate that a cycle high can form, although it could occur somewhat later than the oscillator high.

Running the RSI on Fibonacci time periods of 3, 5, 8, 13 and 21 will show the potential for identifying specific cycle highs and lows.

The shorter time periods of 3 and 5 will generally help indicate the highs and lows of the Trading Cycle, and the longer time periods will help identify the highs and lows of the primary Cycle.

Daily T-Bonds
with CCI and Smoothed RSI

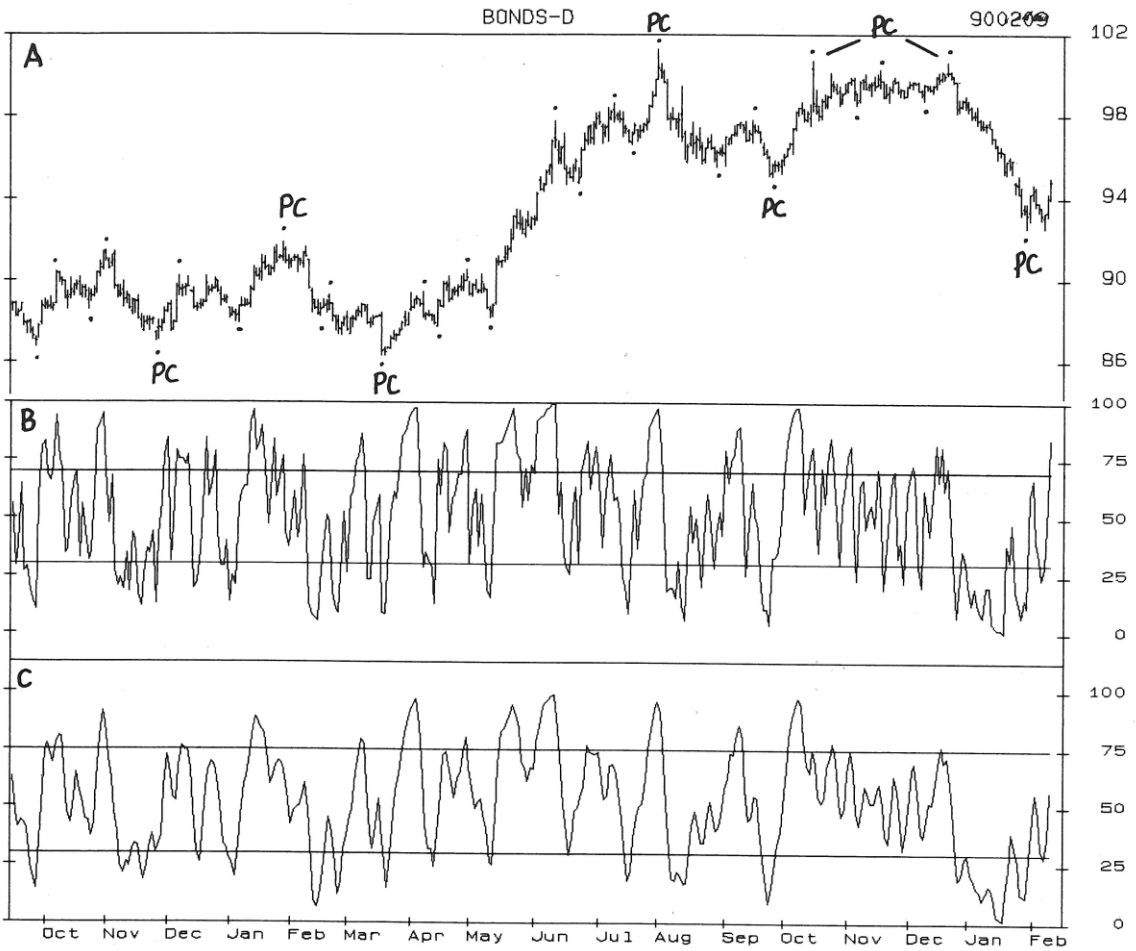


Chart RSI-1

In *CHART RSI-2 ••• the* smoothed 3-term RSI is in Panel B, an 11-term RSI is in Panel C, and a 21-term RSI is in Panel D. The vertical lines below the Trading Cycle bottoms show that the smoothed 3-term RSI appears to be a good indicator of the Trading Cycle lows when it drops below the Buy Line at 30 and turns up.

Daily T-Bonds
with Trading cycle Bottoms

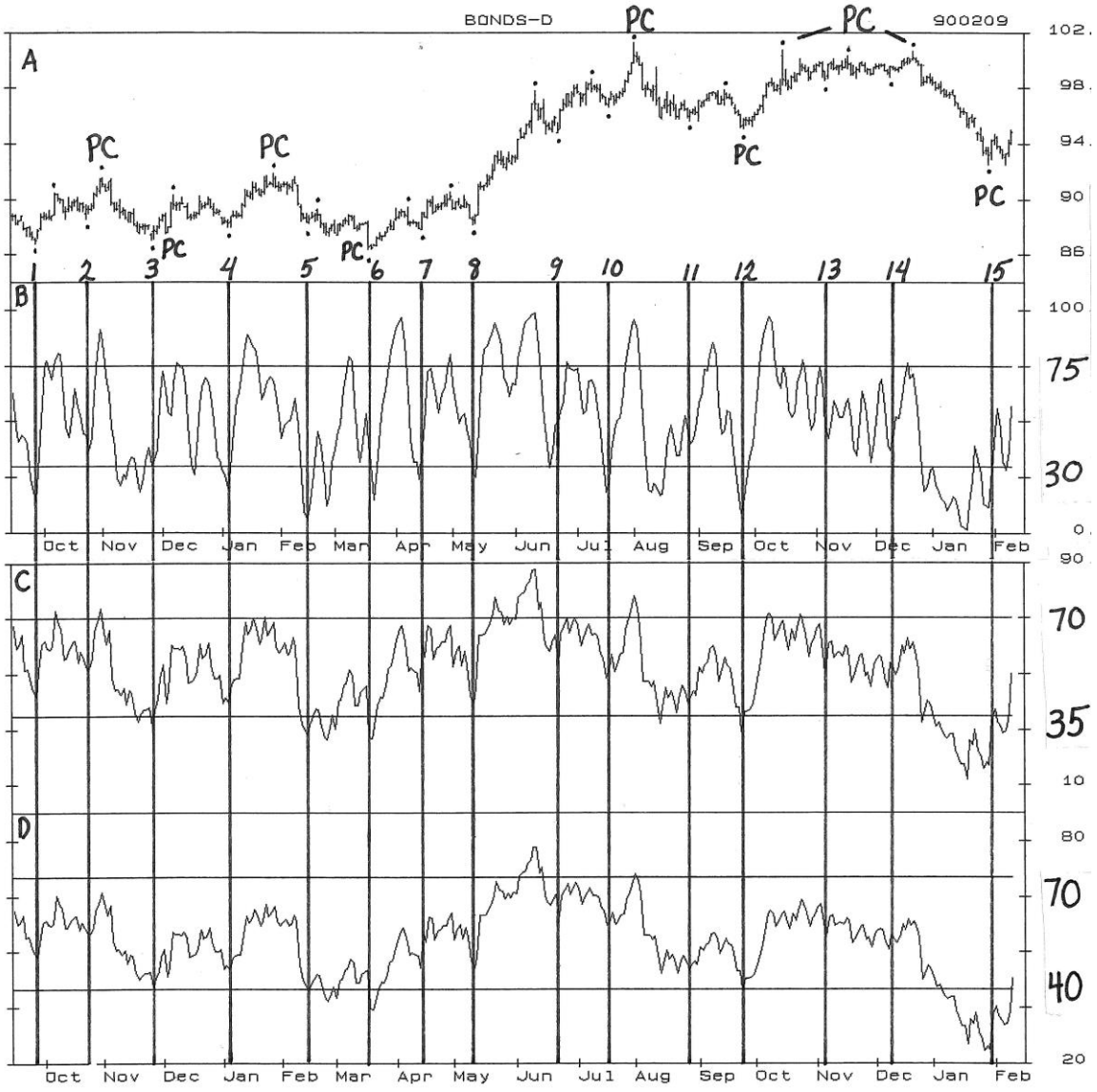


Chart RSI-2

The following guidelines will help identify the Trading Cycle bottom and determine the Setup and Trigger entry –

- The time from low-to-low should be within the trough-to-crest Timing Band of 15 to 30 market days. In bull markets expect a decline from the Trading Cycle high to be 3 to 11 days, and in a bear market look for a decline of 11 to 17 days, but if no low has been identified by day 17, extreme left translation may be taking place and the oscillator pattern can be used. Extended declines into a Primary Cycle bottom are not uncommon.

- The oscillator low must follow a Trading Cycle high that was ideally made with a rise above the Sell Line at 75; but if the earlier Trading Cycle highs and lows have been 'lost' or hard to identify! Use other oscillators to help determine whether or not to buy the Trigger entry that develops.

- The oscillator must drop below the Buy Line at 30, either as the price low is being made, or before the low, and turn up.

- When the above conditions are met the Trigger entry is a rise above the price high of the upturn day. Table RSI-2 shows the preliminary research table to quantify this potential Oscillator/Cycle Combination.

Research Table for Trading Cycle Bottoms					
A No. High	B PC	C First	D Second	E Profit	F T-C Bull
13	UP	N	-	-	-
2	UP	N	-	-	-
14	UP	N	-	-	-
4	UP	1	-	1	2
7	UP	1	-	1	-
1	UP	1	-	1	2
8	UP	2	-	2	3
9	UP	2	-	2	-
10	UP	3	-	3	-
11	DN	0	0	0	-
5	DN	0	-	0	-
3	BTM	0	1	0	-
15	BTM	0	0	0	-
6	BTM	2	-	2	-
12	BTM	3	-	3	-

Table RSI-2

COLUMN A is the number of the Trading Cycle low for 15 cycles.

COLUMN B is the direction of the primary Cycle as the Trading Cycle low was made. The table is sorted by Primary Cycle direction. With 13 of 15 Trading Cycles occurring at a Primary Cycle bottom or in the up-phase of the PC, the time period under study is obviously a bull market and the results should be interpreted accordingly. More research is needed in bear markets to balance this picture.

Profitability was determined by a visual inspection of the rise to the Trading Cycle high, assuming that the long position would be closed out with a Setup of a rise above the Sell Line followed by a downturn and a trigger entry of a drop below the price low of the downturn week. The profitability of a trade is indicted by –

- 0 being a loss
- 1 being a small profit
- 2 being an intermediate profit, and
- 3 being a Big profit
- N indicates that there was no entry.

These classifications will vary according to the market, and are only guidelines to determine if the Oscillator/Cycle Combination can be used regularly, or improved.

- In all 3 Trading Cycle lows with an N the oscillator failed to drop below the Buy line, so there was no Setup.
- The remaining cycle lows in the up-phase of the cycle were all profitable, and none had a second entry.
- The 2 Trading Cycle lows in the down-phase of the Primary cycle both lost money.
- Of the 4 Trading Cycle lows that occurred at the primary Cycle bottoms, only 2 were profitable.

COLUMN D shows the second entries that occurred when the oscillator wiggled. All 3 second entries occurred as the Primary Cycle was moving down, and 2 of these were at PC bottoms.

- A total of 15 trades would have been made, with 8 being profitable for a profitability ratio of 53%.
- Of the 8 profitable trades 5 had intermediate to big profits.

COLUMN E indicates the profitability of buying the Trading Cycle low, whether it took one or two entries to establish a long position. Eight of 12, or 67%, were profitable, and of the 8 profitable trades 5 had intermediate to big profits.
The profitability ratios of C and E are too low, and COLUMN F is an attempt to increase the size of the profits by holding the position into the bull part of the Trough-to-Crest Timing Band. The Timing Band is 5 to 16, with an average of 11 days, so the bull market part of the band is from the median to the end of the band, or 11 to 16 days. This tactic

did increase the size of the profits, resulting in 7 of the 8 profitable trades having intermediate to big profits.

If the primary Cycle low can be identified with reasonable accuracy the multiple contracts explained in Chapter Fourteen, "Trading and Money Management" will greatly increase the profitability of this Oscillator/Cycle Combination. The 2 longer-term RSI charts are helpful in determining the primary Cycle tops and bottoms.
Panel C Shows an 11-Day RSI. Every Primary Cycle high reached or exceeded the Sell Line at 70, and a guideline for identification of a PC top is that this RSI should reach or exceed the Sell Line before or at the primary Cycle high.

All 4 primary Cycle bottoms occur with this RSI dropping below the Buy Line at 30, although it was not unusual for the Buy Line to be penetrated a month or more before the Primary Cycle low was made.

Panel D shows a 21-Day RSI with the Buy Line raised to 40. Every primary Cycle bottom occurred with this RSI very near to, or below, the Buy Line.

Guidelines to identify the Primary Cycle bottoms are –

- Prices must be within the Primary Cycle Timing Bands of 12-28 weeks from the previous primary Cycle bottom.

- The 11-Day RSI must be below the Buy Line, and the 21-day RSI must be below, or very close to, the Buy line.

The smoothed 3-Day RSI must have dropped below the Buy Line, turned up and generated a Trigger entry for a Trading Cycle low by exceeding the high of the upturn day.

The high of the upturn week of the 3-Day RSI should be exceeded.

Other oscillators should also indicate, or confirm, a Trading Cycle and/or Primary Cycle bottom.

CHART RSI-3 ••• is the same as Chart RSI-2, except that the vertical lines are drawn below the Trading Cycle high as for the Trading Cycle lows.

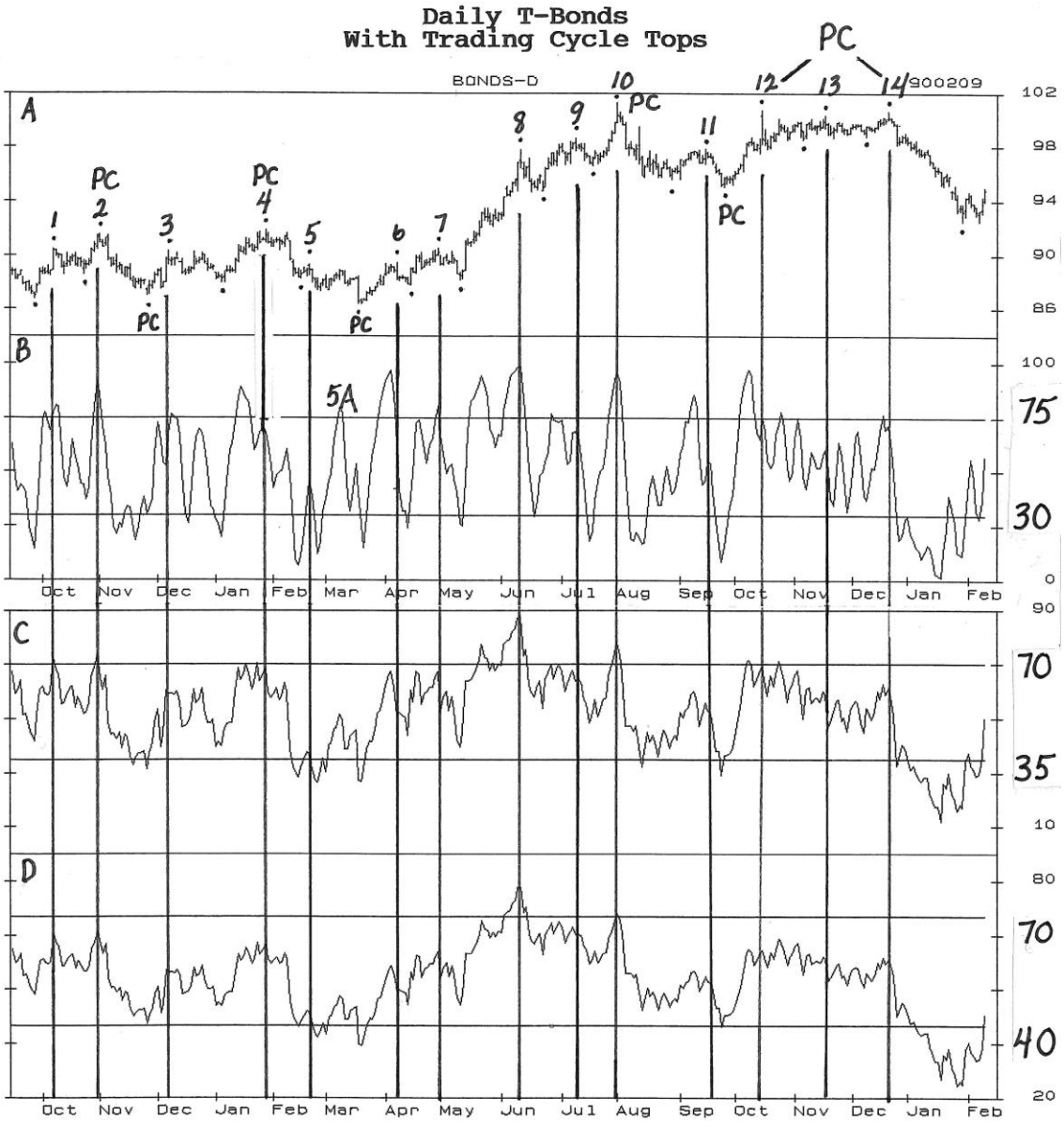


Chart RSI-3

Utilizing the smoothed 3-day RSI in Panel B, several guidelines must be established for the setup to identify a Trading Cycle high and to also generate a short position.

- The time from low-to-high should be within the trough-to-crest Timing Band of 5 to 16 market days, which has an average of 11 days. In bull markets expect a rise of 11 to 16 days, but if no high has been identified by Day 16, extreme right translation may be taking place and the oscillator pattern can be used as in #8. This produced only a small profit but identification of the Trading Cycle high would have prepared you for the excellent buy at the Trading Cycle 10-1 that followed.

In bear markets expect a rise of 5 to 11 days. Do not sell an oscillator downturn if the price high is less than 5 days from the Trading Cycle low. For one early top that makes money you will have several losses from false signals.

- The oscillator high must follow a Trading Cycle low that was ideally made with a drop below the Buy Line at 30; but a drop below 50 in a strong market is also allowed for this Setup.

- The oscillator high must have risen above the Sell Line at 70 either as the high is being made or shortly before the high, but in the same Trading cycle.

- When the above conditions are met the Trigger entry is a drop below the price low of the downturn day of the oscillator high above the Sell Line or a second oscillator downturn. Table RSI-3 shows the preliminary research to quantify this potential Oscillator/Cycle Combination.

Research Table for Trading Cycle Tops				
A	B	C	D	
No. High	PC	First	Second	PROFIT
13	UP	N	-	-
1	UP	N	1	1
8	UP	O	1	0
12	UP	0	1	0
9	UP	N	1	1
6	UP	1	-	1
7	UP	1	-	1
3	UP	2	-	2
2	TOP	3	-	3
14	TOP	3	-	3
4	TOP	0	3	3
10	TOP	3	-	3
5	DN	N	-	-
11	DN	0	2	2
5A	DN	2	-	2

Table RSI-3

COLUMN A is the number of the Trading Cycle high. There are 14 Trading Cycle highs. 5A was not a Trading Cycle high but has been included because the oscillator Setup was met and the high did not exceed the earlier high made 3 days after the Trading Cycle low.

COLUMN B shows the direction of the Primary cycle. In most instances the highest price high should be classified as the Primary cycle high, but attention must always be given to how the situation would look during the heat of the market, so Highs 12 and 14 are considered as 2 highs of a double top. Therefore, 12, 13 and 14 have been classified as in the up-phase of the Primary Cycle. In real-time trading, the identification of the Trading Cycle highs and lows at 13 and 14 would have been 'guesstimates,' and the high at 14 would have been sold on the oscillator pattern.

With most of the entries in the up-phase of the Primary cycle, more research is needed for bear market entries.

Six of the Trading Cycle highs were made at a second oscillator high that was either a higher oscillator high as in 1 and 8, or were lower oscillator 'bumps' that followed the oscillator rise above the Sell Line. These had 2 Setups at each Trading Cycle high.

COLUMN C lists the results of the first Setup of the 6 Trading Cycles with 2 oscillator highs and those with only a single high following a rise above the Sell Line. The Trigger entry was a drop below the price low of the day of the downturn of the oscillator. Those with an N did not have an entry either because the price high was less than 5 days from the Trading Cycle low, or because prices continued up and did not drop below the low of the downturn day.

If the market was entered, the protective buy stop was the highest high of the Trading Cycle preceding entry. Profitability was determined by a visual inspection of the decline from entry to the Trading Cycle low with—

- 0 being a loss
- 1 being a small profit
- 2 being an intermediate profit, and
- 3 being a big profit

Seven of the 11 patterns that entered were profitable, yielding a profit ratio of 60%.

COLUMN D lists the results of the second entry for the 6 with a second oscillator high or 'bump'. Five of 6 were profitable for a profit ratio of 80% indicating that the second Setup and entry should generally be taken.

Notice that the big profits indicated by a 3 in both C and D all came from selling the top of the Primary Cycle, indicating that special effort should be placed in selling the Primary Cycle high. More contracts could be committed with a high probability identification of the primary Cycle top.

COLUMN E shows the profitability of selling a Trading Cycle high regardless of whether it required 1 or 2 entries. Eleven of 13 were profitable for a profit ratio of 85%, with 7 of the 11 having profits that were medium to big.

Combining these entries with those of the CCI should produce trades with a high probability of success.

This study was done over a relatively short period of time, and conditions will change in the future. Researching the past 10+ years and cataloging bull and bear markets will prepare you for many of the changes and questionable situations that will occur in real-time trading. The conditions for this Oscillator/Cycle Combination will have to be adjusted for different market conditions.

Chapter Eleven

COMMODITY CHANNEL INDEX (CCI)

The Commodity Channel Index was first published in *FUTURES* magazine in 1980, and is in most analytical packages available today.

The oscillator, which can be calculated for short and long-term periods, moves between a Sell Line of 100 and a Buy Line of -100. It can be a powerful tool for identifying highs and lows by itself, but its performance is greatly improved with various combinations of smoothing, crossovers, Buy/Sell Lines and Setup/Trigger entries.

The following examples show several different ways to use the CCI, and several research tables to evaluate its effectiveness.

THE CCI AND THE 4-YEAR CYCLE IN THE S&P INDEX

CHART CCI-1 C ••• the 4-Year Cycle in the S&P Index is a powerful and dominant cycle. Monthly Chart CCI-1 on Page 11-2 shows 40 years of the cash S&P Index from January 1950 through January 1990. The highs and lows of the 4-Year Cycle are indicated by the dots above and below prices. A 30-Month CCI with an 8-Month Crossover is in middle Panel A, and a Detrend of the CCI and the Crossover is in bottom Panel B.

A glance at the CCI in Panel A shows that every 4-Year Cycle high exceeded the Sell Line at 100. Every 4-Year Cycle bottom dropped below zero, and 6 of the 9 cycle bottoms occurred below the Buy L1ne at -100. This allows a few general expectations to be established –

- Following a 4-Year Cycle bottom, expect the 4-Year Cycle top to occur only after the CCI has exceeded the Sell Line. Unfortunately, the oscillator can spend some time above the Sell Line and does not clearly indicate when the high occurs. However, following a cycle bottom there is a period of ‘free time’ until the oscillator exceeds the Buy Line. During this time period, market declines and Primary Cycle lows can be aggressively bought with a high probability that prices will continue to rise over the longer term until the Buy Line is exceeded by the CCI.

CHART CCI-l
MONTHLY CASH S&P INDEX SHOWING 4-YEAR CYCLES
WITH 30-MONTH CCI AND 8-MONTH CROSSOVER (A) WITH DETREND (B)

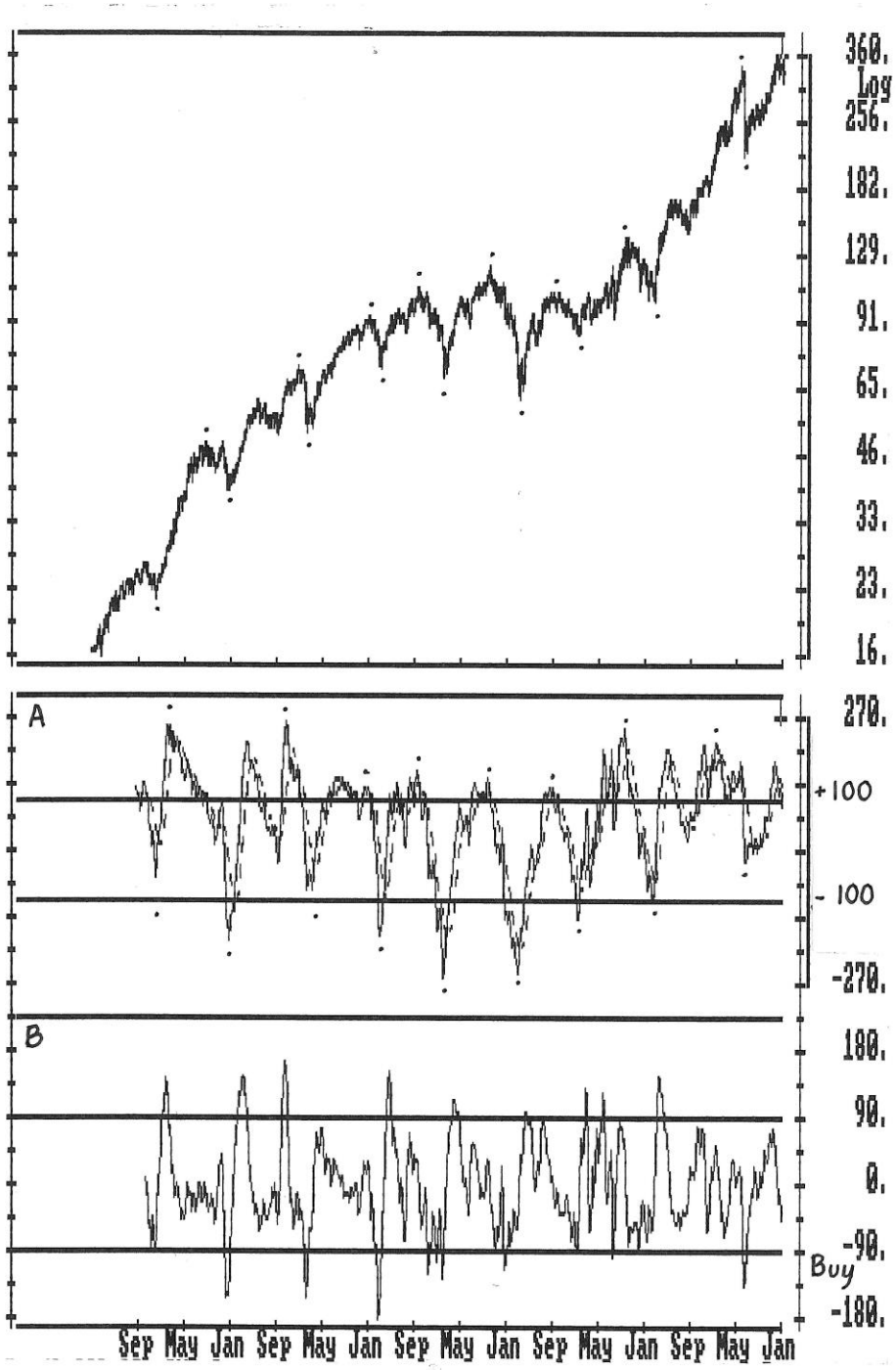


Chart CCI-1

- Following the high of the 4-Year Cycle, expect the CCI to drop below zero, with a 67% probability of a decline below the Buy Line at -100. This gives a time period of 'free time' until the CCI drops below zero.

- Every 4-Year Cycle high was followed by a decline in the Detrend below the Buy Line at -90.

The combination of –

- the timing of the low, plus
- the level of the Detrend low, plus
- the level of the CCI low, plus
- the completion of the CCI crossover, plus
- the Trigger entry of exceeding the high of the month of the Crossover forms an Oscillator/Cycle Combination that is a stellar indicator of 4-Year Cycle bottoms.

The Detrend shows that every 4-Year Cycle low had a decline below the Buy Line at -90. Of the 9 cycle lows, 6 made the downside penetration of the -90 level as, or after, the cycle bottomed; 3 penetrated the -90 level and turned up before the cycle bottomed. The important factor here is that *every* 4-Year cycle bottom saw the Detrend drop below the Buy Line, either before, at, or after the price low. A second look at the CCI shows that *every* cycle bottom was followed by a rise above the Crossover.

The minimum length of the cycle since 1917 has been 32 months, with 15 of the 17 cycles (nearly 90%) bottoming 43 months or more from the previous bottom. So, the guideline for time is that the oscillator pattern should coincide with a price low 32 or more months from the previous cycle bottom, and will most likely be 43 or more months.

The Oscillator/Cycle Combination that confirmed the bottom of every 4-Year Cycle since 1950 has 5 requirements that must be met:

1) The price low must be 32 or more months from the previous 4-Year Cycle bottom.

2) The Detrend must drop below the Buy Line at -90 and turn up.

3) The CCI must drop below zero. A drop below the Buy Line at -100, which occurred at 6 of the 9 bottoms, would be comforting but is not necessary.

4) The CCI must then rise above the Crossover.

5) Following the requirements of 1 through 4 being met, the Trigger entry of prices exceeding the high of the Crossover month confirmed every 4-Year cycle bottom. It is the safest entry, but not always the one with the lowest dollar risk.

CHARTS CCI-2, CCI-3, CCI-4 ••• An historical review of these charts, which begin on Page 11-6, shows this Oscillator/Cycle Combination to be an early and powerful confirmation of the bottoms of the 4-Year Cycle. Each chart has overlapping time periods that allows a single chart to be constructed. In the top panel the 4-Year Cycle lows are indicated by the dates and vertical lines. Panel A is the 30-Month CCI with the 8-Term crossover, which is the darker line. The Detrend of the CCI and the Crossover is in Panel B.

Follow the development of these patterns as each of the 4-Year Cycle lows since 1953 is evaluated relative to the 5 requirements outlined above.

9/53 Low

1) The 9/52 low was 51 months from the previous 4-Year Cycle bottom.

2) The Detrend low of -91 was made in September with an upturn in October, below the Buy line (-90).

3) The CCI dropped below zero and turned up in October.

4) The CCI exceeded the Crossover in November, only two months after the low.

5) Prices exceeded the November high in December to complete the Trigger entry and confirm the 4-Year Cycle bottom.

The 4-Year Cycle low would have been confirmed and long-term positions could have been safely established as the November high was exceeded. A higher risk position could have been established on the November close as the CCI exceeded the Crossover.

10/57 Low

1) The 10/57 low was 49 months from the previous 4-Year Cycle bottom.

2) The Detrend turned up in November at a level well below the Buy Line (-90).

3) The CCI turned up in November at a level well below the Buy line at -100.

4) The CCI exceeded the Crossover in March.

5) The high of March was exceeded in April to complete the Trigger entry and confirm the bottom of the 4-Year Cycle.

The 4-Year Cycle low was confirmed in April as the March high was exceeded. Long-term positions could have been established in April, or higher risk positions could

have been established on the March close. The upturns of the CCI and Detrend in November indicated a possible bottom, as both oscillators were well below their respective Buy Lines, and minimal positions could have been established; but waiting for the Crossover high to be exceeded was the high probability signal. Weekly and daily oscillators may be used to establish positions before confirmation based on their own Oscillator/Cycle combinations.

6/62 Low

1) The 6/62 low was 56 months from the previous 4-Year Cycle bottom.

2) The Detrend turned up in July below the Buy Line (-90).

3) The CCI dropped below zero and turned up in July.

4) The CCI exceeded the Crossover in November, following the October double bottom.

5) The November highs were exceeded in December to complete the Trigger entry and confirm the bottom of the 4-Year cycle.

Earlier positions could have been established —

- As the June high was exceeded in August. Both the CCI and Detrend turned up in July within the time period for the cycle low. Since July was an inside month, the June high was a safer entry than the July high.

- As the August high (the fulcrum point for the double bottom) was exceeded in November. This would have been a relatively low risk trade given the time period from the previous 4-Year low and the double bottom formation.

- At the month-end close for November as the CCI exceeded the crossover. However, the safest approach would have been to wait for confirmation of the bottom, which was not completed until the November highs (the month of the crossover) were exceeded in December.

CHART CCI-2
MONTHLY CASH S&P INDEX SHOWING 4-YEAR CYCLE LOWSWITH A 30-MONTH CCI AND 8-MONTH CROSSOVER, WITH A DETREND

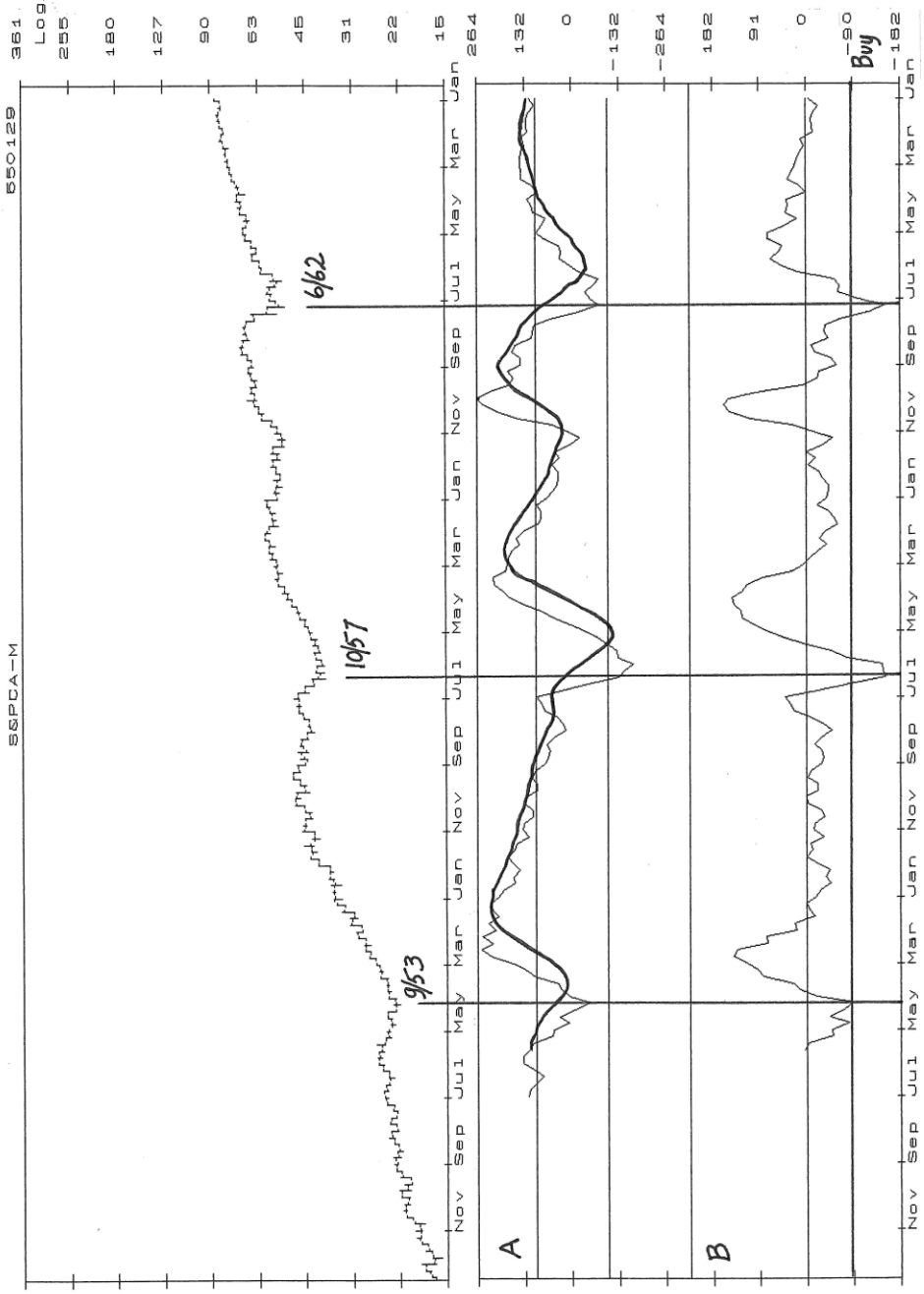


CHART CCI-3
MONTHLY CASH S&P INDEX SHOWING 4-YEAR CYCLE LOWS WITH A 30-MONTH CCI AND 8-MONTH CROSSOVER, WITH A DETREND

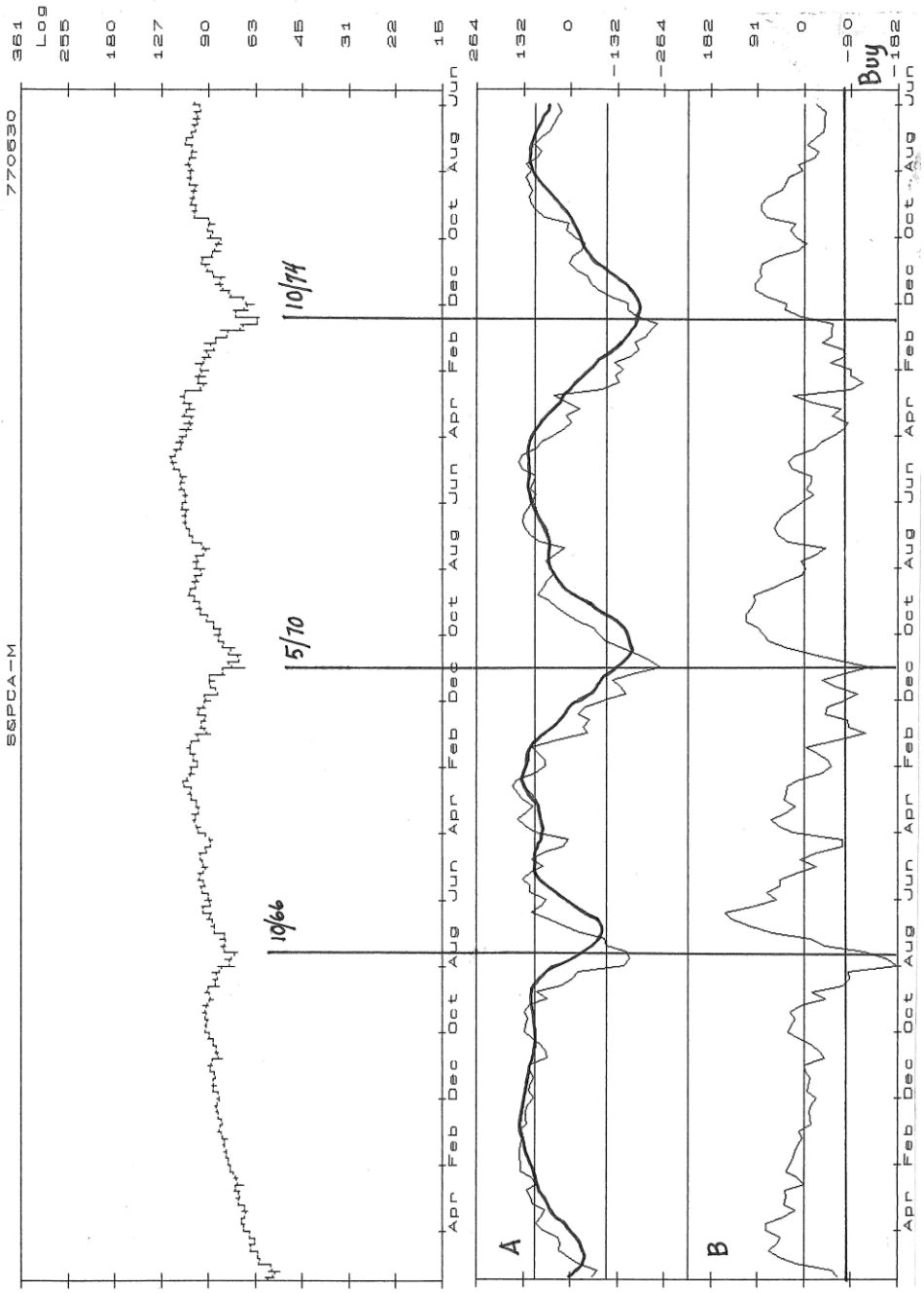
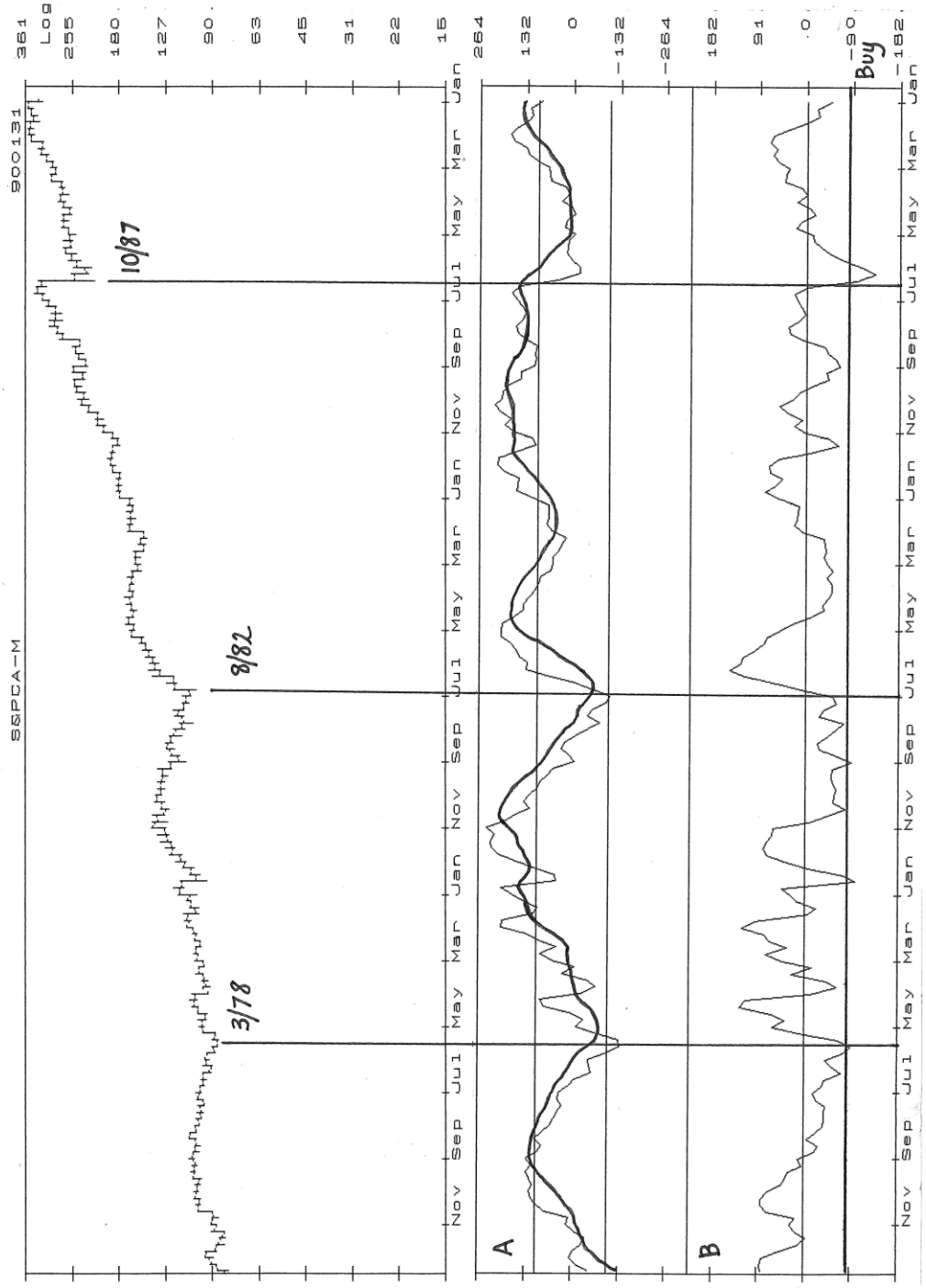


CHART CCI-4
MONTHLY CASH S&P INDEX SHOWING 4-YEAR CYCLE LOWS
WITH A 30-MONTH CCI AND 8-MONTH CROSSOVER, WITH A DETREND



10/66 Low

1) The 10/66 low was 52 months from the previous 4-Year Cycle low.

2) The Detrend turned up in October well below the buy Line (-90).

3) The CCI turned up in October well below the buy Line (-100).

4) The CCI exceeded the Crossover in January 1967.

5) The January highs were exceeded in February to complete the Trigger entry and confirm the bottom of the 4-Year Cycle.

The 4-Year cycle low was confirmed in February, and long-term positions could have been established as the January highs were exceeded. Based on the time from the previous cycle low of 52 months, and the upturns in both the CCI and Detrend below their respective Buy Lines, long positions could have been established as the high of October, which was an outside up month, was exceeded in November. The entry price would have been much lower than the January high, but the risk of loss was greater.

5/70 Low

1) The 5/70 low was 43 months from the previous 4-Year Cycle low.

2) The Detrend turned up in June at -126, well below the Buy Line (-90).

3) The CCI turned up in June at -251, well below the Buy Line.

4) The CCI exceeded the Crossover in August.

5) The high of August, the Crossover month, was exceeded in September to complete the Trigger entry and confirm the 4-Year low.

Although both the CCI and Detrend turned up in June, an inside month often indicates a market searching for direction, as in February and March 1970 which were followed by lower prices. An inside month also occurred just before the 1966 low. Exceeding the May highs in August would have been the earliest possible buy on a monthly chart, and while it would have worked, the safe approach is to wait for the high probability confirmation of exceeding the high of Crossover week.

10/74 Low

1) The 10/74 low was 53 months from the previous 4-Year Cycle low.

2) The Detrend bottomed in December -114, well below the Buy Line at -90.

3) The CCI turned up in October at -242, well below the Buy Line at -100.

4) The CCI exceeded the Crossover in October.

5) The October high was exceeded in November to complete the Trigger entry and confirm the bottom of the 4-Year Cycle. This cycle bottom also offered a buying opportunity on the October close because October was an outside up month, and on the close —

- The CCI exceeded the crossover, and
- Both the CCI and Detrend turned up.

A low risk buy could also have been made as the December high was exceeded in January. Completion of an Oscillator/Cycle Combination followed by a test of the lows does not occur often; but when it does occur the market should be bought against the earlier lows.

3/78 Low

1) The 3/78 low was 41 months form the previous 4-Year Cycle low.

2) The Detrend turned up at -90.44, below the Buy Line at -.90.

3) The CCI turned up at -135, below the Buy Line of -100.

4) The CCI exceeded the Crossover in April.

5) The April high was exceeded in May to complete the Trigger entry and confirm the bottom of the 4-Year Cycle.

At 41 months from the previous low, this would have been the shortest cycle seen in this time period, but it was still longer than the 32-month minimum seen since 1917.

8/82 Low

1) The 8/82 low was 53 months from the previous 4-Year Cycle low.

2) The Detrend bottomed in September 1981 at -91.22, below the Buy Line of -90.

3) The CCI turned up in August at -103, below the Buy Line of -100.

4) The CCI exceeded the Crossover in August.

5) The August high was exceeded in September to complete the Trigger entry and confirm the bottom of the 4-Year Cycle.

Both the August close and the August high offered a buying opportunity, as the CCI exceeded the Crossover on the August close in an outside up month. You can see the safety of waiting for the CCI to exceed the Crossover, as the March 1982 low looked like a probable low. It was 48 months from the previous cycle bottom, the Detrend had dropped below the Buy Line of -90, and both the CCI and Detrend turned up in April, with the April high being exceeded in May. As tempting as it looked (and it looked good at the time), it would have cost you money.

10/87 Low

1) The 10/87 low was 50 months from the previous 4-Year Cycle bottom.

2) The Detrend turned up in December at a -137, well below the Buy Line of -90.

3) The CCI turned up in December well below zero, but not below the Buy Line.

4) The CCI exceeded the Crossover in June 1988.

5) The June high was exceeded in October 1988, to complete the Trigger entry and confirm the bottom of the 4-Year Cycle.

The confirmation of this cycle low was a hard one to trust. Not only did the cycle stretch to the second longest cycle of the past 70 years, but the high of Crossover month was not exceeded until 12 months after the low, following a month in which the CCI dropped back below the Crossover. Although the Detrend did drop below the Buy Line, it was the only cycle in which it did so after the cycle had bottomed. Other oscillators would have been helpful to support the confirmation of this bottom, although it did prove to be accurate.

The Oscillator/Cycle Combination of:

1) The price low occurring 32 or more months from the previous 4-Year Cycle bottom.

2) A bottom in the Detrend below the Buy Line at -.90.

3) A bottom in the CCI below zero and ideally below the Buy Line at -100.

4) The CCI exceeding the Crossover.

5) The Trigger entry of exceeding the price high of the Crossover month confirmed the bottom of every 4-Year Cycle low since 1953.

This Oscillator/Cycle Combination can be expected to confirm the bottom of the cycle due in 1991. In every cycle but 1987 the bottom was confirmed within months of

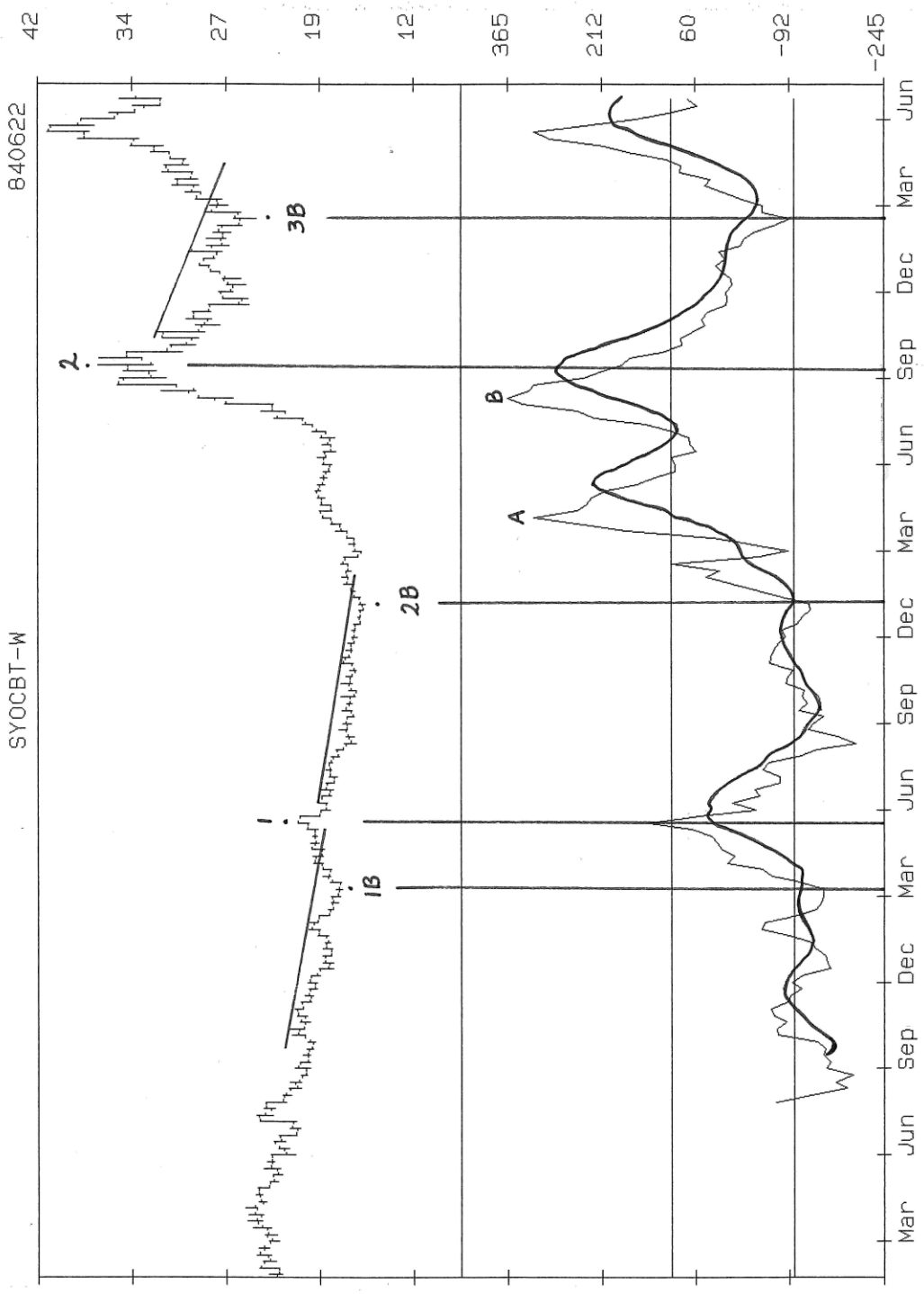
the low, and barring a 1987 type crash, the 1991 bottom is also likely to be confirmed within months of the low.

SEASONAL LOW ANALYSIS IN SOYBEAN OIL

CHARTS CCI-5, CCI-6, and CCI-7 ••• on Pages 11-13, 11-14, and 11-15 show soybean oil weekly prices from 810102 through 890202. Copies of these charts can be joined to produce a single continuous chart. The Seasonal highs and lows are indicated by numbers. The lower panel is a 30-week CCI with an 8-Term Crossover, which is the darker line. The vertical lines indicate the weeks of the Seasonal highs and lows.

All Seasonal lows occurred near, or below, the Buy Line; but not all lows below the Buy Line are Seasonal lows. In most cases in soybean oil, the Seasonal price low occurs as the CCI turns up, indicating that this oscillator might identify a Seasonal low and perhaps offer a low risk 'bottom picking' trade.

CHART CCI-5
WEEKLY SOYBEAN OIL SHOWING PRIMARY CYCLE HIGHS AND LOWS
WITH A 30-WEEK CCI AND AN 8-WEEK CROSSOVER



WEEKLY SOYBEAN OIL SHOWING PRIMARY CYCLE HIGHS AND LOWS
WITH A 30-WEEK CCI AND AN 8-WEEK CROSSOVER

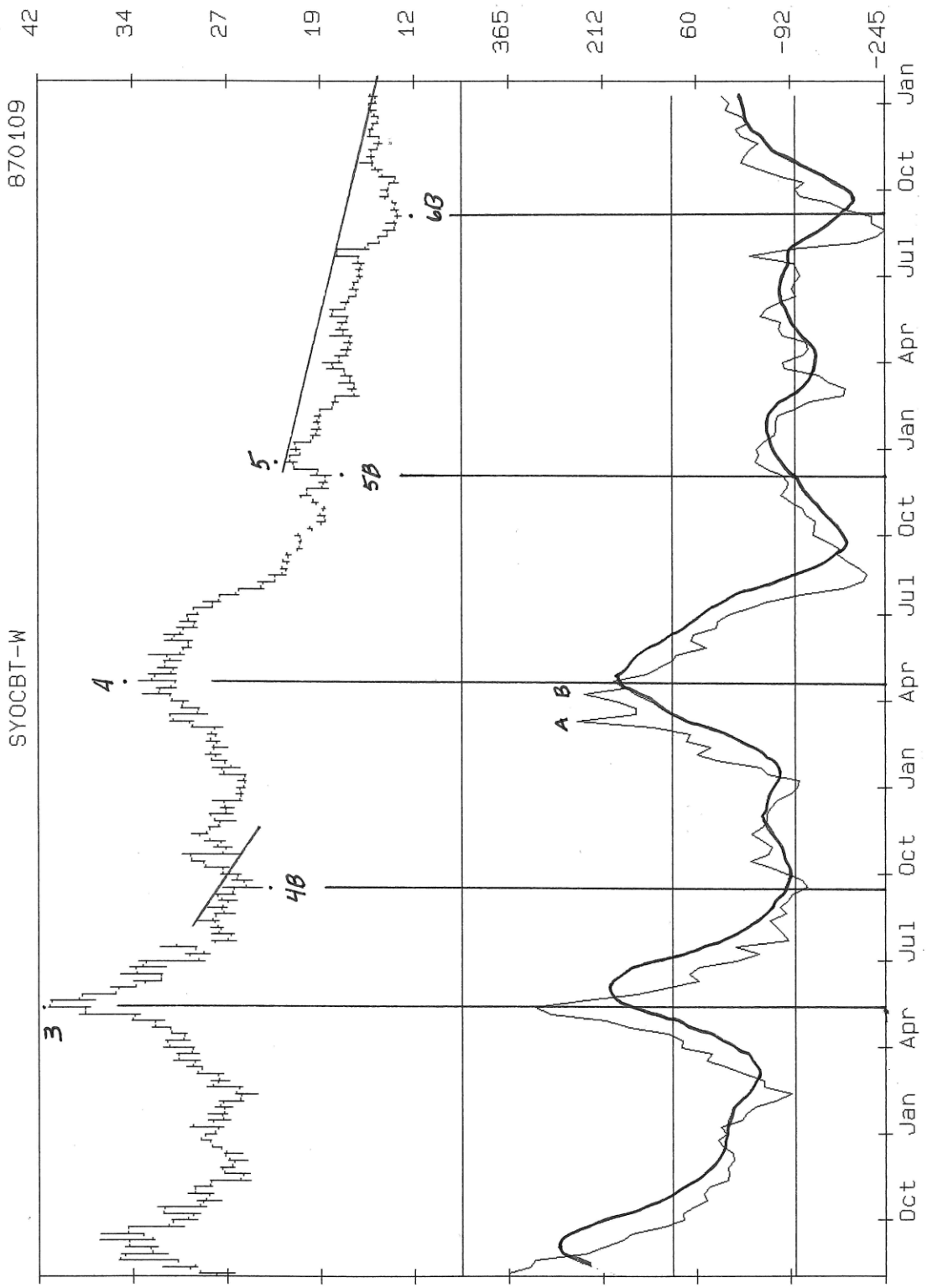
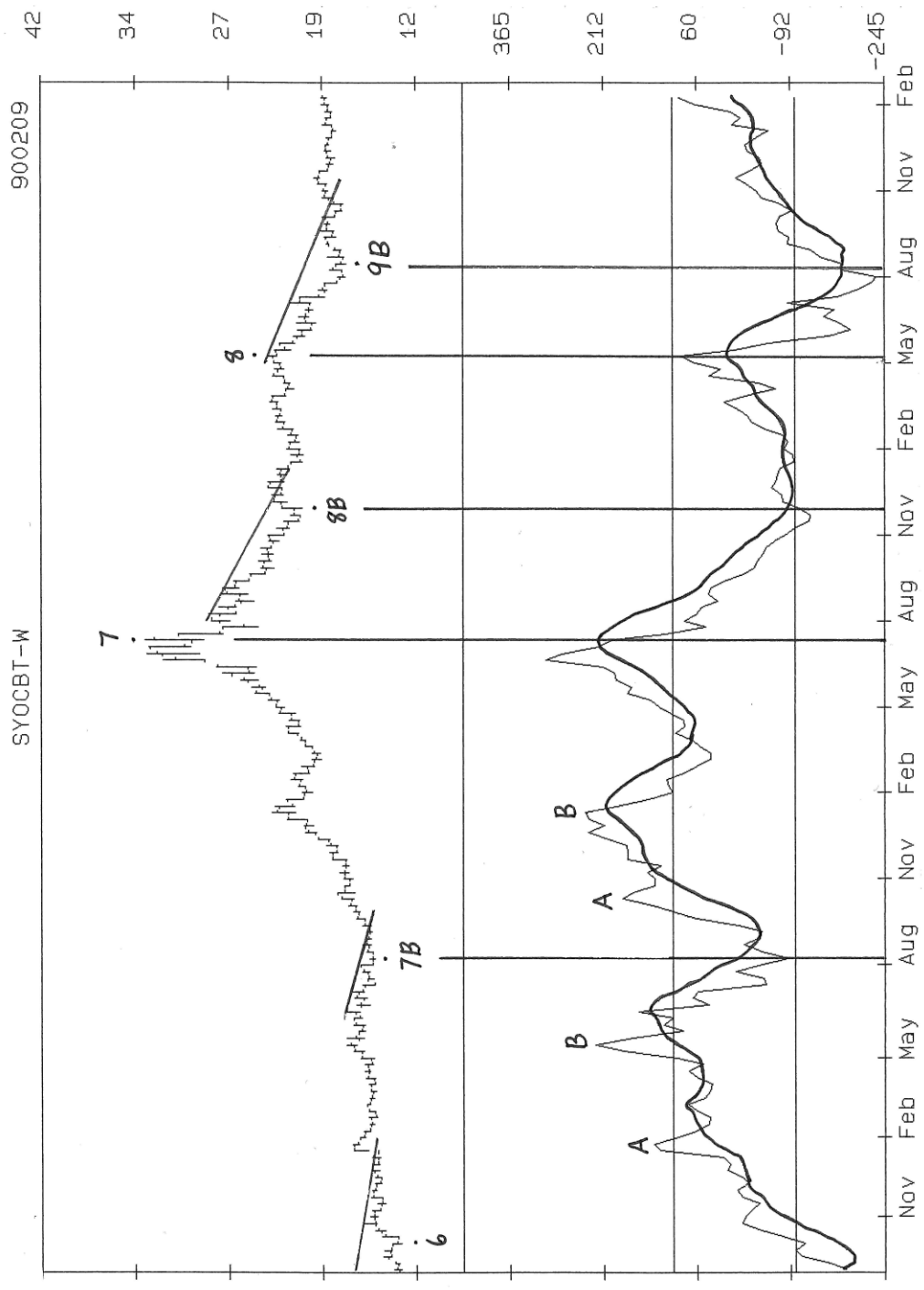


CHART CCI-7
WEEKLY SOYBEAN OIL SHOWING PRIMARY CYCLE HIGHS AND LOWS
WITH A 30-WEEK CCI AND AN 8-WEEK CROSSOVER



The table below shows the results of basic research to establish guidelines for the identification and trading of future lows. (A longer sample size of 20-30 years should be researched before trading the pattern.)

1	2	3	4	5	6	7	8	9	10
1B	3/82	-148	0	+1	+1	XWK	DIV	YES	NO
2B	1/83	-125	-1	+1	+1	XWK	DIV	YES	YES
3B	2/84	-92	0	+2	+1	XWK	-	YES	YES
4B	9/84	-119	0	+2	+1	XWK	-	YES	YES
5B	12/85	-	-	-	-	-	-	-	-
6B	9/86	-247	-2	+2	+1	XWK	-	YES	YES
7B	8/87	-88	0	+2	+3	XWK	-	YES	YES
8B	11/88	-123	-1	+1	+1	XWK	DIV	YES	NO
9B	8/89	-176	-2	0	+1	XWK	-	YES	-

COLUMN 1 is the number assigned to each Seasonal low.

COLUMN 2 is the date of each Seasonal low. Seasonal lows in soybean oil normally occur January through April, or August through November. Every low but 12/85 bottomed in the Seasonal low time periods, within which a minimum 70% of all Seasonal lows have occurred. The 1985 low would not have fit the pattern of the CCI and is not included in the analysis of the patterns.

GUIDELINE: The Seasonal low and the oscillator low should occur within the Seasonal time periods. Potential lows outside of the time periods would be suspect and require verification from other oscillators.

COLUMN 3 is the oscillator value at the turning point closest to the price low. Of the 8 lows all 8 made the CCI low slightly above the Buy Line or below it. Five of the lows were below the -100 Buy Line, and 3 were no more than 12 points above it.

GUIDELINE: Seasonal lows are most likely to occur with the CCI below the Buy Line, but no more than 25 points above it. Price lows that do not meet this expectation are highly suspect.

COLUMN 4 is the number of weeks the CCI turned up before, or after, the week of the price low. A minus sign (-) denotes the number of weeks before the price low, a zero (0) indicates that both the CCI and prices bottomed the same week, and a plus (+) indicates the number of weeks a CCI low occurred after the price low. None of the years saw the CCI turn up after the price low. Four had the CCI bottom 1-2 weeks before the price low, and all were below the Buy Line. Four saw the CCI bottom the same week of the price low, and interestingly, included both of those above the Buy Line.

GUIDELINE: The CCI should bottom from 2 weeks before the price low to the week of the low, with a tendency for those well below the Buy Line to have an early upturn of the CCI, and those above the Buy Line to turn up the week of the price low.

COLUMN 5 shows the number of weeks from the price low that the CCI exceeded the Crossover. The weeks are counted the same as above. This shows that all 8 years had a Crossover within 0-2 weeks of the price low.

GUIDELINE: Following the week of the Seasonal low the CCI should exceed the Crossover 0-2 week from the low, with a tendency for the Crossover to occur in Weeks 1 or 2.

COLUMN 6 shows the number of weeks from the week of the Crossover until the high of that week was exceeded. In 8 of 8 years the high of Crossover week was exceeded the following week.

GUIDELINE: Following a Crossover that meets the guidelines in Columns 3, 4 and 5, expect the high of Crossover week to be exceeded the week following Crossover.

COLUMN 7 is an attempt to locate a mechanical means of entry, which in this case is to go long when the high of Crossover week 1S exceeded. Another option would be to go long on the close of Crossover week, as 8 of the 8 years exceeded the high of Crossover week the following week.

COLUMN 8 indicates which Seasonal lows occurred with an oscillator/price divergence of lower price and higher oscillator. As a general rule this is a good indicator, and all 3 would have made money by going long when the high of the oscillator upturn week was exceeded. Seasonal Low Number 8 saw a slightly lower price low occur with a divergent oscillator pattern, and the second low could also have been traded as the Seasonal low.

COLUMN 9 answers a question. Following entry, was the nearest overhead trendline exceeded? In all 8 years the answer was YES, the trendline was exceeded, giving a minimum price objective for the upmove. In Seasonal Number 8, a second trendline could have been drawn following the double bottom.

GUIDELINE: Following entry, expect the nearest weekly downtrend line to be exceeded.

COLUMN 10 answers another question. Was the move above the trendline followed by a move of more than 20% from the mechanical entry point, which was the high of the Crossover week? In 5 of the 7 years with trendline penetration, the answer was YES, and the upmove from the 1989 Seasonal low, which, as this book is being written had not yet topped, is likely to make it 6 of 8 years.

GUIDELINE: Try to establish as many long-term positions as possible before, and shortly after, the trendline is penetrated.

The CCI, combined with the Buy Line and the crossover, provides a high probability confirmation of the Seasonal low, as well as a mechanical means of entry. Once a Seasonal low has been confirmed the longer-term trend should be up until the Seasonal cycle tops, which can be for 7 months or more if the long-term cycles are moving up; or a relatively short period of time if the longer-term cycles are moving down.

SEASONAL HIGH ANALYSIS IN SOYBEAN OIL

The CCI can be just as powerful a tool for the identification of the Seasonal highs in soybean oil. The patterns below identified 7 of the 8 Seasonal highs.

1	2	3	4	5	6	7	8	9	101
1	5/82	135	0	+2	+2	HWK	-	YES	YES
2	9/83	365	-5	-2	+4	HWK	DBL	-	-
3	5/84	322	0	+2	+1	XWK	-	YES	YES
4	4/85	255	-6	+1	+1	XWK	DBL	YES	YES
5	12/85	-	-	-	-	-	-	-	-
6	5/87	226	0	+2	+4	HWK	DBL	YES	NO
7	7/88	306	-3	-1	+1	HWK	DBL	YES	YES
8	5/89	87	0	+1	+1	XWK	-	YES	YES

COLUMN 1 is the number assigned to each Seasonal high.

COLUMN 2 is the date of each Seasonal high. Seasonal highs in soybean oil normally occur March through May, or July through November. Every high but 12/85 was with1n the Seasonal high time periods, within which a minimum 70% of all Seasonal highs have occurred, and this cycle is not included in our analysis.

GUIDELINE: The Seasonal high and the oscillator high should occur within the Seasonal time periods. Potential highs outside of the time periods would be suspect and require strong verification from other oscillators.

COLUMN 3 is the oscillator value at the turning point closest to the price high. Of 8 highs, one (12/85) was sloppy and would have been so confusing it is not used in the research. Of the remaining 7 highs, 6 made the CCI high above the Sell Line, and one was within 15 points of it. Five of the highs were above 225, and 4 of these had some type of a double top form in the CCI, as indicated by the numbers A-B at the highs of the CCI in the bottom panel.

GUIDELINE: Seasonal highs are most likely to occur with the CCI above the Sell Line, and above 225. Double top formations occurred in 4 of the 5 above 225 and should be watched for in the future.

COLUMN 4 is the number of weeks the CCI turned down before, or after, the week of the price high. A minus sign (-) denotes the number of weeks before the price high, a zero (0) indicates that both the CCI and prices topped at the same week, and a plus (+) indicates the number of weeks for a CCI high after the price high. None of the years saw the CCI turn down after the price high. Only 3 had the CCI top 3-6 weeks before the price high; all were above 225 and also had a double top in the CCI. Four saw the CCI top the same week of the price high, and only one of these had a double top in the CCI.

GUIDELINE: The CCI should top 3-6 weeks before the price high, or the week of the high. With a double top formation, the second top in the CCI is likely to top 3-6 weeks before the price high. Those without a double top tend to make the CCI and price high the same week.

COLUMN 5 shows the number of weeks from the price high to when the CCI dropped below the Crossover. The weeks are counted the same as indicated for Column 4. This shows that 5 of the 7 years had a Crossover 1-2 weeks after the price high, and two years had a Crossover 1-2 weeks before the price high.

GUIDELINE: Expect the Crossover within a time period of 2 weeks before, or after, the price high. The Crossovers before the Seasonal high will be traded differently than those after the Seasonal high, as discussed below. Crossovers outside of this time period may indicate that the high that is forming is not a Seasonal top.

COLUMN 6 shows the number of weeks from the week of the Crossover until the low of that week was taken out. In all 7 years, the low of Crossover week was taken out within 4 weeks, and 4 years did so the first week following the Crossover.

GUIDELINE: Following a Crossover that meets the guidelines in Columns 3, 4, and 5, expect the low of Crossover week to be taken out within 4 weeks of the Crossover, with about a 50% probability of taking it out the first week following the Crossover.

COLUMN 7 is an attempt to locate a mechanical means of entry, which takes much of the emotion out of trading. Although the sample size is small, there are 3 types of patterns that should be researched in other time periods.

-When Crossover week occurs on/or after the price high, place a sell stop to go short below the low of Crossover week. The stop should be filled the week following Crossover week. The years of these entries are indicated by XWK.

-If, in the above situation, prices go up following Crossover week a new sell order should be placed under the previous week's low of each higher week until a sell order is filled. This pattern occurred in two years/land 6/ and is indicated by HWK for high week.

-If the high of the week of the price high is exceeded, cancel all sell orders, as the Seasonal high has not occurred. Remember that these charts are on the nearby contract until expiration, and the actual sell order may be placed in the next distant contract.

-When the Crossover week occurs in a rising market before the price high, place a sell stop to go short below the low of Crossover week, and continue to raise the stop each week to just below the previous week's low until filled. This pattern occurred in Years 2 and 7 and is also indicated by HWK.

COLUMN 8 indicates which oscillator patterns should be watched for as an indicator of a true Seasonal High Pattern. Four of the years saw double tops in the formation of the CCI as indicated by DBL, and are discussed in the comments on Column 4.

COLUMN 9 answers a question. Following the Seasonal high, was the nearest uptrend line broken? In the 6 years in which a trendline could be constructed, the answer was YES. Completion of the oscillator pattern and entry may come before, or after, penetration of the trendline.

GUIDELINE: If it is a Seasonal top, a weekly trendline should be broken shortly before or after market entry.

COLUMN 10 answers another question. Was the move below the trendline followed by a sizable downmove in time and price? In 5 of the 6 years with trendlines the answer was YES, indicating that long term positions could be very profitable.

GUIDELINE: Try to establish as many long-term positions as possible before, and shortly after, the trendline is penetrated.

These Oscillator/Cycle Combinations for the CCI give high probability confirmations of the Seasonal highs and lows as well as mechanical entries. Seasonal oscillators should generally be researched over a minimum 20-30 year time period to verify their performance, and even then, in the heat of the market it is often hard to accept a single pattern as solid confirmation of a top or a bottom no matter how well it has performed in the past. But when other Oscillator/Cycle combinations also give confirmations of a Seasonal high or low, you better pay attention, especially if the fundamental picture says exactly the opposite.

The CCI and the 4-Week Trading Cycle in T-Bonds

With all of the economic factors and reports affecting the T-Bond market it may be surprising to see that it has a rather consistent 4-week Trading Cycle.

CHART CCI-8 ••• shows the nearby contract of daily T-Bonds from 880923 through 900929 in Panel A. The Trading Cycle lows are numbered and indicated by the vertical lines which run through the chart to evaluate the accuracy of the oscillator overextensions at the lows. The cycle highs are indicated by the dots above prices. The larger dots above and below prices indicate the primary Cycle highs and lows, which are also Trading Cycle highs and lows.

The Centered Detrend

The cycle lows were determined by the 21-Day Centered Detrend in Panel B. with a Centered Detrend the cycle lows should be below the moving average (which is the Zero Line in the Detrend chart) and the highs above it. Each 4-Week Trading Cycle low in this chart was made with the Detrend well below the moving average; and although the Detrend low was not always exactly the same as the price low, it was usually within 4 days of it. All of the Detrend highs are above the moving average and while they do not match the price highs as closely as the lows, are still helpful for identifying the cycle highs.

The Timing of Cycle Lows

Because this Detrend is centered it is not useful for current time analysis, but it does help pinpoint the earlier cycle lows. Of the 14 complete cycles in this time period, approximately 60% bottomed 18 to 23 market days from the previous Trading Cycle low, and about 40% occurred 28 to 30 days from the low. The Trading Cycle Trough-to-Trough Timing Band (see Page 1-16) is 15-30 days with an average of 21 days. So, as a general guideline, expect the 4-Week Trading Cycle to bottom 15 to 23 days from the previous low, and if prices continue lower after the 23rd day a bottom is not likely until the 28th to the 30th day.

The Half-Span Detrend

Panel C is a plot of a Current-Time Detrend around a 10-Day Moving Average that is one-half the span of the 4-Week Trading Cycle. Such a Half-Span Detrend will often pinpoint the cycle highs and lows, especially when the Detrend has dropped below a Buy Line. Most cycle lows were made as, or after, the Detrend dropped below the Buy Line at -80. A guideline for this oscillator is that following a cycle high this Detrend should drop below the Buy Line to make a 4-Week Trading Cycle bottom. Look for 70% of the bottoms to occur within the 15-30 day Timing Band.

The Commodity Channel Index

Panel D shows a smoothed CCI with a Crossover. The lighter line is a 5-Day CCI smoothed with an 8-Term Moving Average of the CCI. This smoothed CCI will be called the CCI from here on. The darker line is the Crossover, which is an 8-Term Moving Average of the CCI. A Sell Line is at 60 and a Buy Line at -35.

There were fifteen 4-Week Trading cycle bottoms and 14 declines in the CCI below the Buy Line. A visual inspection shows that following a drop from above the Sell Line to below the Buy Line, an upturn in the CCI seems to occur near most Trading Cycle bottoms; rises above the Sell Line often occur near Trading Cycle tops. This oscillator looks good enough to warrant more detailed research, and a closer inspection has developed the following Oscillator/Cycle Combination.

The Oscillator/Cycle Combination for 4-Week Trading Cycle Bottoms

The buy pattern for this oscillator/Cycle Combination is as follows:

1) Prices should normally be 15-30 days from the previous 4-Week Cycle low. They should be no less than 15, but could be more than 30 in an extended cycle.

2) The 10-Day Detrend must have dropped below the Buy Line at -.80.

3) The CCI must drop below the Buy Line at -35 and turn up. Ideally this would have followed a CCI high above 60, which occurred in most of the Trading Cycles in this time period. In other time periods it may be necessary to lower the Sell Line to 25.

4) The market should then be bought with a Trigger entry as prices exceed the high of the CCI upturn day.

5) A protective sell stop should be placed below the lowest price of the cycle before entry. Should the oscillator rise above the Crossover and then drop below the Crossover before rising above the Sell Line, raise the protective stop to under the price low of the Crossover day.

DAILY T-BONDS (4-Week Cycle Lows)
(B) With 21-Day Centered Detrend
(C) 10-Day Detrend
(D) With Smoothed CCI and Crossover

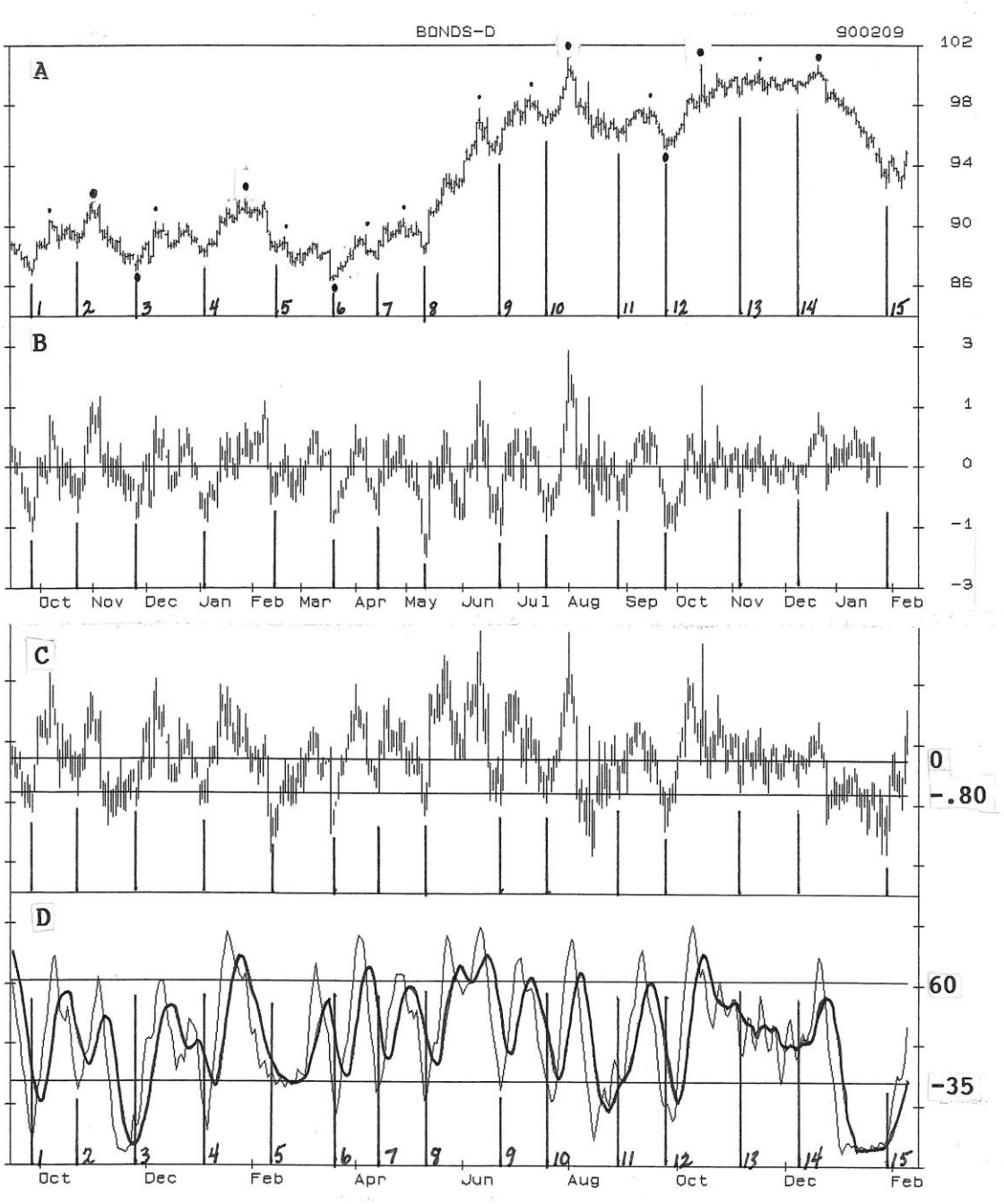


Chart CCI-8

Controlled Risk Money Management

Research Table CI-8 incorporates the Oscillator/Cycle Combination with the multiple contract money management concepts in Chapter 14 under the subheading, "Controlled Risk Money Management." These money management concepts can greatly increase profits and turn a losing trade into one that breaks even or has a small profit. They can also keep you in a market for the really big moves. (Reading Pages 14-10 through 14-13 before proceeding will make the following table more understandable.)

The profit objectives and stops for the 3 contracts could be handled a number of way depending upon market conditions. A review of the chart shows that T-Bonds were in a bull market, and for this research table the assumption is made that our analysis would have identified the bullish uptrend and the Primary Cycle highs and lows. In real time we might not have been that brilliant.

Following market entry, profits should be taken on the Number 1 Position when prices rise $1000 (1 full point) above the entry price. This is a reasonable amount for a bull market, but would be too much for a bear market.

Once profits have been taken on the Number 1 Position, the protective sell stop for the remaining 2 positions should be raised to ½ point (.50) below the entry price. With a $1000 profit in hand, total exposure is now $500 for these 2 positions.

Profits for the Number 2 Position should be taken following a rise in the CCI above the Sell Line, and —

- a downturn in the CCI, followed by
- a drop below the price low of the downturn day.

Once profits have been taken on the Number 2 Position the protective stop for the Number 3 Position should be raised to break even plus commission, skiddage, and a small profit. The trade is now guaranteed to be profitable.

Profits should be taken on the Number 3 Position when a sell signal is generated at the Primary Cycle high. For this example the sell signal will be a decline in the oscillator below the Crossover, followed by a drop below the price low of the Crossover day. Our example uses a single exit price for all Number 3 contracts, but with more than one contract profits should be taken at different price levels; some on strength before the top, and some after the top.

3 Contract Sells at Trading Cycle Tops With CCI Crossover and Trigger Entry											
A	B	C	D	E	F	G	H	I	J	K	L
TC Low Number	PC Dir	Stop Price	Entry Price	Entry Date	No. 1 Price	No. 1 $ Amount	No. 1 Days	No. 2 $ Amount	No. 3 $ Amount	No. 3 Date	Total $ Amount
1	Up	86.81	87.91	880930	88.91	1000	0	1150	1280	881109	3430
2	Up	88.59	89.50	881026	90.50	1000	2	90	310	881109	1400
3	Btm	87.06	88.03	881130	89.03	1000	4	1410	2350	890209	4760
4	Up	87.94	89.16	890112	90.16	1000	1	1340	1220	890209	3560
5	Dn	N	-	-	-	-	-	-	-	-	0
6	Btm	86.38	87.28	890323	88.28	1000	4	1560	10100	890810	12660
7	Up	87.78	89.06	890418	90.06	1000	2	440	10320	890810	11760
8	Up	88.22	88.91	890512	89.91	1000	0	3590	8470	890810	13060
9	Up	94.72	96.50	890626	97.50	1000	1	530	780	890810	2310
10	Up	96.63	97.56	890725	98.56	1000	2	2070	0	890810	3070
11	Dn	95.78	97.22	890817	0.00	L	-				-4320
12	Btm	95.09	95.75	890927	96.75	1000	5	2060	4130	891222	7190
13	Up	N	-	-	-	-	-	-	-	-	-
14	Up	N	-	-	-	-	-	-	-	-	-
15	Btm	N	-	-	-	-	-	-	-	-	-
				Totals		10000		14240	38960		58880

Table CCI-8

COLUMN A is the number of the Trading Cycle low.

COLUMN B shows the direction of the Primary Cycle at the time of entry.

COLUMN C is the stop price, which is the price low of the decline preceding entry. Prices are in decimals, not 32nds.

The N indicates that there was no entry. Trading Cycles 5, 14 and 15 did not have an entry because the oscillator was too ‘wiggly’ or bumpy to trust. A good guideline is that if an oscillator high is followed by a 1- or 2-day wiggle 3 times, it is unreliable for that cycle and an oscillator upturn should not be used for market entry. In some situations an upside penetration of the Crossover with a Trigger entry above the high of the Crossover day may be used for entry.

Trading Cycle 13 did not have an entry because the CCI did not drop below the Buy Line.

COLUMN D is the entry price which was the high of the upturn day (or the next day's open if it gapped higher). Notice that the dollar risk was less than $1500 per

contract in 10 of the 11 trades, and 7 were around $1000. Normally this would be calculated in the table, but due to space limitations has been left out.

COLUMN E is the entry date for reference in checking the data.

COLUMN F is the price level for the Number 1 profit objective.
Ten of the 11 trades reached this objective.

COLUMN G is the dollar amount from entry price to the Number 1 objective.

COLUMN H is the number of days from the entry day to the day the Number 1 profit was taken. All 10 ranged from the day of entry (0), to the 5th market day after entry, with 7 of the 10 taking profits by the second day. If the objective has not been met by Day 4 or 5, the profit objective should be lowered and consideration given to closing the position.

COLUMN I is the profit realized as the Number 2 position was closed out as outlined above. Although only 6 of the 10 were substantially greater than the Number 1 profit, the total, at $14,240, was more than 40% greater than Number 1. These profits were normally taken about 2 weeks after entry.

COLUMN J is the Profit realized in the Number 3 Contract. The big profits that came from the positions put on early in the Primary Cycle are one of the main reasons for the multiple contract approach. If a big move only happens once every 2 years it will more than make up for the extra losses incurred with a Number 3 Contract in losing trades.

Trading Cycle 12 did not give a good indication of the Primary Cycle high. The stop was raised to the low of the week of the blow off and kept at that price until the rise above the Sell Line at the high of Trading Cycle 14.

COLUMN K is the date the Number 3 position was closed out. The sell signal used was a drop below the price low of the day of the downside penetration of the Crossover at the Primary Cycle high. The purpose of the Number 3 position is to ride the market to the Primary Cycle high. It is not always easy to identify that high and a balance must be made between the potential for greater profits versus lost profits. To ride a market to a Primary Cycle high a wide stop must be used that often means risking a give up of 20-30% of the open profits.

Using Timing Bands, oscillators, and technical analysis, a primary Cycle top will hopefully be identified as it is occurring, and stops raised closer to the market. When several Number 3 positions have been established as in Trading Cycles 5 through 10, it is recommended that 2 or 3 be taken off on strength before the top. Such a move would have prevented the large give up of open profits in Trade 10.

COLUMN L shows the total profits for each trade. Total profits were $58,880, averaging $5350 per trade. With a risk from entry to stop of $3000 or more, this gives a relatively low reward/risk ratio of 1.8, which is somewhat deceiving because of the reduction in risk once the Number 1 profit is taken and the stops raised. This is also more than offset by 10 of the 11 trades being profitable. Although unusual, with Oscillator/Cycle Combinations similar trades with 60% probability and higher can be developed by waiting for the right combination of time and price.

This Oscillator/Cycle Combination worked well for the time period researched, but a review of past years will show that there were many Trading Cycles in which the oscillator did not extend beyond the Buy and Sell Lines. In many cycles a Sell Line at 25 would have worked well for profit taking, and would have produced the same profits in this study as the Sell Line at 60. Before using this Oscillator/Cycle Combination, or any other, it should be researched in other time periods and market conditions. Modifications that could improve performance are the length of the CCI, the smoothing time period, the Crossover and the level of the Buy/Sell Lines.

The Trading Cycle Highs

CHART CCI-9 ••• is the same as Chart CCI-8, except that the vertical lines indicate cycle highs. The highs and lows of the 20-Week primary Cycle are identified by the larger dots. Ideally, 4-Week Trading Cycle bottoms should be bought at the Primary Cycle low and each 4-week Trading Cycle low until the Primary Cycle tops; 4-Week Trading Cycle highs should be sold at the Primary Cycle high and each Trading cycle high until the primary Cycle bottoms.

How this is implemented will depend upon how well the Oscillator/Cycle Combinations identify the tops and bottoms of the Primary Cycle. The assumption made for Table CCI-8 was that we were able to identify the highs and lows of the primary Cycles and trade accordingly. In reality, the possibility always exists that the unexpected can happen, and *any* Trading Cycle could become the primary Cycle high. Therefore, our assumption at each Trading cycle high will be that it could develop into a Primary Cycle high and a 3-contract short position will be established when entering the market.

DAILY T-BONDS (4-Week Cycle Highs)
(B) With 21-Day Centered Detrend
(C) 10-Day Detrend
(D) with Smoothed CCI and Crossover

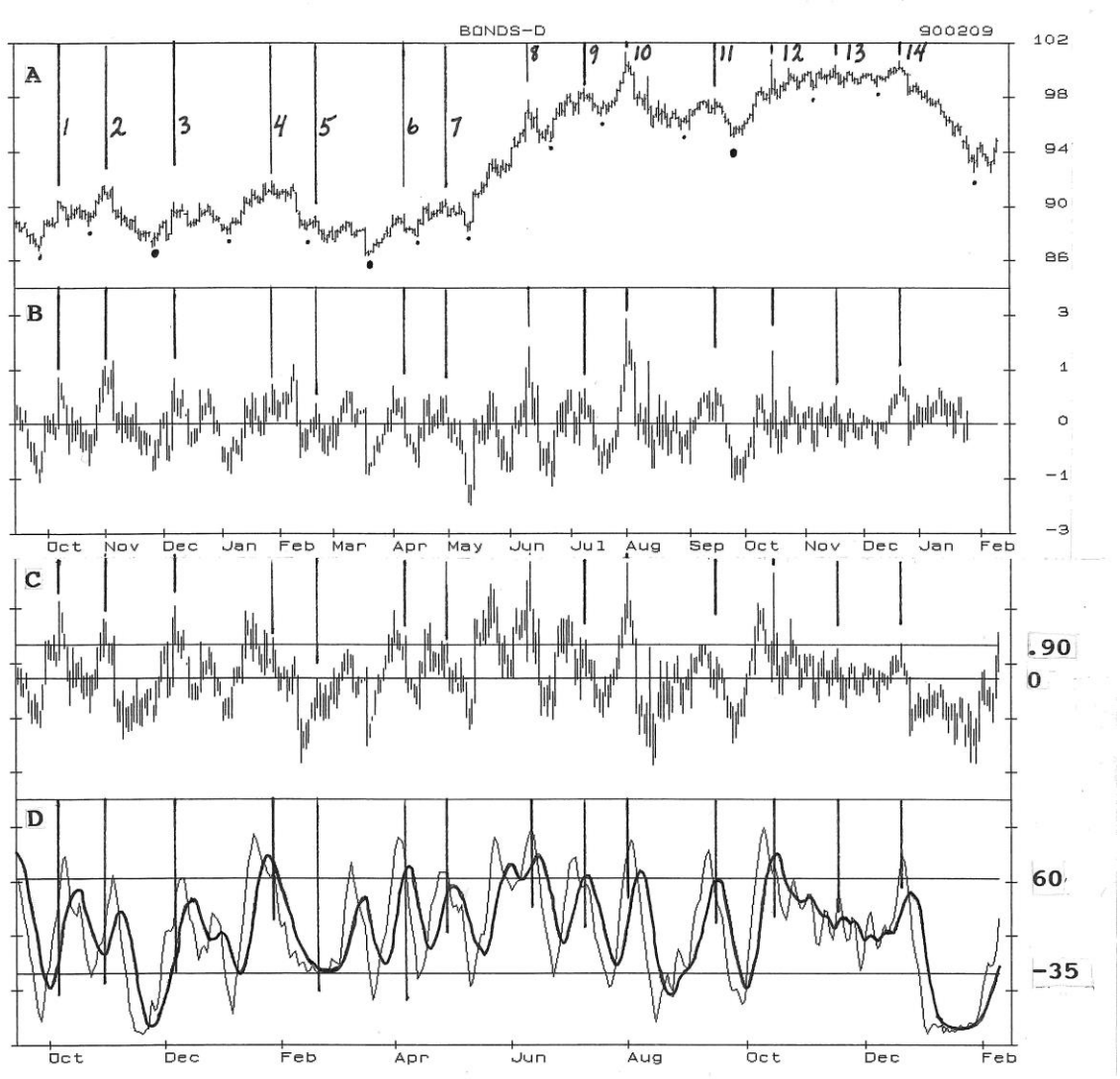


Chart CCI-9

There were 14 Trading Cycle highs, of which only 1 (Trading Cycle 13) did not rise above the Sell Line. There were 14 highs in which the CCI rose above the Sell Line at 60 from below the Buy Line at -35. One of these highs was a double top in the oscillator that was treated as a separate oscillator pattern even though it did not follow a drop below the Buy Line (Trading Cycle 8). Although this does not strictly follow the parameters outl1ned below for the sell pattern, the extreme overextension of the 10-Day Detrend would have enticed many of us to go short, so it has been included. In Trading Cycle 5 the oscillator high occurred in what was a somewhat confusing cycle, and although it was not the price high of the cycle, it was a tradable pattern.

Of the 14 oscillator highs above the Sell Line, using the highest price of the cycle before entry as the protective stop, only 5 would have been profitable using the low of the CCI downturn day as the Trigger entry. Nine would have been losses, yielding a profit ratio of only 36%.

But by using a rise above the Sell Line followed by a decline below the Crossover, with a Trigger entry of a drop below the price low of the downturn day, the profit ratio jumps to 82%. This would be a good ratio in any market situation, but is exceptional in a bull market.

The Oscillator/Cycle Combination for Selling 4-Week Trading cycle Tops

The sell pattern for this Oscillator/Cycle Combination is as follows:

1) The Timing Band for trough-to-crest is 5-16 days with an average of 11 days, and prices should be at least 5 days from the Trading Cycle low. In bull markets the highs tend to made 11-16 days or more from the Trading Cycle low; in bear markets the Trading Cycle highs will tend to be made 5-11 days from the Trading Cycle bottom.

2) The 10-Day Detrend should have risen above the Sell Line at .90.

3) The CCI must have risen above the Sell Line at 60 and dropped below the Crossover. Ideally, the rise would have followed a drop below the Buy Line at -35, but this is not necessary since some Trading Cycle lows will be made above the Buy Line.

4) The market should then be sold with a Trigger entry when prices drop below the price low of the Crossover day. A rise above the highest price of the cycle before the Crossover would normally cancel the Setup and the Trigger entry.

5) Following entry a protective buy stop should be placed above the highest price of the cycle before entry.

The profit objectives and stops for the 3 contracts could be handled a number of ways depending upon market conditions. Based on our assumption that any Trading Cycle high could be the Primary Cycle high, a 3-contract position will be established at each Trigger entry.

Following market entry, profits should be taken on the Number 1 position when prices drop $650 (.65 point) below the entry price. This is a reasonable amount for a bull market, or if uncertain of the longer-term trend, but should be increased to $1000 in a bear market.

Once profits have been taken on the Number 1 position, the protective buy stop for the remaining 2 positions should be lowered to entry price plus commissions. With a small profit in hand, this trade is not likely to become a loss, and if the market does continue lower the remaining 2 positions could develop into large profits.

Profits for the Number 2 Position should be taken following a decline in the CCI below the Buy Line and —

- an upturn in the CCI, followed by
- a rise above the price high of the upturn day

Profits should be taken on the Number 3 Position following a rise in the CCI above the Crossover and a rise above the price high of the Crossover day.

3 Contract Sells at Trading Cycle Tops With CCI Crossover and Trigger Entry											
A	B	C	D	E	F	G	H	I	J	K	L
TC Low Number	PC Dir	Stop Price	Entry Price	Entry Date	No. 1 Price	No. 1 $ Amount	No. 1 Days	No. 2 $ Amount	No. 3 $ Amount	No. 3 Date	Total $ Amount
1	Up		N								
2	Top	91.5	89.19	881109	88.47	720	4	1160	1060	881130	2940
3	Up	90.25	88.56	881215	87.91	650	1	0	0	-	650
4	Top	91.63	90.38	890209	89.70	650	0	1540	2130	890224	4320
5	Dn	88.88	87.88	890313	83.23	650	4	600	0	-	1250
6	Up	89.47	88.22	890410	87.57	L	-	0	0	-	-3750
7	Up	90.53	89.31	890502	88.66	650	6	0	0	-	650
8	Up	96.47	92.69	890531	92.04	L	-	0	0	-	-1780
A	Up	97.78	95.38	890616	94.79	590	0	0	0	-	590
9	Up	-	N	-	-	-	-	-	-	-	0
10	Top	101.28	97.38	890810	96.73	650	2	160	0	-	810
11	Dn	97.84	96.88	890915	96.23	650	4	1130	660	891003	2440
12	Up	-	N	-	-	-	-	-	-	-	0
13	Up	-	N	-	-	-	-	-	-	-	0
14	Top	100.63	98.19	900103	97.51	650	3	2220	2220	901022	5090
				Totals		5860		6810	6070		13210

Table CCI-9

COLUMN A is the number of the Trading Cycle high.

COLUMN B shows the direction of the Primary Cycle at the time of entry.

COLUMN C is the stop price, which is the price high of the rise preceding entry. The T-Bond prices are in decimals, not 32nds.

The N indicates there was no entry. 1, 9, 12, and 13 did not have an entry, because prices rose above the price high without completing the Trigger entry following the Crossover.

Trading Cycle 4 rose above the price high preceding the downside Crossover, but the Trigger entry was taken following the Head and Shoulders formation that developed at the Primary cycle top.

COLUMN D is the entry price which was the price low of the day that made the downside Crossover. Notice that the dollar risk was less than $1500 per contract in 7 of the 11 trades, and 10 were $2500 or less.

COLUMN E is the entry date for reference in checking data.

COLUMN F is the price level for the Number 1 profit objective. Nine of the 11 trades reached this objective, which is the key to the high percentage of winning trades.

COLUMN G is the dollar amount from entry price to the Number 1 objective. Losing trades are shown with an L.

COLUMN H is the number of days from entry day to the day the Number 1 profit was taken. All 9 ranged from the day of entry (0), to the sixth market day after entry, with 8 of the 9 taking profits by the fourth day. If the objective has not been met by Day 4, consideration should be given to closing the position or raising the protective stop to break even.

COLUMN I is the profit realized as the Number 2 position was closed out as outlined above. Only 6 of the 9 realized profits and they were all at, or following, the top of the Primary Cycle, a poignant reminder that it pays do the research necessary to identify the highs and lows of the Primary Cycle. These profits were normally taken within 1 or 2 weeks of entry.

COLUMN J is the Profit realized in the Number 3 Contract. Only 4 of the profitable cycles realized profits from this position, although in a bear market this percentage and the size of the profits would be much greater.

COLUMN K is the date the Number 3 position was closed out.

COLUMN L shows the total profits for each trade. Total profits were $13,210 averaging $1200 per 3-contract trade. With a risk from entry to stop averaging about $3500, this looks terrible, and would have been worse without the short-term Number 1 position, which allowed 80% of the trades to be profitable. This shows the value of the number 1 Position, and highlights the concept of trading in the direction of the Primary Cycle and selling the Primary Cycle highs.

As good as this combination looks, the sample size is small and at least 10 years should be researched before putting your money on the Line. Probabilities of correctly identifying and trading the Trading Cycle and Primary Cycle highs and lows will be greatly increased by simultaneous confirmations of one or more additional Oscillator/Cycle Combinations.

Chapter Twelve

STOCHASTIC

The Stochastic is one of the more widely watched oscillators because it usually tops and bottoms near the price highs and lows of the markets. Conventional wisdom has it that a market is overbought when the Stochastic is above 70 and oversold when it is below 30. In reality, the Stochastic has a tendency to stay above 70 for long periods of time in a bull market and below 30 in a bear market.

However, it is an excellent indicator of cycle tops and bottoms of various lengths. The calculations for the Stochastic are in the Appendix. It can be calculated to turn very quickly and frequently, or in the slow Stochastic, to turn more slowly and less frequently, which is the one used here. The Crossover (%D) in this approach is kept only as a confirmation to be used in questionable situations.

CHART STOCH-I ••• on Page 12-2 shows weekly T-Bond prices in the top panel with the dots indicating the 18 Primary Cycle highs and lows. The vertical lines below the PC lows allow the correlation between the
Stochastic lows and the cycle lows to be easily seen.

The 10-Week Stochastic is an excellent indicator of primary Cycle bottoms when certain conditions are met. Our intent is not to identify every PC bottom with this oscillator, but to structure the Setup so the Trigger entry will give a high probability confirmation of the PC low, and generate trades with a high probability of making money. It is better to miss a PC bottom once in a while than to have a pattern that requires judgment but lets you 'try' to trade every PC low. By using a variety of oscillators, other Oscillator/Cycle Combinations can usually be found that will identify the PC bottoms that this one misses.

The Buy and Sell Lines for the 10-Week Stochastic in Panel B have been changed from 70 and 30 to 80 and 20. Of the 18 PC lows, 15 occurred with the oscillator below the Buy Line at 20. In 12 of these, once the oscillator dropped below the Sell Line it continued down without an upturn until below the Buy Line. This indicates that once the PC has topped there is an 80% probability that the oscillator will drop below the Buy Line, and that if it is going to drop below the Buy Line, there is an 80% probability that it will do so in a line move down without a wiggle, which means without a sizable upmove between the high and the low.

Weekly T-Bond Chart
with 10, 20, and 40 – Week Stochastics

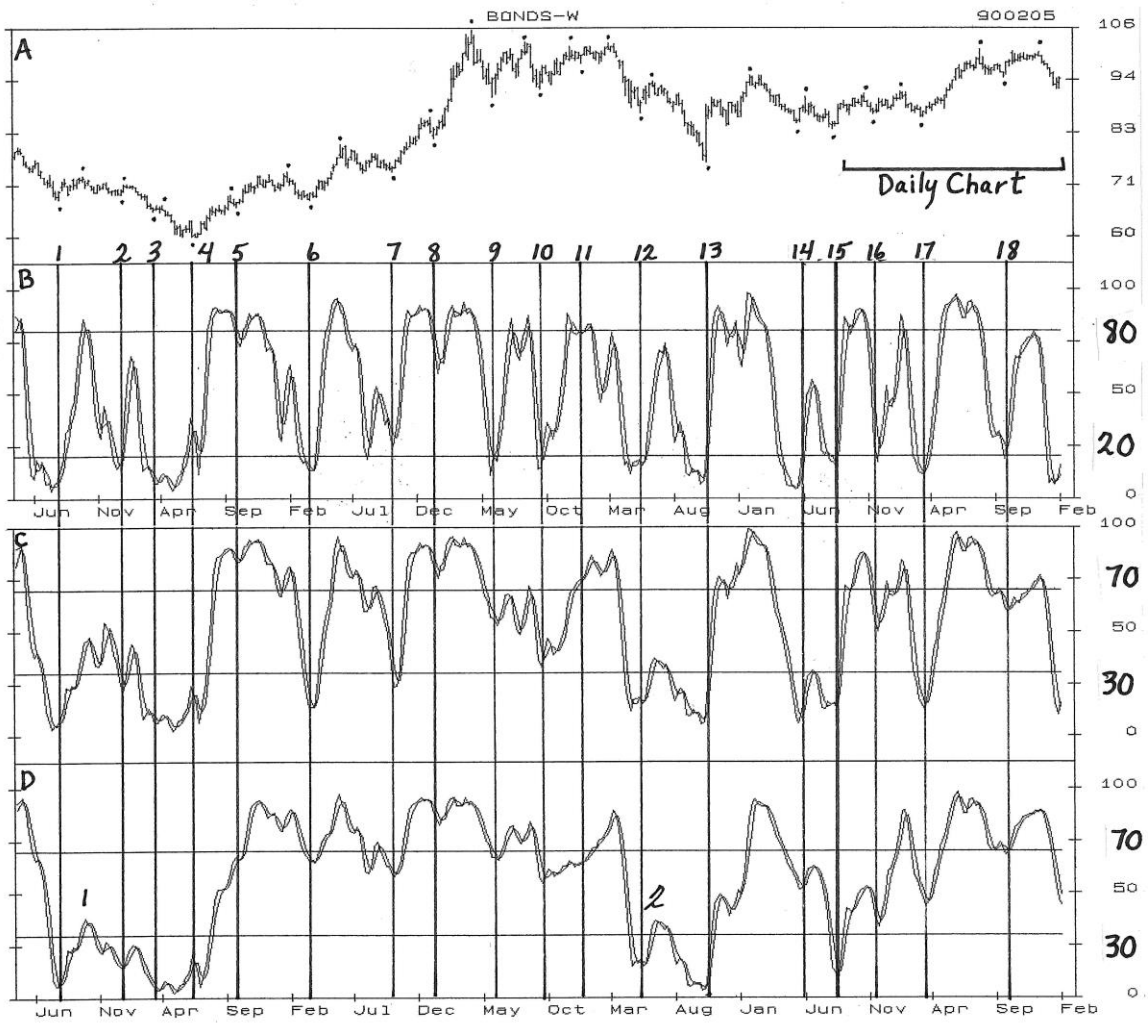


Chart STOCH-1

The setup for identification of the Primary Cycle bottom is as follows:

1) Prices should be 12 to 28 weeks from the previous PC low,
2) The Stochastic (%K) should drop below the Buy Line at 20,
3) The oscillator should then turn up to complete the Setup.
4) The Trigger entry is a rise above the price high of the upturn week. A drop below the lowest price of the cycle preceding entry would be the protective stop.

Of the 18 PC lows, 11 cycle bottoms were confirmed by the Trigger entry. Ten of the 11 were followed by upmoves that would have generated intermediate to big profits (Cycles 6, 7, 9, 10, 12, *131 14,* 16, 17, and 18). Only one would have made a profit of less than $1000 (Cycle 2).

Six cycle lows did not generate a setup because the conditions were not met (Cycles 3, 4, 5, 8, 11 and 15). One Setup did not complete a Trigger entry (Cycle 1).

Most of the Primary Cycle lows were confirmed within 1 to 3 weeks of the bottom.

Panel C shows a slow 20-Week stochastic, and several observations may be useful in the future —

- 6 Primary cycle bottoms were made below the Buy Line at 30 following an osc1llator high above the Sell Line at 70. An interesting aspect of these lows is that the declines from the Sell Line to the Buy Line did not have an upturn until after they dropped below the Buy Line. In such a declining market Trading Cycle highs can be sold against the possibility of a sizable rally that would turn the oscillator up before it drops below the Buy Line.

In each of the 6 cycles, an upturn and Trigger entry above the high of the upturn week confirmed the Primary cycle low. Buying the market at this Trigger entry would have produced large profits in 3 trades at cycles 6, 7 and 17, which bottomed in an uptrend or trading range. The other 3, which were followed by a lower Primary Cycle would have produced small profits or a loss.

From these we can infer that following a decline in the 20-Week Stochastic from above the Sell Line to below the Buy Line, when the PC bottom is above the previous PC low, a sizable upmove and rise above the previous PC high can be expected. While occurring in only 2 cycles, this pattern shows up in many markets. It does not occur often, but when it does the moves are big.

Of the 6 cycles that dropped below the Buy Line, 5 saw the Stochastic bottom below 15, indicating that similar declines are likely in future years.

Panel D shows a slow 40-week Stochastic which illustrates the tendency for this oscillator to stay at high levels during a strong bull market.

The 2 major bottoms followed the pattern of —

- a drop from above the Sell Line to below the Buy Line, followed by
- a rise above the Buy Line to form highs at 1 and 2 that were below 50/ followed by a drop well below the Buy Line, and
- rises above the highs at 1 and 2 that confirmed the major bottoms, and were followed by major bull markets.

Additional research is needed to see if this pattern occurred at other major bottoms. If it did, it will be a useful indicator of major bottoms in the future.

Most of the PC tops occurred with the 10-Week Stochastic above the Sell Line at 80/ but the Stochastic itself does not generate high probability confirmations of the PC highs or high probability trades. The best approach is to have the 10-Week Stochastic above 80 and use the daily Stochastic and other short-term daily oscillators such as the CCI, RSI or 3-10 to generate Setups and Trigger entries that will occur at the primary Cycle highs.

The daily Stochastic is an excellent indicator of Trading Cycle highs and lows.

CHART STOCH-2 ••• on Page 12-5 is a daily chart of T-Bonds for the time period indicated by the bracket in the top right hand corner of the chart.

The highs and lows of the Trading Cycle are indicated by dots, and the larger dots are also Primary Cycle tops and bottoms.

Panel B shows the 10-Day stochastic. Notice how consistently
Trading cycle highs tend to occur as the Stochastic is above the Sell Line at 80. Most Trading Cycle lows occur as the Stochastic is below the Buy Line at 30/ with many occurring as it is below 15.

Using the Stochastics with the more sensitive oscillators such as the CCI or RSI will generate high probability Trigger entries that confirm the Trading cycle highs and lows and are also profitable trades.

Many Primary cycle highs can be sold within days of the tops when the 10-Week and 10-Day Stochastics are above the Sell Lines at 80 and another short-term oscillator generates a Trigger entry. The 20 and 40-Day Stochastics help to identify the Primary cycle tops / but the key is the 10-Week Stochastic.

DAILY T-BONDS
with 10, 20 and 40-Day Stochastics

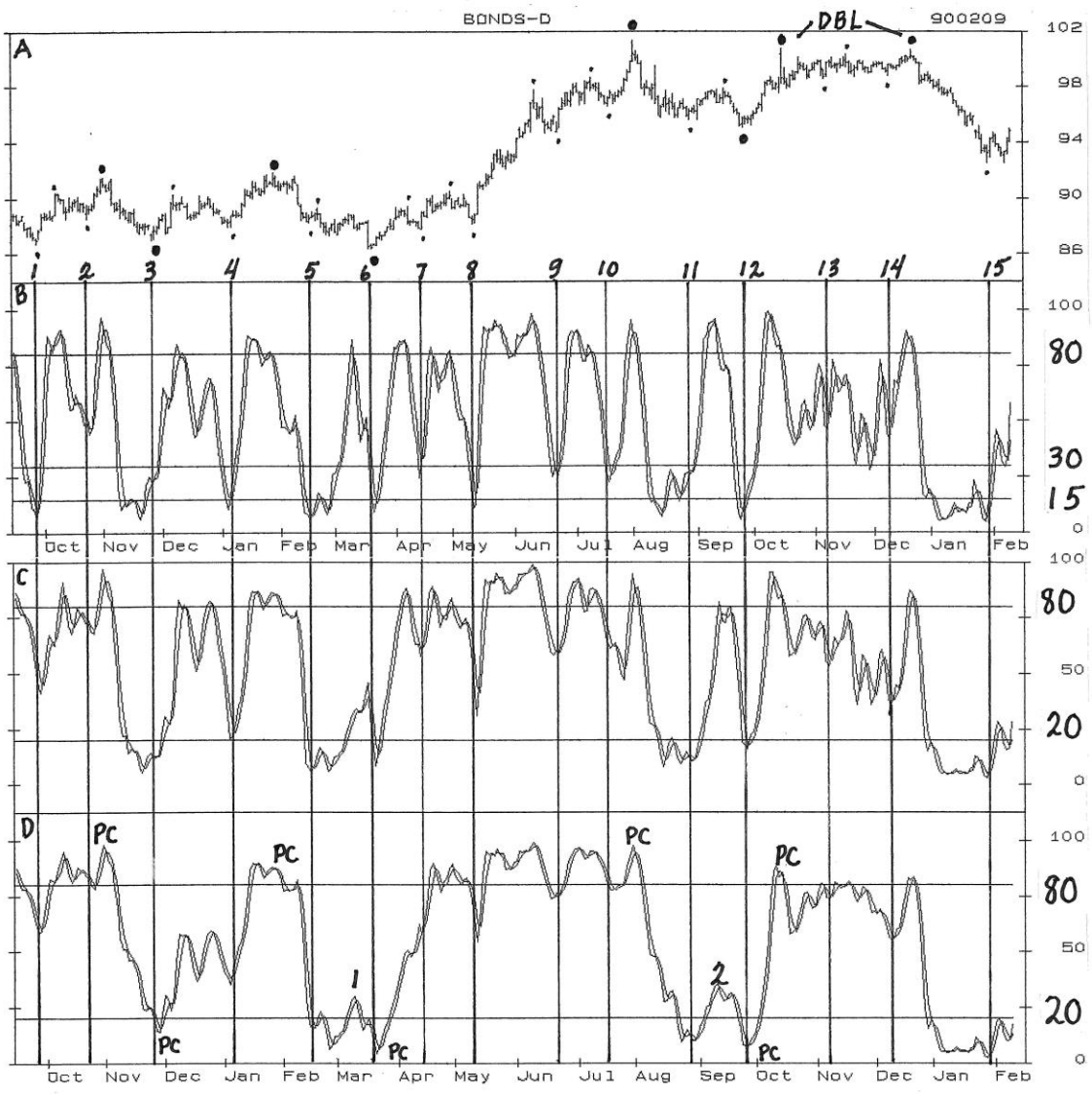


Chart Stoch-2

The same concept works at Primary Cycle bottoms. When the 10-Week Stochastic is below the Buy Line at 20, and the 10-Day is at least below 30 and ideally below 15, a Trigger entry in a short-term oscillator/cycle Combination such as the RSI or CCI will often buy a primary Cycle low within days of the bottom.

Notice how the 40-Day stochastic, and to a lesser extent the 20day, overextend at the Primary Cycle bottoms. Notice also the similarity of the patterns at the PC lows in the 40-Day Stochastic to the patterns at the major cycle lows in the 40-Week Stochastic. In both, the longer-term cycle was confirmed by a rise above the highs at 1 and 2. This may be a pattern for all longer-term cycles.

The various Stochastics should be a part of any oscillator combination for identification of the Primary and Trading Cycles, and it can also help identify the Seasonal Cycle.

The Stochastic and the Seasonal Cycle

CHART STOCH-3 ••• 0scillators identify Seasonal highs and lows best with weekly data, and the top panel of Chart Stoch-3 on Page 12-7 shows the Seasonal tops and bottoms on a weekly soybean chart from 1981 through March 2, 1990.

In any year, there is about a 70% probability that the Seasonal high will occur April through August, and that the Seasonal low will occur June through October. Overextensions and turning points in the stochastic and other oscillators during these time periods will help confirm a Seasonal high, which often begins a downtrend of 4 to 7 months, or more.

Panel B is a slow 40-Week Stochastic, and Panel C is a slow 20-week. The solid vertical lines show the Seasonal lows, and the vertical dashed lines show the Seasonal highs. Compressing 9 ½ years of data on a chart sacrifices detail for the bigger picture, but details can be gleaned by expanding the chart and by viewing daily charts at the desired time periods.

WEEKLY SOYBEAN CHART
with 40 and 20-Week Stochastics

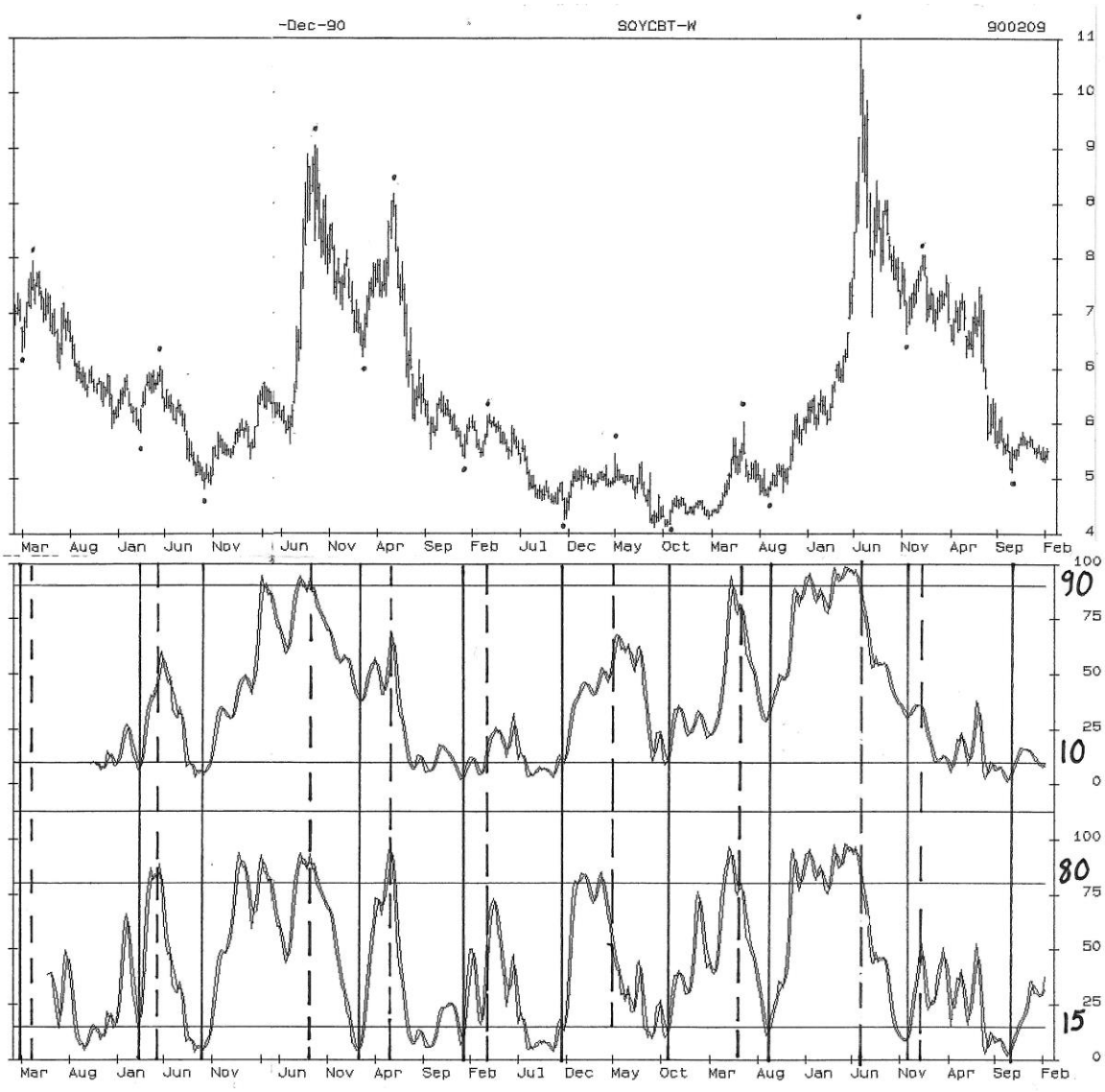


Chart Stoch-3

40-Week Stochastic

The Seasonal tops and bottoms occur on, or near, the turns of the Stochastic. Notice that 5 Seasonal highs occurred with the Stochastic below the Sell Line at 90. All 5 were followed by Seasonal lows below the previous Seasonal low *r* which were accompanied by a drop in the stochastic below the Buy L1ne at 10.

Also, notice that the 3 Seasonal highs that occurred above the Sell Line were all followed by Seasonal lows that bottomed above the previous Seasonal low. At these Seasonal lows, the Stochastic low was well above the Buy Line at 10. From these observations, the following guidelines can be formulated —

- Seasonal highs that occur as the Stochastic remains below the Sell Line should be followed by a Seasonal low below the previous Seasonal low, and the Stochastic should drop below 10.

- Seasonal highs that occur as the Stochastic is above the Sell Line should be followed by a Seasonal low above the previous Seasonal low, and the Stochastic should bottom well above the Buy Line at 10.

20-Week Stochastic

The Seasonal Cycle stands out very clearly in the 20-Week Stochastic. Notice that 6 of 8 Seasonal highs occurred with the Stochastic having risen above the Sell Line at 80, and that 7 of the 8 exceeded 70. Also, every Seasonal low occurred below the Buy Line at 15. The following guidelines can then be formulated —

- A Seasonal high is most likely to occur April through August, and is not likely to be in place unless the Stochastic has exceeded 80, especially in a bull market.
- A Seasonal low is most likely to occur June through October, and is not likely to be in place unless the Stochastic has dropped below 15.

Other oscillators can be used for a more exact identification of the Seasonal bottom and a Trigger entry, similar to the way shorterterm cycles and oscillators were used with T-Bonds.

Chapter Thirteen

3-10 OSCILLATOR

Oscillators based on daily data are more oscillators based on weekly data, and will give many of overbought and oversold levels. More entry signals daily oscillators, and one of these signals is almost Cycle high ... but which one?

The only way to determine whether or not an oscillator can determine a Primary Cycle high is through research. Simple turns in the oscillator seldom work, and each oscillator should be evaluated based on the individual patterns that occur in different markets.

A good daily oscillator is the 3-Day Moving Average minus a 10-Day Moving Average. The oscillator turns at overextensions often indicate highs and lows, but what really makes this oscillator a powerhouse are the patterns based on the fluctuations of the 3-10 Oscillator around the Crossover, which is a 16-Term Moving Average of the oscillator.

Two step Sell (TSS) and Small Bump Sell (SBS)

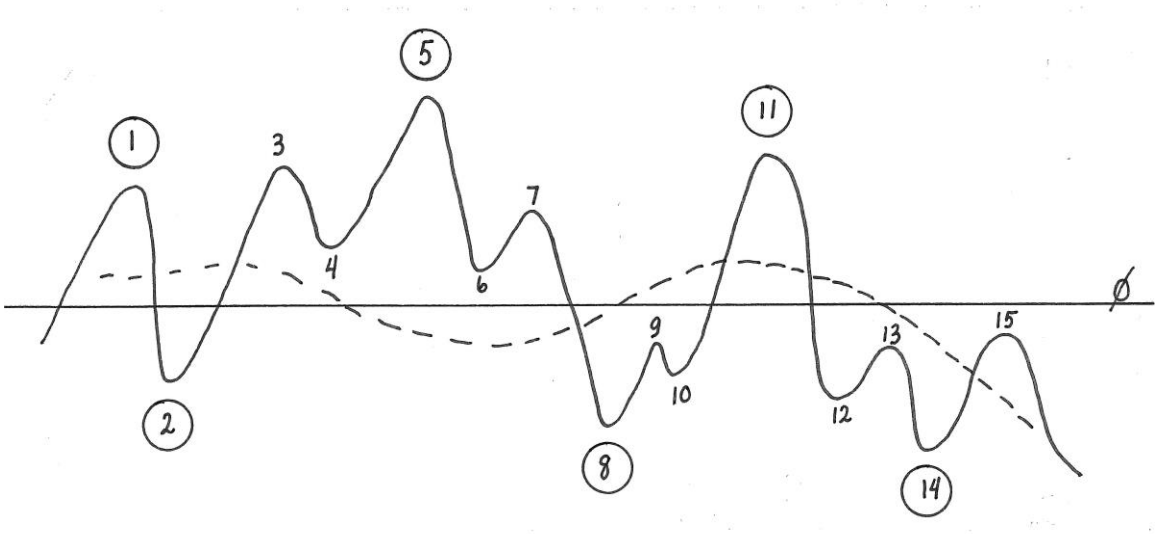
To construct this oscillator with the Crossover, plot a 3-10 Moving Average, and on the same chart plot a 16-Term Moving Average of the 3-10 Oscillator. Charts of daily gold and this oscillator from 2/88 through 11/89 are on Pages 13-5 and 13-7.

Primary Cycle highs and lows are indicated on the gold price chart in the top panel. The oscillator chart in the lower panel has oscillator highs marked for two specific patterns: the Two Step Sell (TSS), and the Small Bump Sell (SBS). The circled dots show the Setups that were followed by a Trigger entry. A description of both patterns follows. Page 13-7 shows the research table used to evaluate the effectiveness of these patterns.

The key to the TSS and SBS Oscillator Patterns is the Crossover. A high is valid only when it is above the Zero Line *and* the crossover, and follows a low that was formed below the Crossover. A low is valid only when below the Crossover and following a high that was above the Crossover.

Example 1 shows the oscillator as a solid line and the Crossover as a dashed line. Each turn of the oscillator is numbered and the highs and lows that are valid for Setups are circled. Of the 15 oscillator turns only the 6 circled Setups would qualify to form the two patterns.

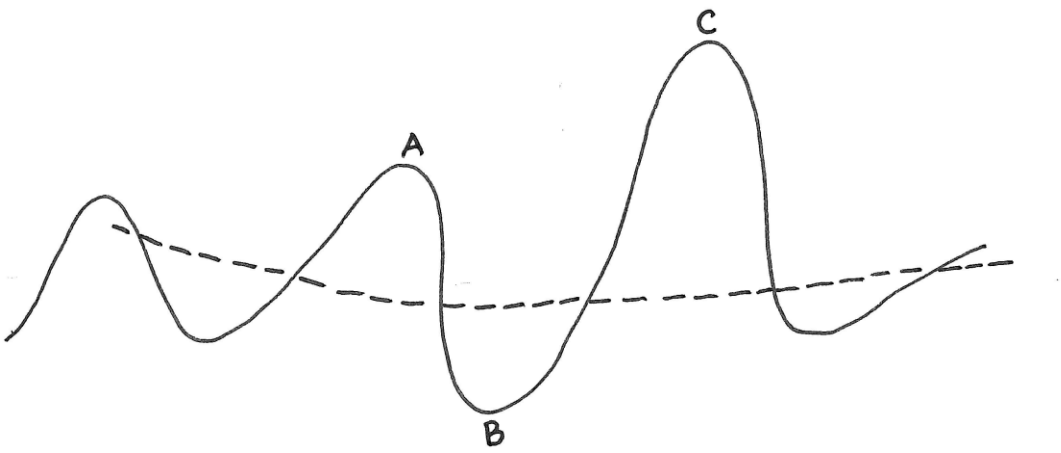
Formation of Oscillator Patterns



Example 1

Example 2 illustrates the formation of the Two Step Sell (TSS). First, an oscillator high is made at A above the Crossover. This high can be above or below the previous oscillator high and the Zero Line. Then an oscillator low is formed below the Crossover at B, which can be above, or below, the previous low. The high at C then rises above the Crossover, and the high at A to form a higher\second step'. A 2-day downturn in the oscillator completes the Setup stage, and the Trigger for market entry is a drop below the previous week's low, or the low of the current week as explained below.

Two Step Sell

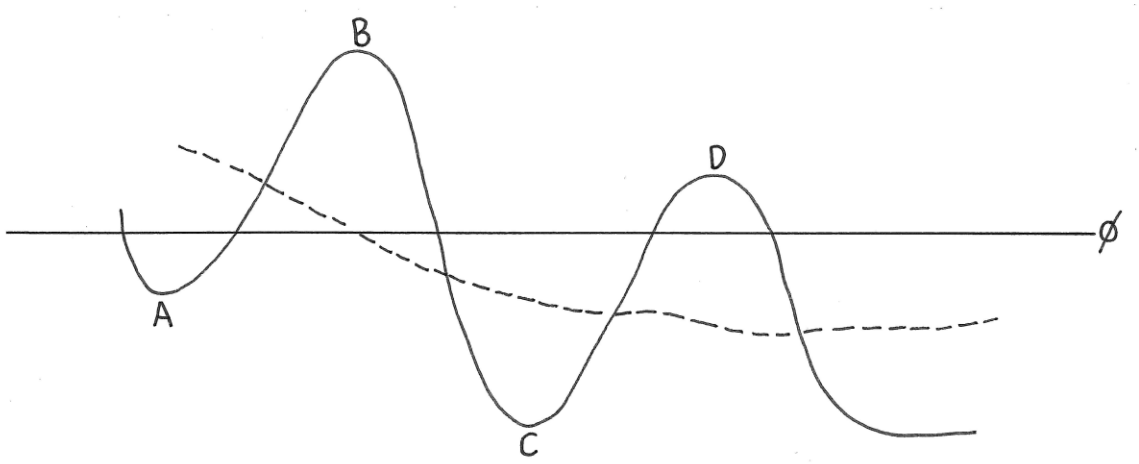


Example 2

In Example 1 the oscillator high at 5 is a Two Step Sell setup. The high at 3 might also have been a TSS Setup, but would not normally have triggered a market entry, which usually occurs only at tops. If it had, you would have been stopped out and gone short at the Trigger entry following 5.

Example 3 illustrates the Small Bump Sell (SBS). Following an oscillator low below the Crossover at A, a high is formed at B above the Crossover and the Zero Line. The oscillator then forms a second oscillator low at C below the Crossover and the previous oscillator low at A. The Setup is formed at D by a 2-day oscillator downturn that must occur above the Crossover and the Zero Line, but below the oscillator high at B. The Trigger entry is a drop below the previous week's low, or the low of the current week as explained below.

Small Bump Sell



Example 3

In Example 1 the oscillator high at 11 is a Small Bump Sell. The oscillator high at 15 is not a SBS because it was not above the Zero Line.

The following charts can be combined to form one continuous chart from 880201 to 891201. The charts are 7-day plots, with space left for weekends, which highlights the weekly price ranges.

Gold/3-10 Oscillator

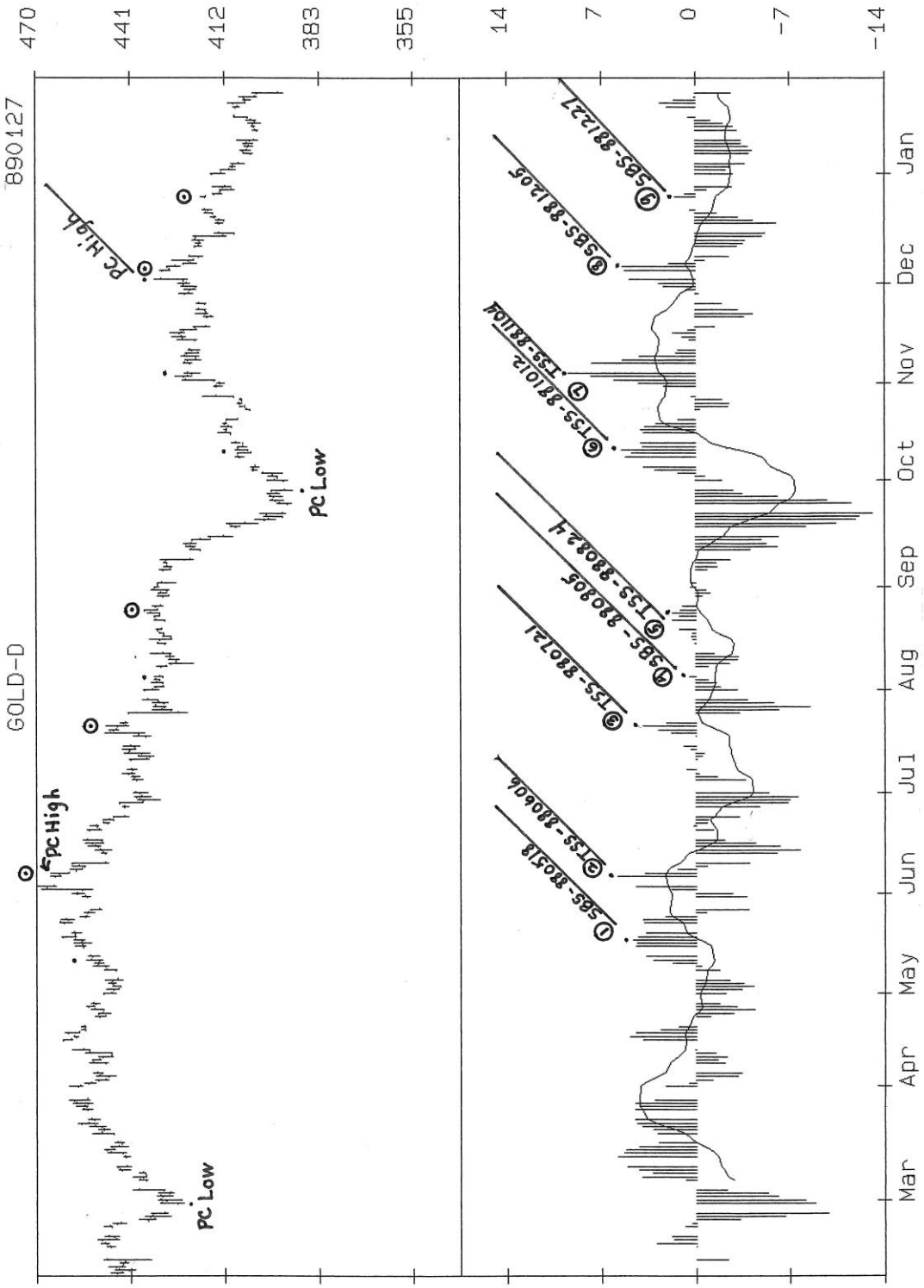


Chart 310-1

Gold/3-10 Oscillator

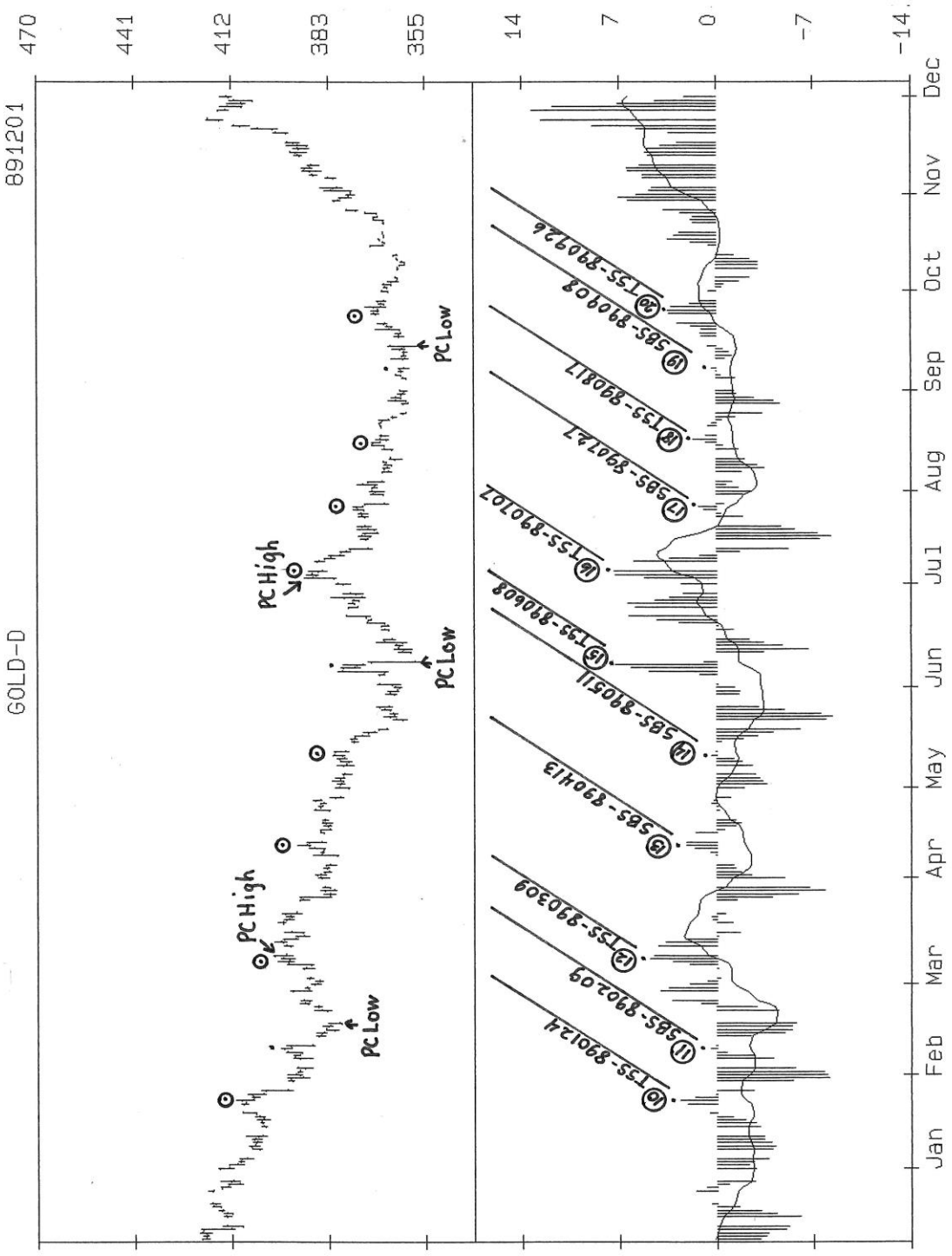


Chart 310-2

RESEARCH TABLES FOR GOLD PRIMARY CYCLE HIGH IDENTIFICATION
AND TRADING PATTERNS USING THE 3-10 OSCILLATOR

Table 1 is the result of using the patterns to trade gold and to identify the Primary cycle highs.

TSS and SBS Patterns Sorted by Number											
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**
NBR	**TYPE**	**OSC HIGH**	**PC HIGH**	**DATE ENTRY**	**PRICE ENTRY**	**PC HIGH ?**	**PC LOW WKS TO ENTRY**	**WKS ENTRY TO LOW**	**PRICE LOW**	**AMT TO PC LOW**	**% TO PC LOW**
1	**SBS**	**880518**	**-**	**1**	**-**	**-**	**-**	**3**	**-**	**-**	**-**
2	**TSS**	**880606**	**469**	**880610**	**453**	**Y**	**14**	**9**	**432**	**21**	**4.64**
3	**TSS**	**880721**	**449**	**880725**	**425**	**Y**	**4**	**-**	**391**	**44**	**10.11**
4	**SBS**	**880805**	**-**	**N**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5	**TSS**	**880824**	**449**	**880829**	**430**	**-**	**9**	**4**	**-**	**39**	**9.07**
6	**TSS**	**881012**	**-**	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
7	**TSS**	**881104**	**-**	**2**	**-**	**-**	**-**	**-**		**-**	**-**
8	**SBS**	**881205**	**433**	**881209**	**420**	**Y**	**10**	**10**	**380**	**40**	**9.52**
9	**SBS**	**881227**	**433**	**890106**	**409**	**-**	**14**	**6**	**380**	**29**	**7.09**
10	**TSS**	**890124**	**433**	**890127**	**401**	**-**	**17**	**3**	**380**	**21**	**5.24**
11	**SBS**	**890209**	**-**	**3**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
12	**TSS**	**890309**	**400**	**890327**	**391**	**Y**	**6**	**10**	**356**	**35**	**8.95**
13	**SBS**	**890413**	**400**	**890428**	**382**	**-**	**10**	**6**	**356**	**26**	**6.81**
14	**SBS**	**890511**	**400**	**890515**	**376**	**-**	**13**	**3**	**356**	**20**	**5.32**
15	**TSS**	**890608**	**-**	**N**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
16	**TSS**	**890707**	**390**	**890714**	**377**	**Y**	**5**	**9**	**357**	**20**	**5.31**
17	**SBS**	**890727**	**390**	**890807**	**365**	**-**	**9**	**5**	**357**	**8**	**2.19**
18	**TSS**	**890817**	**390**	**890824**	**364**	**-**	**11**	**3**	**357**	**7**	**1.92**
19	**SBS**	**890908**	**-**	**N**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
20	**TSS**	**890326**	**XX**	**891002**	**366**	**-**	**X**	**X**	**X**	**X**	**X**

Table 1

COLUMN A is the number of the oscillator setup in the charts on Pages 13-5 and 13-6.

COLUMN B is the type of pattern—TSS or SBS. Combining oscillators and cycles is not simply a matter of looking for profitable trades. It involves looking for the patterns, for the timing that occurs in the combinations. The sort function of a spreadsheet helps to see patterns and timing that might otherwise go unnoticed. Table 2 below is sorted

by the type of pattern. Looking at the SBS group, there were only 5 of 9 setups that triggered an entry. Although the sample size is small we can make a number of observations that will develop into trading guidelines if confirmed by research in other time periods that provide a larger and more diversified sample size.

TSS and SBS Patterns Sorted by Pattern Type - Column B											
A	B	C	D	E	F	G	H	I	J	K	L
NBR	TYPE	OSC HIGH	PC HIGH	DATE ENTRY	PRICE ENTRY	PC HIGH ?	PC LOW WKS TO ENTRY	WKS ENTRY TO PC LOW	PRICE LOW	AMT TO PC LOW	% TO PC LOW
9	SBS	881227	433	890106	409	-	14	6	380	29	7.09
14	SBS	890511	400	890515	376	-	13	3	356	20	5.32
13	SBS	890413	400	890428	382	-	10	6	356	26	6.81
8	SBS	881205	433	881209	420	Y	10	10	380	40	9.52
17	SBS	890727	390	890807	365	-	9	5	357	8	2.19
11	SBS	890209	-	3	-	-	-	-	-	-	-
1	SBS	880518	-	1	-	-	-	-	-	-	-
19	SBS	890908	-	N	-	-	-	-	-	-	-
4	SBS	880805	-	N	-	-	-	-	-	-	-
10	TSS	890124	433	890127	401	-	17	3	380	21	5.24
2	TSS	880606	469	880610	453	Y	14	3	432	21	4.64
18	TSS	890817	390	890824	364	-	11	3	357	7	1.92
5	TSS	880824	449	880829	430	-	9	4	391	39	9.07
12	TSS	890309	400	890327	391	Y	6	10	356	35	8.95
16	TSS	890707	390	890714	377	Y	5	9	357	20	5.31
3	TSS	880721	449	880725	425	Y	4	9	391	44	10.11
20	TSS	890926	XX	891002	366	-	X	X	X	X	X

Table 2

- All 5 occurred 9 weeks or more following the PC low; so if a setup occurs before the 9th week an entry is not likely. Consider the possibility of going long against the Trigger entry price.

- 4 of 5 were not PC highs and occurred after the high was made.
These 4 dropped 3-6 weeks from entry, setting a guideline for when to expect the next PC low to occur.

- Of the 8 TSS patterns that entered the market, 4 occurred at PC highs, and 3 of the 4 obviously occurred in bear markets, as the weeks from PC low to entry were only 4-6 weeks from the PC low.

- Of those that were not PC highs, 3 entered after the PC high and made the PC low 3-4 weeks following entry. Only one occurred before the PC high. With 7 of 8 occurring at, or following, a PC high, this pattern is also a good indicator of a PC high.

COLUMN C is the date of the oscillator high.

COLUMN D is pattern occurs, before.

COLUMN E is the date market entry was triggered. The sell stop to enter should be placed after the second consecutive oscillator down day. In this study, the Trigger entry will be:

- A drop below the previous weeks low, or

- If the oscillator turns down in a week following a price high week (the price high of the week of the downturn is below the price high of the previous week at the time of the downturn), the sell stop should be placed below the previous week's low after the second consecutive oscillator downturn day. But if the previous week's low has already been taken out, the sell stop should be placed below the low of the current week. A protective buy stop should be placed just above the high of the highest price high before entry.

The numbers in COLUMN E reference rules that eliminate losing trades. These rules should be evaluated when the oscillator is researched in other time periods. If a rule does not work when tested in other time periods of both bull and bear markets, the rule should be discarded and the trades cataloged as losers. Before putting your money on the line always test the patterns and rules in different types of markets, as there can be distinct differences between performance in bull markets and bear markets. 'N' means there was no possibility of entry.

1) 8-WEEK RULE - Do not enter in an outside down week (the previous week's high is exceeded, then the previous week's low is taken out in the same week), in which the high of the outside week is the highest of the previous 8 weeks. In gold, prices often continue higher, especially in bull markets.

2) 6-WEEK RULE - If the oscillator downturn occurs in less than 6 weeks from the PC low, and the price high of that week is exceeded, place the Trigger entry below the low of the week in which the oscillator turned down; if not entered within 3 weeks of the downturn, cancel the sell order.

5) 14 - WEEK RULE - Do not enter a market after the fourteenth week from the PC low. While some trades might be profitable as was #10, in general after the

fourteenth week you want to be psychologically preparing to go long, which most traders find hard to do if short.

COLUMN F is the entry price activated by the Trigger entry.

COLUMN G indicates the signals that occurred at the 5 PC highs, which is the sort used in Table 3 below. Notice that every PC high was followed by a completed sell pattern, and that 4 of the 5 entered the market within 7 days of the top. It is also interesting that 4 of the 5 PC highs occurred with a TSS. Should this be consistent in other time periods it would be a valuable piece of information for identifying the PC tops.

TSS and SBS Patterns Sorted by PC High - Column G											
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**
NBR	**TYPE**	**OSC HIGH**	**PC HIGH**	**DATE ENTRY**	**PRICE ENTRY**	**PC HIGH ?**	**PC LOW WKS TO ENTRY**	**WKS ENTRY TO PC LOW**	**PRICE LOW**	**AMT TO PC LOW**	**% TO PC LOW**
3	**TSS**	**880721**	**449**	**880725**	**425**	**Y**	**4**	**9**	**391**	**44**	**10.11**
8	**SBS**	**881205**	**433**	**881209**	**420**	**Y**	**10**	**10**	**380**	**40**	**9.52**
12	**TSS**	**890309**	**400**	**890327**	**391**	**Y**	**6**	**10**	**356**	**35**	**8.95**
16	**TSS**	**890707**	**390**	**890714**	**377**	**Y**	**5**	**9**	**357**	**20**	**5.31**
2	**TSS**	**880606**	**469**	**880610**	**453**	**Y**	**14**	**3**	**432**	**21**	**4.64**
5	**TSS**	**880824**	**449**	**880829**	**430**	**-**	**9**	**4**	**391**	**39**	**9.07**
9	**SBS**	**881227**	**433**	**890106**	**409**	**-**	**14**	**6**	**380**	**29**	**7.09**
13	**SBS**	**890413**	**400**	**890428**	**382**	**-**	**10**	**6**	**356**	**26**	**6.81**
14	**SBS**	**890511**	**400**	**890515**	**376**	**-**	**13**	**3**	**356**	**20**	**5.32**
10	**TSS**	**890124**	**433**	**890127**	**401**	**-**	**17**	**3**	**380**	**21**	**5.24**
17	**SBS**	**890727**	**390**	**890807**	**365**	**-**	**9**	**5**	**357**	**8**	**2.19**
18	**TSS**	**890817**	**390**	**890824**	**364**	**-**	**11**	**3**	**357**	**7**	**1.92**
20	**TSS**	**890926**	**XX**	**891002**	**366**	**-**	**X**	**X**	**X**	**X**	**X**

Table 3

COLUMN H is the number of weeks from PC low to the Trigger entry, which is the sort used in Table 4 below. Notice that of the 4 that entered less than 9 weeks from the PC low, 3 were PC highs that occurred 4-6 weeks from the low. This would indicate that a completed signal that occurs less than 9 weeks from the PC low is likely to be a PC high. Since PC highs of less than 9 weeks tend to occur in bear markets this would also be an indicator that gold is probably in a bear market and that the previous PC low has a high probability of being taken out.

Notice also that of the 9 entries occurring 9-17 weeks from the PC low, 8 made the next PC low 3-6 weeks from entry (Column I). This is a real jewel of an indicator (if it holds up in more extensive research) because it will keep you from taking profits too soon, and from trying to buy the market until at least the third week following entry. You will also have a high probability time period of 3-6 weeks for oscillator overextensions to identify the PC low.

TSS and SBS Patterns Sorted by PC-Weeks to Entry - Column H											
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**
NBR	**TYPE**	**OSC HIGH**	**PC HIGH**	**DATE ENTRY**	**PRICE ENTRY**	**PC HIGH ?**	**PC LOW WKS TO ENTRY**	**WKS ENTRY TO PC LOW**	**PRICE LOW**	**AMT TO PC LOW**	**% TO PC LOW**
10	TSS	890124	433	890127	401	-	17	3	380	21	5.24
9	SBS	881227	433	890106	409	-	14	6	380	29	7.09
2	TSS	880606	469	220610	453	Y	14	3	432	21	4.64
14	SBS	890511	400	890515	376	-	13	3	356	20	5.32
18	TSS	890817	390	890824	364	-	11	3	357	7	1.92
8	SBS	881205	433	881209	420	Y	10	10	380	40	9.52
13	SBS	890413	400	890428	382	-	10	6	356	26	6.81
5	TSS	880824	449	880829	430	-	9	4	391	39	9.07
17	SBS	890727	390	890807	365	-	9	5	357	8	2.19
12	TSS	890309	400	890327	391	Y	6	10	356	35	8.95
16	TSS	890707	390	890714	377	Y	5	9	357	20	5.31
3	TSS	880721	449	880725	425	Y	4	9	391	44	10.11
20	TSS	890926	XX	891002	366	-	3	X	X	X	X

Table 4

COLUMN I is the number of weeks from entry to PC low.

TSS and SBS Sorted by % to PC Low - Column L											
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**
NBR	**TYPE**	**OSC HIGH**	**PC HIGH**	**DATE ENTRY**	**PRICE ENTRY**	**PC HIGH ?**	**PC LOW WKS TO ENTRY**	**WKS ENTRY TO PC LOW**	**PRICE LOW**	**AMT TO PC LOW**	**% TO PC LOW**
3	TSS	880721	449	880725	425	Y	4	9	391	44	10.11
8	SBS	881205	433	881209	420	Y	10	10	380	40	9.52
5	TSS	880824	449	880829	430	-	9	4	391	39	9.07
12	TSS	890309	400	890327	391	Y	6	10	356	35	8.95
9	SBS	881227	433	890106	409	-	14	6	380	29	7.09
13	SBS	890413	400	890428	382	-	10	6	356	26	6.81
14	SBS	890511	400	890515	376	-	13	3	356	20	5.32
16	TSS	890707	390	890714	377	Y	5	9	357	20	5.31
10	TSS	890124	433	890127	401	-	17	3	380	21	5.24
2	TSS	880606	469	880610	453	Y	14	3	432	21	4.64
17	SBS	890727	390	890807	365	-	9	5	357	8	2.19
18	TSS	890817	390	890824	364	-	11	3	357	7	1.92
20	TSS	890926	XX	891002	366	-	3	X	X	X	X

Table 5

COLUMN J is the price of the PC low.

COLUMN K is the dollar amount from entry to PC low.

COLUMN L is the % decline from entry to PC low, which is the sort used in Table 5 above. The median decline is about 6%, and no decline exceeded 10.11%. These relatively small declines are a function of the price level. No entry occurred above 430, and the smallest declines followed entries at the 364 and 365 entries. The moves that followed entries at the 700, 600 and even 500 Levels, were much greater.

Through 2 relatively simple patterns we have been able to identify the tops of the IS-Week Primary Cycle and develop high probability entry signals. The same process can be applied to intra-day data to give earlier entries in anticipation of triggering an entry in the TSS and SBS.

The 5.6-Year Cycle low, due the last quarter of 1990 or first quarter of 1991, is likely to be followed by a bull market that will take prices above the 1980 high in this decade. A little research now could be very profitable over the next 10 years.

Chapter Fourteen

TRADING AND MONEY MANAGEMENT

Successful futures trading involves four inter-related aspects of trading.

1) MARKET ANALYSIS—determining market trend, topping/bottoming levels, and timing for tops and bottoms.

2) MONEY MANAGEMENT—calculating risk/reward, size of positions and preservation of trading capital.

3) MARKET ENTRY AND EXIT—actual time and price levels for buying and selling.

4) A GAME PLAN—combining all of the above into a Trading Strategy that includes:

- How and when you will enter the market.
- How and when you will take profits.
- Placement and adjustment of trailing stops.
- Other strategies you wish to include in your Game Plan.

Most people learn to trade the futures markets on their own through actual trading in the futures markets. No one can tell you how to trade, but you can learn from the mistakes of others.

The single most important aspect of trading futures, or any highly leveraged market, is money management. You will make mistakes, and you will lose money, but with the proper approach, you can turn futures into a profitable venture.

The rules and guidelines that follow comprise my own trading approach which was developed through years of trading the markets.

Although no two people will trade the markets exactly the same, I suggest you carefully consider these guidelines and incorporate them into your own trading style.

12 CARDINAL MISTAKES IN TRADING FUTURES AND HOW TO OVERCOME THEM

1) Lack of a Game Plan

2) Lack of Money Management

3) Failure to Use Protective Stop/Loss Orders

4) Taking Small Profits and Letting Your Losses Run

5) Overstaying Your position

6) Averaging a Loss

7) Meeting Margin Calls

8) Increasing Your Commitment with Success

9) Overtrading Your Account

10) Failure to Remove Profits from Your Account

11) Changing Your Strategy During Market Hours

12) Lack of Patience, or Trading for Excitement, Not for Profit

In the 20+ Years that I have been trading the futures markets, I have made every possible mistake more often than I like to admit. The most common mistakes are 12 *CARDINAL MISTAKES IN FUTURES TRADING.* Each is listed with possible solutions to help you avoid repeating these mistakes time and time again.

INTRODUCTION

Self-Discipline

It has been my experience in trading futures that the greatest cause of loss is lack of self-discipline—lack of self-discipline to follow your game plan; lack of self-discipline to be patient; lack of self-discipline to take a loss or profit; and lack of self-discipline to follow proven money management concepts. The list can go on and on . . .

Fear and Greed

With the tremendous leverage of the futures markets, you as a trader are intensely exposed to the basic emotions of fear and greed. At certain times, these emotions can make you completely and absolutely irrational, oblivious to what is really happening. It can make you rely on hope, hope that the market will do what you want it to do because it must! Otherwise you will lose all of your risk capital, and sometimes much more. Not surprisingly, that doesn't matter to the market.

Danger of Success

Each time I made one of these 12 CARDINAL MISTAKES, I promised myself not to repeat the mistake, but as I was once again successful, and made large amounts of money, I invariably became overconfident, sloppy and 'dangerous.' You are most likely to make these same mistakes when you are *making money* not losing it. After several losses, you naturally tighten up your discipline and become more conservative, or lose all of your risk capital. Following several losses you are likely to lose the least amount of money on a trade, and unfortunately, you are also likely to make the least amount of money because of the natural tendency to 'grab' the profit and avoid another loss.

Overconfidence

It is following a string of profitable trades that you are most likely to lose *large* amounts of money. If you began trading with $30,000, and limited yourself to 10% risk you could lose a maximum of $3000 per trade. With profits increasing your account to $100,000, you can now lose $10,000 per trade. This is the time you should reduce your risk to 5%; but flushed with success, you are more prone to break your rules, double up your positions and let your losses run when you should have been stopped out. Reviewing my records, I found that some of my largest losses have come from my smallest positions. After making large profits, I let these small positions run into extremely large losses because I was overconfident.

Balance

Trading futures is a game of psychology. It is a game of balance. Emotional extremes create an imbalance. In your elation at being successful, you make mistakes of greed. In your reluctance to take a loss you make mistakes of fear. The tremendous emotional release I have felt when I finally closed out a big losing position was amazing. Fighting the market, yet knowing it was going to go against me, but wanting it to go in my direction, pushing it, *hoping* for it, worrying about it. After a few days or a few weeks of that, it felt as though the weight of the world was taken off my shoulders when I finally took the loss, even when I knew it was the bottom.

Hope

One of the early signs that you have made a serious mistake is when you change your routine and begin to call your broker frequently for quotes and 'reasons' for the market to go your way. Things such as asking him to call the floor for advice, asking him what he thinks you should do (even though he told you 15 minutes earlier), *hoping* that some government action will bail you out. This is not futures trading — it is *hope. Hope* is the most devastating of all emotions in trading futures because it can lull you into complacency. You *know* when you find yourself *hoping* that you are wrong, and should immediately get out of the market; but it takes an unusual amount of self-discipline to take that now very large loss.

Take Profits

Tremendous amounts of money can be made in the futures markets. Profits are there for the making, but the real key to trading futures is not making money; it is keeping it. It is not basking in the elation of success; it is taking your profits and looking over your shoulder.

Profit/Loss Cycle

Every experienced futures trader has a profit/loss cycle. I know mine, and most other professionals know theirs. Without exception, every trader I know has experienced a cycle of success, of over commitment, of over-confidence, followed by losses and the feeling of failure. I have made and lost many millions of dollars and know that these 12 *CARDINAL MISTAKES* can be overcome through strict, unbending self-discipline, and mechanical rules that cannot be broken. Once aware of these mistakes, by adhering to the following rules and guidelines, your odds of making money are greatly increased.

THE 12 CARDINAL MISTAKES

(1) LACK OF A GAME PLAN

Having published an advisory service for twelve years, I have had a lot of contact with the trading public. I am always amazed that year after year, trade after trade, I hear the same approach. A trader who thinks a market is about to start up will usually say something like, "I think gold is going to go up to $600. Where do you think I should buy it?" My response is always, "Well, where are you going to get out if you are wrong?" There is almost always silence or perhaps a puzzled "huh?" They never thought about being wrong, they never thought about where to put their stop, and my next question, "Well, if it does go up, how and where are you going to get out?" often receives the same response.

Better than 90% of the futures traders that I have come in contact with had no game plan. That means they did not know what to do if they were wrong, and they did not know what to do if they were right. The large paper profits they made often turned into a large loss because they did not know where to get out.

One of the most important moves a trader can make is to develop a game plan consisting of basic guidelines:

** Know how and where you are going to enter a market.*

** Know how much money you are going to risk on each and every trade.*

** Know how and where you are going to get out if you are wrong.*

** Know how and where you are going to take profits if you are right.*

** Know how much money you are going to make if you are right.*

** Have a safety stop in case the market does the unexpected.*

** Have an approximate idea of when a market should meet your objectives; of when it should begin to make a move, and if it has not done so, get out.*

(2) LACK OF MONEY MANAGEMENT

Few traders have a workable concept of money management. Money management is controlling your risk through the use of stops, while balancing your potential for loss against your potential for profit.

Let me give you just one example of poor money management. Many traders refer to a trade that might lose $500 if they are wrong and make them $1500 if they are right as a three-to-one reward/risk ratio a 'decent' trade. Yet, that is misleading because the most important aspect of a trade is not how much you are going to make if you are right, but what the odds are of making money, of being right.
What are your odds of losing money, of being wrong?

Good money management means you know your profit objective and the odds of being right or wrong, and controlling your risk with stops. You are better off with a trade in which you might lose $1000 if you are wrong, or make $1000 if you are right, that would work eight times out of ten, than to take a trade where you would make $1500 if you are right and lose only $500 if you are wrong, but which is profitable only one time out of three.

(3) FAILURE TO USE PROTECTIVE STOP/LOSS ORDERS

This fits right in with a game plan and money management. It is the failure to use *stop/loss orders* once you enter the market – not mental stops, but real stops that cannot be moved. All too often traders use mental stops because, in the past, they have been stopped out and then watched the market move in their direction. This does not invalidate the use of stops. It simply means that their stop was in the wrong place — they did not have a good technical stop.

When a stop/loss order that was determined before you entered the market is hit, it means your analysis was wrong, your game plan was wrong. With a mental stop, as soon as the market has gone through your stop price, you no longer act like a rational human being. You are more likely to make mistakes because you are now operating on *fear and hope.* How many times have *you* had a mental stop and instructed your broker to call you when prices went through it. By the time he could call you, the market had run an extra $1000 against you. You probably decided to hold onto the trade in the *hope* that it would let you out on a retracement to your entry price. Unfortunately, it never touched that price again, and you took a larger loss.

Or you made the mistake of holding the trade overnight because you *hoped* it was going to go higher the next day. But the next day it was lower, and by then your loss was so large you couldn't *'afford'* to get out — and what should have been a small loss turned into a disaster.

There is an old saying that the first loss is the smallest. It is also the easiest to take even though it may seem hard at the time.

The only way to overcome this mistake is to have an unbreakable rule (and the discipline to follow it!) that stop/loss orders must be placed each and every time the market is entered. I have found the easiest way to take a loss is to have the stop order waiting before the open or immediately after entering the market. Do your homework when the market is closed, and place your order before the open.
Another rule should be that the initial protective stop/loss order cannot be changed to increase the risk, only to reduce it.

(4) TAKING SMALL PROFITS AND LETTING YOUR LOSSES RUN

A very common mistake among inexperienced traders is taking small profits and letting losses run. This is often the result of no game plan.

After one or two losing trades, you're very likely to take a small profit on the next trade, even though that trade could have turned into a large profit-maker that would have offset all your losses.

Letting your losses run often happens to new futures traders, but is not that uncommon among professional futures traders either. After entering a market, you don't know where to get out. Once you start losing money your tendency is to let your loss get larger and larger as you *hope* that the market will retrace to let you break even - which, of course, it seldom does.

This mistake is overcome by using pre-determined stop/loss orders to prevent your losses from running, and following your game plan to take profits at your profit objective, or with a trailing stop.

(6) AVERAGING A LOSS

This is usually a holdover from trading stocks. In futures, with five or ten percent margin, averaging a loss can be disastrous.

A typical approach is that after you have bought a contract and it drops lower, you figure that since it was a good buy then, it is a better buy now. You can also justify averaging down by figuring you will have a lower average entry price and require a smaller move to break even. Unfortunately, you will lose twice as much if the market continues against you, as it almost always does.

There are approaches that will allow you to buy a market at one price level, add on at a lower level, and add on again at even a lower level, as long as this was your *pre-determined* game plan *before* you bought the first contract. And you must also have an unmovable stop/loss order that takes you out of all contracts.

This mistake is easily overcome by having a strict rule that you never average a loss unless your pre-determined game plan called for buying the market at lower levels with an unmovable stop/loss order to take you out of all contracts if it is hit.

(7) MEETING MARGIN CALLS

Most often, meeting a margin call will only increase your loss. A margin call means you are wrong in the market, and your position should be closed out. Margin calls are met because people do not want to admit being wrong and take a loss; because they *hope* the market will eventually go in their direction.

Margin calls are the result of making one or more of the other 12 CARDINAL MISTAKES such as not having a game plan, not using stop/loss orders, overtrading and poor money management.

You should never have a margin call, much less meet one using the rules to overcome the 12 CARDINAL MISTAKES.

(8) INCREASING YOUR COMMITMENT WITH SUCCESS

One of the most dangerous mistakes you can make in trading is to increase your exposure as you become more successful. Just by being successful you will risk more dollars per trade because you have more money. But, because you have more money (and confidence) when successful, you are also likely to take larger percentage risks. Not surprisingly, this ruins more futures traders than a series of small losses.

You can overcome this mistake by not allowing your percentage commitment to increase as you realize profits (*it should actually decrease), and by maintaining your stop/loss discipline.*

(9) OVERTRADING YOUR ACCOUNT

••• or risking too large a percentage of equity on any single trade. Either with too large a dollar risk per contract or by trading too many contracts for any single trade, or by trading too many markets.

This often happens after a period of success when you *'know'* that the market is going to do something. You are so certain that this is going to be a really big move, that you risk much more than the maximum 5-10% of your equity. Already emotionally out of balance, all it takes is a couple of limit moves against you and you are bust.

To prevent this mistake from occurring, you must have a hard and fast rule that you can risk no more than a certain percentage of your equity on any trade regardless of how good the trade looks, and should have a program for lowering that percentage as your equity increases.

(10) FAILURE TO REMOVE PROFITS FROM YOUR ACCOUNT

It seems to be a natural law that the futures markets, over a given period of time will allow you to make only so much money and then you are going to have to start giving some back. Yet, no more than a handful of the futures traders I know have a rule to take profits *out* of their account, (but most never fail to put more money into their accounts to meet margin calls). They leave profits in their account and go for the 'big trade,' the one trade that will give them a real 'killing,' and that usually kills their profits.

This can be overcome by pre-determining an equity level at which you remove profits from your account. When you make profits in the futures markets, take some money out and put it somewhere else. The markets are not a cornucopia. If you chart your equity, you will see that it will also move in cycles. You will make some, lose some, make some, lose some. By taking money out of your account when you are profitable, you will not make the mistake of losing larger amounts of money when your down cycle begins.

(11) CHANGING YOUR STRATEGY DURING MARKET HOURS

During market hours you are subject to emotional reactions of fear and greed much more than you are when the market is closed. Have you ever sat down in the quiet of the night before the trading day, and very calmly figured out what you wanted to do the next day; yet, shortly after the market opened you did exactly the opposite of what you had planned?

With rare exception, the best approach is to *not* change your trading strategy during market hours.

Overcome this mistake by developing your trading strategy before the market opens and having the discipline to not change your game plan during the day, unless it is to stand aside.

(12) LACK OF PATIENCE (OR TRADING FOR EXCITEMENT. NOT FOR PROFIT)

The average life of a futures trader is somewhere between five minutes and nine months. Not all traders trade because they want to make money. Many trade because they want the action. Think about it . . . must you have a trade a day, or can you patiently wait for the high probability trades, even if it means standing aside for a week of two?

You must evaluate your own trading and determine whether you really trade to make money, or for the action and excitement. To overcome this mistake, you must develop patience, do your homework, and research the markets for high probability trades.

For those of you that do wish to learn how to make money in futures, rest assured you can. Do not expect to make money in each and every trade, but if you avoid the 12 CARDINAL MISTAKES, you must make money over an extended period of time. Certainly the market will do the unexpected, and at times you will lose more than you expected; but if you consciously try not to make these mistakes, you must make money.

By studying the past history of a market you can isolate high probability trades and situations that offer exceptionally large profits relative to the dollar risk . . . if you have the patience to wait for them.

Part II
CONTROLLED RISK MONEY MANAGEMENT

Most futures traders spend 99% of their time on analysis and the buying and selling of markets. Many of these traders ultimately join the legions of ex-futures traders because they ignored the most important aspect of speculation — money management.

You can be a good analyst and lose money due to poor money management. But, if you have sound, market-proven money management concepts, and the discipline to follow them, you will never lose all of your money.

Since developing the following money management concepts in the mid-1970s, I've had large profits as well as large losses — but never a single margin call. There is no guarantee that you will make money using these money management rules, but you will never lose the farm.

Before entering the market, determine a stop/loss as well as a profit objective.

Many traders often enter the market with a price objective, but without a clearly defined protective stop. When the market moves against them they are often forced out by the size of their margin call. They lose control, and the results are often disastrous. What should have been a relatively small loss becomes an extremely large loss.

With a pre-determined price objective and a predetermined stop/loss, you know where you will get out if you are wrong and where you will get out if you are right. You have control. *The stop/loss must be in the market, not in your mind.*

If you have been stopped out only to have the market make the move without you, the problem was how you determined where to place your stop, not whether to use stops.

Never risk more than 10% of equity on any single trade. If possible, risk 5% or less. Never risk more than 20% in anyone complex.

If you are like most traders, you always figure how much you could make. The question of how much you could lose if you're wrong is never quantified. You are out of control.

The most important question in trading leveraged markets is – *How much of your equity is at risk?* On any given day, for any given trade, you must know how much you will lose if the market goes against you. You can maintain control by never risking more

than 10% in any one trade and by adjusting stops so you are never risking more than a maximum of 20% of open equity at any time.

In reality, the 20% risk factor should exist for only a few days at most, as explained in the following multiple contract which will greatly reduce your exposure within several days of entering the market.

TRADE IN MULTIPLE CONTRACTS

One of the most important concepts is to trade multiples of three. Whether two, three, ten, or a hundred contracts are traded, most traders make the mistake of entering and exiting all contracts at the same price level. They are going to be all right or all wrong. In using multiple contracts, no fewer than three contracts should be traded per position, and one-third of each position should have a different profit objective. If trading 3 contracts, each contract would have a different price objective; if trading 90 contracts, each grouping of 30 contracts would have a different price objective . . . with each one-third of a position having a different price objective you can be wrong on your expectations and still make money!

For example, a $30,000 account risking 10% of equity can afford to risk $3,000 on the overall position. If the dollar risk per contract from point of entry to stop/loss is $900, commissions and 'skiddage' might equal another $100; the dollar risk per contract is $1,000 with a total $3000 for the three contracts in the position.

Contract No.1: The Money Contract

The first contract, called the Money contract, is the most important. When possible, the profit figure for the Money Contract should equal the dollar risk, but should seldom be more than $1,000 under normal market conditions. In our example, the pre-determined dollar risk per contract, including 'skiddage' is $1,000, so our pre-determined profit objective for the Money Contract is also $1,000.

It is important to have all three contracts on before the market moves. All three contracts can be entered at once, or can be put on at different price levels. Once the three contracts are positioned, place an exit order for the money position at the pre-determined profit objective. This order should be placed every day before the open.

Profits on the money contract should be taken as quickly as possible. Normally, the money contract should be liquidated within five. If not, you may be expecting too much from the market you are trading, or the market may be telling you that it is not going to move in your direction.

When the money contract is liquidated, the whole tone of the market changes because, now, your risk is lowered by two-thirds of your initial risk exposure, and best of all, you have $1,000 in closed profits in your account.

In our example of a $30,000 account risking 10%, a three-contract position was entered at $1,000 risking 10%, or 3-1/3% risk per contract. Once profits have been taken on the Money Contract, not only has its 3-1/3% risk of $1000 been eliminated, but the $1,000 profit in pocket effectively negates the exposure of the 3-1/3% risk of $1000 for the No. 2 Short-Term Contract, dropping the total dollar risk to about 3-1/3%, or $1000, for the two remaining positions — your emotional commitment is similarly reduced.

Contract No. 2: The Short-Term Profit Objective Contract

The Short-Term Contract is also designed to take profits at a pre-determined profit objective. Normally, this can be the crest of a Trading Cycle in a Bull market, or the Trading Cycle trough in a Bear market. Either get out at this price objective, or, as prices approach your price objective, move stops closer and have the market take you out.

In our $30,000 account, if you make $2000 on the Short-term Contract, you now have $3,000 in closed profits and a third position that has a $2,000 open profit.

Contract No.3: The Long-Term Profit Objective Contract

The purpose of the Long-Term Contract is to keep you in the market for the BIG moves. Assuming you liquidated the Short-Term Contract near the Trading Cycle top, the Long-Term Contract will give up some profit as the Trading Cycle bottoms. But, the purpose of the Long-Term Contract is to comfortably ride with the market until your long-term price objective is reached, which is often the price objective for the primary Cycle or the Seasonal Cycle.

These money management concepts can be modified depending upon the position of the Trading Cycle and when the buy/sell signal is generated.

Shown in the example on the following page, is the first three contract position, which is entered at the Trading Cycle bottom with a dollar risk of about $1000 per contract (point of entry to the Trading Cycle low, which is the stop; plus commissions and expected 'skiddage').

Within several days of entry, the No. 1 Money Contract should be liquidated with $1,000 profit. As the Trading Cycle moves up a $1000 profit is taken as the No. 2 Short-Term Profit Objective is met. The No. 3 Contract is held through the Trading Cycle bottom in anticipation of reaching the higher primary Cycle or Seasonal Cycle price objective.

As the Trading Cycle bottoms, three more contracts are bought for a total of four contracts — two Long-Term Contracts, the Money Contract and the Short-Term Profit

Objective Contract. As the market moves up, the money contract is liquidated at the pre-determined price objective and a short-term profit is taken as the Trading Cyle tops. Both Long-Term Contracts are held, expecting higher prices as the long-term objective is met.

As the next Trading Cycle bottoms in this example, the market does not retrace as expected; so new contracts are not added. The market takes off without the additional three contracts, but leaves two Long-Term Contracts that can be liquidated at two *different* price levels as the Primary Cycle tops. Should the market fail to reach the long-term price objective, technically determined fail-safe stops must be maintained for the two remaining Long-Term Contract. But, assuming all goes well, each of the two Long-Term Contracts can be liquidated at different price levels as the long-term objective is met. (My own approach is to take one-half of the profits on strength, before the market tops.)

PART III

ENTERING AND EXITING THE MARKETS LIKE A PROFESSIONAL

Many trading systems and methods base entry and exit signals on the closing price. Yet, more often than not, actually entering on the close gives a poor entry price with a large dollar risk because a market on such a day frequently closes near the extreme of the day's range.

If you do not wish to trade on the close, you have only two alternatives: (1) wait to enter until the day after the close signals a bottom (or top) to enter the market, taking a chance on incurring an even larger dollar risk, or missing the move should the market gap open the next day; or, (2) attempt to anticipate the close and enter before the close. While the second approach usually lowers the dollar risk per trade, the probability of incurring a loss is increased, especially when buying a bottom or selling a top.

In an effort to solve this dilemma, I spent two years in the early '70s hand-charting intra-day price movement. As I did this, I noticed price levels and time factors that were common to all markets. The following brief summary explains the basics on how to enter and exit the market before the close with a pre-determined dollar risk. This approach forces you to wait for the market to tell you that it is ready to go up (or down). Use of this approach assumes a reasonably reliable means of analysis to determine approximately when a bottom (or top) is due . . . plus the discipline to follow your rules.

A consistent means of entering and exiting the market is one of the most important elements of success in the highly leveraged futures markets. Professionals let the market tell them when to get in and when to get out. Proper use of market entry and exit rules will increase profits and provide you with meaningful stops that take much of the guesswork out of getting in and out of the market. They give you a pre-determined dollar risk for the trade before the order is placed.

PIVOT POINTS

Seven key price levels called 'Pivot Points' are watched closely by all market professionals, and can be used in combination with four time periods during the day to determine when to enter or exit the market. The key price levels, or Pivot Points, are the previous days high, low, and close and today's (day of entry) open, high, low, and close.

Price action on the day of entry often gives highly reliable clues about future direction by the way prices act relative to these Pivot Points. These points become more effective as the day progresses – the later in the day a Pivot Point is taken out, the greater the probability of continued movement in that direction the following day.

For example, today's price penetrating yesterday's high one-half hour after the open is not nearly as significant as today's price penetrating yesterday's high during the last 35 minutes of the trading session.

Time is Important

The four time periods that have special signs-in analyzing Pivot Points are:

1) The open.

2) Thirty minutes after the open of each market range from 7:20 a.m. until 9:00 a.m. (Chicago time).

3) Mid-day — about 11:20 to 11:45 a.m., Chicago time — same for all markets.

6) Thirty-five minutes before the close.

MARKET ENTRY SHEET

The accompanying Market Entry Sheet illustrates the placing of buy and sell orders at various Pivot Points, according to the times of the day. 'B' indicates the suggested place to have a buy stop resting; 'S' indicates the suggested spot for a resting sell stop. *These stops could be as close as one tick from a Pivot Point or as far away as 1.5% of the price at the Pivot Point, depending upon volatility and market history.*

The Market Entry Sheet includes a section for going long and a section for going short. Each section is further divided for an open above, or an open below, the previous day's close.

Let's assume that your analysis suggests it is time to go long or to close out a short position. Look at the section, 'Buy Long', situation 1A, which shows price data where the opening price appears above the previous day's close.

Price has not exceeded the previous day's high (HE < HY) is translated as: high of entry day (HE) J.S less than «) high of yesterday (HY). Price is above the previous day's low (LE > LY) is translated as: low of entry day (LE) is greater than (» low of yesterday (LY). The range of the day extends below the previous day's close (R < C). While the same picture is given for all time sequences (note that the buy (B) and sell (S) signals move closer to price activity as the day progresses.

As a general rule of thumb, stand aside on the open and for the first 30 minutes after the open. If prices stay in the same range after 30 minutes of trading (1B), you can place a buy stop above the most distant pivot Point — the previous day's high, in this case. If prices move up and fill the buy order, place a protective sell stop below the most

distant Pivot Point — the previous day's low. This allows you to calculate your dollar risk for the trade before you enter the market.

Move Stop Orders

If the range of the day stays the same, the buy stop could be lowered to the next closest Pivot Point after mid-day (1C). Our illustration maintains the buy stop at the previous day's high because the range is inside of the previous day.

Thirty-five minutes before the close (10), the buy stop has been lowered to today's high, and the protective stop would be raised to today's open if the buy order is filled.

Other variations depend on price action: The buy order could have been kept at the previous day's high, moved down to the current day's open or lowered to the previous day's close; the sell stop also could have been placed at another Pivot Point.

Now, suppose prices opened as they did in 1A but moved higher during the first 30 minutes. Simply find the picture that corresponds to actual price activity in the Open + 30 minutes' column — Situation 5B, in this case — and place your order at the indicated Pivot Point. Over the next two time periods, move your orders to the Pivot Points indicated in 5C and 5D.

While this Market Entry Sheet does not illustrate all possible situations, it does include the most common market configurations. The Pivot Points chosen are not necessarily the best places to have orders resting; placement of stops will depend upon the individual markets, so some judgment must be used during the day. The individual market volatility, distance of prices from the Pivot Point, penetration of other Pivot Points and follow-through, or lack of it, after earlier penetrations of a Pivot Point are just a few of the factors that must be considered when deciding which pivot Point to use.

A word of caution: Different markets have different characteristics; the profitable use of Pivot Points in one market will not necessarily produce similar results in other markets. Currencies, for example, have been known to knock out both high and low Pivot Points during the last 30 minutes of trading while such action is almost never seen in gold.

Before using Pivot Points in the markets, learn the characteristics of your favorite market by historical research or paper trading until you feel comfortable with both the concept and the application.

KEY TO MARKET ENTRY SHEET

H	High
L	Low
C	Close
R	Range (H minus L) for Entry Day
Y	Yesterday
E	Day of Entry/Exit 'Today'
B	Buy
S	Sell

HE<HY	High of Entry Day is *lower* than Yesterday's High
HE>HY	High of Entry Day is *higher* than Yesterday's High
R>C	Range of Entry Day extends *above* Yesterday's Close
R<C	Range of Entry Day extends *below* Yesterday's Close
LE<LY	Low of Entry Day is *lower* than Yesterday's Low
LE>LY	Low of Entry Day is *higher* than Yesterday's Low

MARKET ENTRY SHEET

Pivot Point Rules

1) Market entry/exit Pivot Points work best at cycle tops and bottoms, and oscillator overextensions. Prices move in cyclical patterns, and you should be in tune with these cyclical phases to use Pivot Point rules to catch market turns. However, price patterns on the Market Entry Sheet and Pivot Points can be used whenever oscillators indicate that a bottom or top is forming, whether you follow cycles or not.

2) The Pivot Points are excellent filters for intra-day trading systems or oscillators. If the trading signal is good, it should be followed by penetration of the nearest pivot Point.

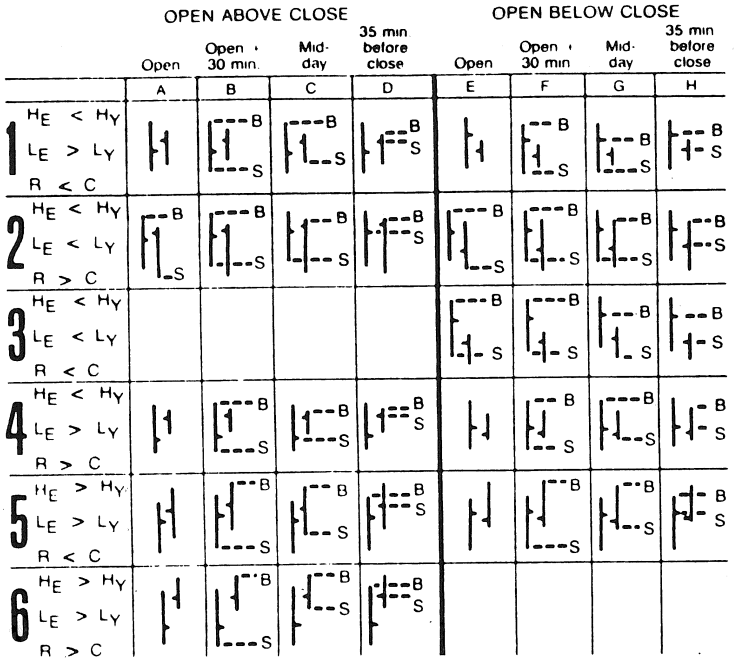
3) When using Pivot Points to establish a position, always enter a protective stop/loss order immediately after your initial order is filled.

4) If the market does not appear to be closing as expected, get out of the market. A good rule of thumb is the trading maxim: *When in doubt, stay out; if in doubt, get out!*

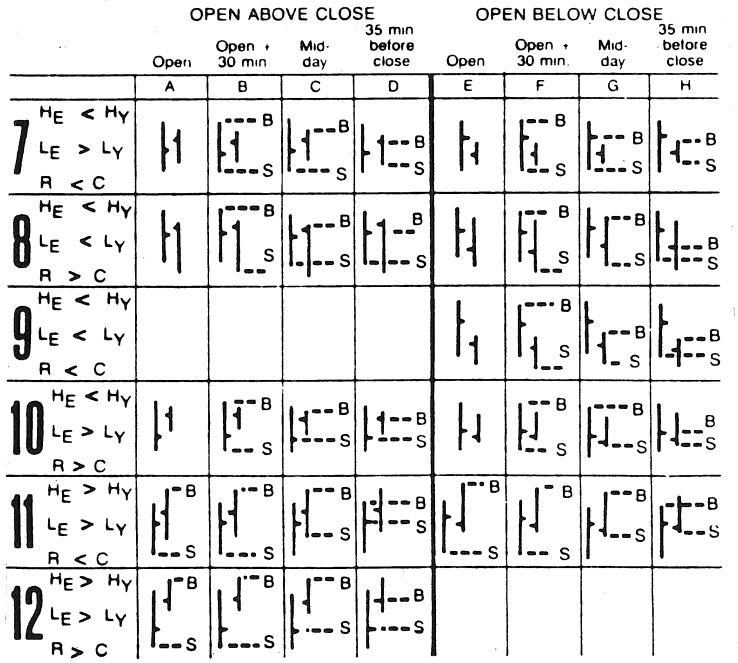
5) As with cycles, the use of Pivot Points is an art, not a science. Different markets have different characteristics, and Pivot Points work better in some markets than in others. Some markets work better at different times of the day than other markets. As you gain experience in using Pivot Points, you will be able to modify these guidelines to fit your own trading personality.

MARKET ENTRY SHEET

BUY LONG OR TAKE PROFITS FROM SHORT POSITIONS
(Market must close above previous day's close and above the open on entry day?



SELL SHORT OR TAKE PROFITS FROM LONG POSITION
(Market must close below previous day's close and below the open on entry day)



APPENDIX

OSCILLATOR CALCULATIONS

COMMODITY CHANNEL INDEX (CCI)

The CCI is calculated as follows:

1) Calculate each day's typical price by adding each day's high, low, close, and dividing by 3.

2) Compute a moving average of these typical prices. The length of the CCI is the length of the moving average.

3) Calculate the mean deviation for the number of days desired in the moving average.

4) The CCI is then calculated by subtracting the moving average from today's typical price and dividing by the mean deviation times the constant .015.

The purpose of the .015 constant is to scale the CCI values so 70-80% of the random fluctuations fall within a +100% to a -100% channel. +100% is the Sell Line; -100% is the Buy Line.

For more information:
See "Commodity Channel Index", by Lambert, Donald R., COMMODITIES magazine, Oct. 1980, pp. 40-41.

MOVING AVERAGE CONVERGENCE-DIVERGENCE (MACD)

The MACD Lines for the COMPUTRAC MACD are calculated as follows:

1) The MACD (Moving Average Convergence-Divergence) line is the difference between: a 12 day or .15 EMA (Exponential Moving Average) of the Close, and a 26-day or .075 EMA of the close.

2) The "Crossover" line is a 9-day or .20 EMA of the MACD line.

Due to the nature of exponential moving averages, MACDs of the same calculation that were begun at different time periods will be slightly different.

For more information:

See The Moving Average Convergence-Divergence Method, by Gerald Appel, 1979. SIGNALERT Corporation, 40 Middle Neck Road, Great Neck NY 11021.

MOVING AVERAGE

A Moving Average is calculated by averaging "X" time periods, including the most current:

$$MA = (N) + (N - 1) + (N - 2) + \ldots + (N - X + 1)\ X$$

where N is the most recent price and X is the number of the time periods used for the moving average.

MOVING AVERAGE, EXPONENTIAL

The Exponential Moving Average is calculated as follows:

$$EMA = (N - Y) \times K + Y$$

where N = the most current price.

Y = yesterday's EMA value, and

K = 2 / (X + 1), where X = the # of days in the time period.

RELATIVE STRENGTH INDICATOR (RSI)

The RSI is calculated as follows:

$$RSI = 100 - \left[\frac{100}{1 + RS}\right] \qquad RS = \frac{\text{Avg of X Days' Closes UP}}{\text{Avg of X Days' Closes DOWN}}$$

$$\text{Avg UP} = \frac{\text{SUM of X Days' Closes UP}}{X}$$

RSI (cont'd)

$$\text{Avg DOWN} = \frac{\text{SUM of X days' Closes DOWN}}{X}$$

where X is the term, or time period, for the calculations.

The UP sum is determined by first noting the UP days within the time period and adding together each one's respective gain over the previous close. The DOWN sum is obtained by noting the DOWN days within the same period and adding together each one's respective loss from the previous day's close. (After the initial period, each subsequent UP or DOWN sum is determined by multiplying each by (X - 1)/X and adding to the UP or DOWN sum (1/X) x Today's Figure, where X is the number of days in the Period.

For more information:

See New Concepts in Technical Trading Systems, by Wilder J. Welles, Jr., Greensboro, NC, PP. 63-70.

THE STOCHASTIC

A 10-Stochastic is calculated as follows:

The "K" line is calculated as:

$$K = 100 [(C – L1O) / (H1O – L1O)]$$

where C is the current CLOSE. L1O is the LOWEST LOW of the previous 10 days, and H1O is the HIGHEST HIGH of the same time period.

The Crossover line, "%D", is calculated as follows:

$$\%D = 100 \times (H3 / L3)$$

where H3 is the 3-day SUM of (C – L1O), and L3 is the 3-day SUM of (H1O L1O). To calculate the slow Stochastic, %D becomes the figure for %K, and the new %D, or Crossover, is calculated from the original %D above as follows:

$$\%D \text{ slow} = [\%D + (\%D - 1) + (\%D - 2)] / 3$$

PRICE DATA DISKETTE

Historical data for all charts in the book is available in a 5 1/4" or 3 1/2" Diskette. Each data series is the nearby contract until expiration, can be ordered in the COMPUTRAC DIF Format, or ASCII.

BONDS-W.DIF	WEEKLY T-BONDS	810601 - 900205
BONDS-D.DIF	DAILY T-BONDS	880404 - 900209

GOLD-W.DIF	WEEKLY CMX GOLD	810102 - 900209
GOLD-D.DIF	DAILY CMX GOLD	880201 - 891201

JYEN-W.DIF	WEEKLY JAPANESE YEN	810102 - 900209

S&PC-W.DIF	WEEKLY CASH S&P	810102 - 900209
S&PCA-M.DIF	MONTHLY CASH S&P	500131 - 900228

SFRNC-M.DIF	MONTHLY SWISS FRANC	740131 - 900228
SFRNC-W.DIF	WEEKLY SWISS FRANC	820604 - 900209

SOYCBT-M.DIF	MONTHLY SOYBEANS	550131 - 900228
SOYCBT-W.DIF	WEEKLY SOYBEANS	810102 - 900209
SOYCBT-D.DIF	DAILY SOYBEANS	880209 - 900208

SYOCBT-W.DIF	WEEKLY SOYBEAN OIL	810102 - 900209

The length of data in a chart was limited by the plotting capabilities of the plotting program.

Research for the charts and tables was done using the TELERATEC/COMPUTRAC PROGRAM. While some of the charts in the book are from COMPUTRAC, most are H. P. plots which were used because of the clean format. The COMPUTRAC SNAP PROGRAM, which produces exceptional charts, was not used because the data length for an individual chart was not long enough.

The ideal situation is to conduct historical research with the COMPUTRAC PROGRAM or any analytical program that allows long periods of data to be easily viewed, and to use the COMPUTRAC SNAP PROGRAM or an on line system to monitor current time analysis.