The ISEC 250 is an analog computer designed to solve one type of equation related to stock market values. It helps resolve the problem of the relative merits of individual securities in the context of the current market climate. It helps to set price objectives, stop loss points, relative risk levels and can be used to study the effect of earnings estimates. The computer has been designed with a sound fundamental approach to the market in mind and provides the needed objectivity to maximize capital gains.

The information required to program any security consists of:

1.   The current Dow Jones Average obtainable from the Wall Street Journal or many other publications.

2.   The price earnings ratio and latest 12 months earnings for the Dow Jones Average. These are published in Barrons or in the Monday issue of the Wall Street Journal.

3.   The current price, the approximate high price during the last three months and the approximate low price during the last three months of the stock to be programmed. These can be obtained from back issues of Barrons, by observation of a stock price chart or other sources.

4.   The current 12 months earnings and the 12 months earnings for the previous reporting period. These can be obtained from various services; Barrons, stock guides, etc.

Input A is calculated once a week and is the same for all calculations during the week. The calculation is made as follows:

Determine the Dow Jones Average price earnings ratio from the Wall Street Journal. Look up the value for Input A in the Table of Values for Input A. Subtract 1 from this value for each 1% gain in the earnings of the Average over the last 3 months. Add 1 to the Input A value for each 1% decline in earnings over the last 3 months.

Example: Price Earnings reported in the Monday Wall Street Journal is 15.9 and the latest 12 months earnings for the Dow is $53.45.

ISEC

Calculation: Input A value in the table is 89. Three months ago
              the earnings were listed as $51.75, therefore, there has
              been a gain of $1.70 in the period or about 3%. As a
              result, the Input A value of 89 should have 3 subtracted
              from it to give an Input A dial setting of 86.

Input A value	= 89	Current Earnings	53.45
	- 3	3 mo. ago earnings	51.75
Dial setting	= 86	difference	1.70 or 3%

Input B is calculated for each security being programmed as follows:

The percentage change from the prior 12 months earnings reported last
quarter to the current 12 months earnings reported this quarter is
calculated. For example:

	1Q	2Q	3Q	4Q	New Q
	.20	.25	.30	.35	.40
12 mos. earnings				1.10	1.30
Old 12 mos. 1.10					
New 12 mos. 1.30					

If this change is positive, one point for each 2% gain is added to 125.
If the change is negative, one point for each 2% drop is subtracted from
125. The result is the dial setting for Input B.

Example: Current earnings are 2.15, while prior 12 months earnings
          are 1.92. The percentage gain is about 12%, therefore,
          six points should be added to 125. This gives an Input B
          dial setting of 131.

The Input B value for deficit earnings is calculated in a similar manner
with the percentage gain or loss being determined by dividing the
difference between the old and new earnings by the old earnings value.
It is recommended that a maximum of 100% gain be used as large values
tend to be the results of distortions.

Input C is calculated for each security being programmed as follows:

Using the current 12 months' earnings calculate the price earnings
ratio for the highest price in the last three months and the lowest
price in the last three months. Subtract the lowest value from the
highest and look up Input C in the Input C table.

Example: The highest price of the security was 32 1/2, the earnings
         are $2.10, therefore, the price earnings ratio is 15.5.
         The lowest price was 26 1/4 which gives a price earnings
         12.5. When these are subtracted (15.5 - 12.5 = 3.0) and
         the value looked up in the table under the column headed
         by the earnings (2.10) the value for the Input C dial
         setting is 158. If the earnings were between 2.10 and
         2.20 the value for the dial setting can be easily approx-
         imated between the figures in the two columns.

         For example, if the earnings were 2.15 and the difference
         between price earnings ratios was 3, the value of the dial
         setting would be 154.

With deficit earnings, the Input C value = .1000 and the Price Earnings
difference = 15.

The volatility number which is used for price projections and stop loss points
is calculated by taking the same difference in price earnings ratios used in
the Input C calculation and looking up the figure to use in the volatility table.

Example: Using the previous price earnings difference of 3 and an
         Input C of 158, the table for volatility gives a value
         of 3.

When reported earnings are a deficit an Input C of 1000 is used and
the volatility number is calculated as though the P/E difference
was 15.

The basic calculation that the computer does can be represented as follows:

$$\frac{\text{Input B}}{10} - \frac{\text{Input A} \times \text{Dow Jones}}{1000} - \frac{\text{Input C} \times \text{Stock Price}}{1000} = \text{SPIN or Relative value}$$

The Input B calculation can be expressed as:

$$\text{Input B} = 125 = 50 \times \frac{(\text{New Earnings} - \text{Old Earnings})}{\text{Old Earnings}}$$

A   INPUT TABLE

Dow Jones P/E	Input A
8.0 - 10.0	84
10.1 - 12	85
12.1 - 14	87
14.1 - 16	89
16.1 - 18	90
18.1 - 20	94
20.1 - 22	97
22.1 - 24	100
24.1 +	105

C INPUT TABLE

Earnings	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	1.00
*1.00	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1.25	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	941	889	842	800
1.50	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	952	889	833	784	741	702	667
1.75	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	952	879	816	762	714	672	635	602	571
2.00	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	909	833	769	714	667	625	588	556	526	500
2.25	1000	1000	1000	1000	1000	1000	1000	1000	988	889	808	741	684	635	593	556	523	494	468	444
2.50	1000	1000	1000	1000	1000	1000	1000	1000	889	800	727	667	615	571	533	500	471	444	421	400
2.75	1000	1000	1000	1000	1000	1000	1000	909	808	727	661	606	559	519	485	455	428	404	383	364
3.00	1000	1000	1000	1000	1000	1000	952	833	741	667	606	556	513	476	444	417	392	370	351	333
3.25	1000	1000	1000	1000	1000	1000	879	769	684	615	559	513	473	440	410	385	362	342	324	308
3.50	1000	1000	1000	1000	1000	952	816	714	635	571	519	476	440	408	381	357	336	317	301	286
3.75	1000	1000	1000	1000	1000	889	762	667	593	533	485	444	410	381	356	333	314	296	281	267
4.00	1000	1000	1000	1000	1000	833	714	625	556	500	455	417	385	357	333	313	294	278	263	250
4.25	1000	1000	1000	1000	941	784	672	588	523	471	428	392	362	336	314	294	277	261	248	235
4.50	1000	1000	1000	1000	889	741	635	556	494	444	404	370	342	317	296	278	261	247	234	222
4.75	1000	1000	1000	1000	842	702	602	526	468	421	383	351	324	301	281	263	248	234	222	211
5.00	1000	1000	1000	1000	800	667	571	500	444	400	364	333	308	286	267	250	235	222	211	200
5.50	1000	1000	1000	909	727	606	519	455	404	364	331	303	280	260	242	227	214	202	191	182
6.00	1000	1000	1000	833	667	556	476	417	370	333	303	278	256	238	222	208	196	185	175	167
6.50	1000	1000	1000	769	615	513	440	385	342	308	280	256	237	220	205	192	181	171	162	154
7.00	1000	1000	952	714	571	476	408	357	317	286	260	238	220	204	190	179	168	159	150	143
7.50	1000	1000	889	667	533	444	381	333	296	267	242	222	205	190	178	167	157	148	140	133
8.00	1000	1000	833	625	500	417	357	313	278	250	227	208	192	179	167	156	147	139	132	125
8.50	1000	1000	784	588	471	392	336	294	261	235	214	196	181	168	157	147	138	131	124	118
9.00	1000	1000	741	556	444	370	317	278	247	222	202	185	171	159	148	139	131	123	117	111
9.50	1000	1000	702	526	421	351	301	263	234	211	191	175	162	150	140	132	124	117	111	105
10.00	1000	1000	667	500	400	333	286	250	222	200	182	167	154	143	133	125	118	111	105	100
11.00	1000	909	606	455	364	303	260	227	202	182	165	152	140	130	121	114	107	101	96	91
12.00	1000	833	556	417	333	278	238	208	185	167	152	139	128	119	111	104	98	93	88	83
13.00	1000	769	513	385	308	256	220	192	171	154	140	128	118	110	103	96	90	85	81	77
14.00	1000	714	476	357	286	238	204	179	159	143	130	119	110	102	95	89	84	79	75	71
15.00	1000	667	444	333	267	222	190	167	148	133	121	111	103	95	89	83	78	74	70	67
16.00	1000	625	417	313	250	208	179	156	139	125	114	104	96	89	83	78	74	69	66	63
17.00	1000	588	392	294	235	196	168	147	131	118	107	98	90	84	78	74	69	65	62	59
18.00	1000	556	370	278	222	185	159	139	123	111	101	93	85	79	74	69	65	62	58	56
19.00	1000	526	351	263	211	175	150	132	117	105	96	88	81	75	70	66	62	58	55	53
20.00	1000	500	333	250	200	167	143	125	111	100	91	83	77	71	67	63	59	56	53	50
21.00	952	476	317	238	190	159	136	119	106	95	87	79	73	68	63	60	56	53	50	48
22.00	909	455	303	227	182	152	130	114	101	91	83	76	70	65	61	57	53	51	48	45
23.00	870	435	290	217	174	145	124	109	97	87	79	72	67	62	58	54	51	48	46	43
24.00	833	417	278	208	167	139	119	104	93	83	76	69	64	60	56	52	49	46	44	42
25.00	800	400	267	200	160	133	114	100	89	80	73	67	62	57	53	50	47	44	42	40

*Difference between High PE and Low PE

C INPUT TABLE

Earnings	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	3.00
*1.00	909	833	769	714	667	625	588	556	526	500	476	455	435	417	400	385	370	357	344	333
1.25	727	667	615	571	535	500	472	444	422	400	382	364	348	333	321	308	297	286	276	267
1.50	606	556	513	476	444	417	392	370	351	333	317	303	290	278	267	256	247	238	230	222
1.75	519	476	440	408	382	357	337	317	301	286	272	260	249	238	229	220	212	204	197	190
2.00	454	416	385	358	333	313	294	278	263	250	238	223	218	208	200	192	185	178	172	167
2.25	404	370	342	317	297	278	262	247	234	222	212	202	193	185	178	171	165	159	153	148
2.50	364	333	308	285	267	250	236	222	211	200	191	182	174	167	160	154	148	143	138	134
2.75	331	303	280	260	243	227	214	202	192	182	173	165	158	152	146	140	135	130	125	121
3.00	303	278	256	238	222	208	196	185	175	167	158	151	145	139	133	128	123	119	115	111
3.25	280	256	237	220	205	192	181	171	162	154	147	140	134	128	123	118	114	110	106	103
3.50	260	238	220	204	191	178	168	158	150	143	136	130	124	119	114	110	106	102	98	95
3.75	242	222	205	190	178	167	157	148	140	133	127	121	116	111	107	103	99	95	92	89
4.00	227	208	192	178	167	157	147	139	131	125	119	112	109	104	100	96	92	89	86	83
4.25	213	196	181	168	157	147	139	131	124	118	112	107	102	98	94	90	87	84	81	78
4.50	202	185	171	158	148	139	131	123	117	111	106	101	96	93	89	85	82	80	76	74
4.75	191	175	162	150	140	132	124	117	111	105	100	96	92	88	84	81	78	75	73	70
5.00	182	167	154	142	135	126	116	111	106	100	96	92	88	84	80	78	74	72	68	66
5.50	165	152	140	130	121	113	107	101	96	91	86	82	79	76	73	70	67	65	62	60
6.00	152	139	128	119	111	104	98	93	87	83	79	75	73	69	66	64	61	59	57	55
6.50	140	128	118	110	102	96	90	85	81	77	73	70	67	64	61	59	57	55	53	51
7.00	130	119	110	102	95	89	84	79	75	71	68	65	62	60	57	55	53	51	49	47
7.50	121	111	103	95	89	83	78	74	70	66	63	60	58	55	53	51	50	47	46	44
8.00	114	104	96	89	83	78	73	69	66	63	59	56	54	52	50	48	46	44	43	41
8.50	107	98	90	84	78	73	69	65	62	59	56	53	51	49	47	45	43	42	40	39
9.00	101	93	85	79	74	69	65	61	58	55	53	50	48	46	44	42	41	40	38	37
9.50	96	88	81	75	70	66	62	58	55	52	50	48	46	44	42	40	39	37	36	35
10.00	91	83	77	71	67	63	58	56	53	50	48	46	44	42	40	39	37	36	34	33
12.50	72	67	62	57	54	50	47	44	42	40	38	36	35	33	32	31	30	29	28	27
15.00	61	56	51	48	44	42	39	37	35	33	32	30	29	28	27	26	25	24	23	22
17.50	52	48	44	41	38	36	34	32	30	29	27	26	25	24	23	22	21	20	20	19
20.00	45	42	38	35	34	32	29	28	26	25	24	23	22	21	20	20	19	18	17	17
25.00	36	33	31	29	27	25	24	22	21	20	19	18	17	17	16	15	15	14	14	13

*Difference between High PE and Low PE

C INPUT TABLE

Earnings	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	5.00
*1.00	322	313	303	294	285	278	270	263	256	250	244	238	233	227	222	217	213	208	204	200
1.25	258	250	243	235	228	222	216	211	205	200	195	190	186	182	178	174	170	167	163	160
1.50	215	208	202	196	190	185	180	175	171	167	163	159	155	152	148	145	142	139	136	133
1.75	185	179	173	168	163	159	155	150	147	143	143	139	136	133	130	126	124	121	119	116
2.00	161	157	152	147	142	139	135	131	128	125	122	119	116	113	111	108	106	104	102	100
2.25	143	139	135	131	127	123	120	117	114	111	110	107	105	102	100	98	96	94	92	90
2.50	129	125	121	118	114	111	108	105	102	100	97	95	93	91	89	87	85	83	81	80
2.75	117	114	110	107	104	101	98	96	93	91	89	87	85	83	81	79	78	76	74	72
3.00	107	104	101	98	95	92	90	87	85	83	81	79	77	76	74	72	71	69	68	66
3.25	99	96	93	90	88	85	83	81	79	77	76	74	73	71	70	68	66	64	63	62
3.50	92	89	87	84	81	79	77	75	73	71	71	69	68	66	65	63	62	60	59	58
3.75	86	83	81	78	76	74	72	70	68	67	66	64	63	61	60	60	57	56	55	54
4.00	80	78	76	73	71	69	68	66	64	63	61	59	58	56	55	54	53	52	51	50
4.25	76	74	71	69	67	65	64	62	60	59	58	56	55	54	52	51	50	49	48	47
4.50	71	69	67	65	63	61	60	58	57	55	55	53	52	51	50	49	48	47	46	45
4.75	68	66	64	62	60	58	57	55	54	53	51	51	49	48	47	47	45	44	43	42
5.00	64	62	60	58	57	56	55	53	52	50	48	48	46	45	44	44	43	42	41	40
5.50	58	57	55	53	52	50	49	48	46	45	44	43	42	42	41	40	39	38	38	37
6.00	53	52	50	49	47	46	45	43	42	41	40	39	38	38	37	36	35	34	34	33
6.50	50	48	46	45	44	43	41	40	40	38	38	37	37	36	35	33	33	32	31	31
7.00	46	44	43	42	40	39	38	37	36	35	35	34	34	33	32	31	31	30	29	29
7.50	43	41	40	40	38	37	36	35	34	33	33	32	31	31	30	29	29	28	27	26
8.00	40	39	38	38	35	35	34	33	32	32	30	29	29	28	27	27	26	26	25	25
8.50	38	37	35	36	33	32	32	31	30	30	29	28	27	26	26	25	24	24	24	23
9.00	35	34	33	34	31	30	30	29	28	27	27	26	26	25	25	24	24	23	23	22
9.50	34	33	32	32	30	29	28	27	27	26	25	25	25	24	24	23	23	22	22	21
10.00	32	31	30	31	29	28	27	26	26	25	24	24	23	23	22	22	21	21	20	20
12.50	26	25	24	24	23	22	22	21	21	20	20	19	19	18	18	17	17	17	16	16
15.00	22	21	20	20	19	19	18	18	17	17	16	16	16	15	15	15	14	14	14	13
17.50	19	18	17	17	16	16	16	15	15	14	14	14	14	13	13	13	12	12	12	11
20.00	16	16	15	15	14	14	14	13	13	13	12	12	12	11	11	11	10	10	10	10

*Difference between High PE and Low PE

C INPUT TABLE

Earnings	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00
1.00	190	181	173	167	160	153	148	142	138	133	129	125	122	118	114	111	108	105	103	100
1.25	152	146	139	133	128	123	118	114	110	107	103	100	97	94	91	89	87	84	82	80
1.50	127	121	116	111	107	103	99	95	92	88	86	83	81	78	76	74	72	70	68	67
1.75	111	105	101	97	93	89	86	83	80	78	75	72	71	69	67	65	63	61	58	58
2.00	95	90	86	83	80	76	74	71	69	67	64	62	61	59	57	55	54	52	51	50
2.25	86	82	78	75	72	68	66	64	62	60	57	56	54	53	51	49	48	47	46	45
2.50	76	73	69	66	64	61	59	57	55	53	51	50	48	47	45	44	43	42	41	40
2.75	70	66	64	61	57	56	54	52	51	48	47	45	44	43	41	40	39	38	37	36
3.00	64	60	58	55	52	51	49	47	46	44	43	41	40	39	38	37	36	35	34	33
3.25	59	56	54	52	49	48	46	44	43	42	40	39	38	37	35	34	33	32	31	31
3.50	55	52	50	48	46	44	43	41	40	39	37	36	35	34	33	32	31	30	29	29
3.75	50	48	46	44	43	41	40	38	37	36	35	34	32	31	30	29	29	28	27	27
4.00	47	45	43	41	40	38	37	35	34	33	32	31	30	29	28	27	27	26	25	25
4.25	44	43	41	39	38	36	35	33	32	31	30	29	28	27	26	25	25	24	24	24
4.50	43	41	39	37	36	34	33	32	31	30	28	28	27	26	25	24	24	23	23	22
4.75	40	38	36	35	34	33	32	30	29	28	27	27	25	24	23	23	23	22	22	21
5.00	38	36	34	33	32	31	30	28	27	27	26	25	24	23	22	22	22	21	21	20
5.50	35	33	32	30	29	28	27	26	25	24	23	22	22	21	21	20	20	19	19	18
6.00	32	30	29	27	26	25	24	23	23	22	21	20	20	19	19	18	18	17	17	16
6.50	29	28	27	26	24	23	22	21	21	20	19	19	19	18	17	17	17	16	16	15
7.00	27	26	25	24	23	22	21	20	20	19	18	18	17	17	16	16	15	15	14	14
7.50	25	24	23	22	21	20	20	19	18	17	17	16	16	16	15	15	14	14	13	13
8.00	23	22	21	20	20	19	18	17	17	16	16	15	15	14	14	13	13	13	12	12
8.50	22	21	20	19	19	18	17	17	16	15	15	14	14	13	13	12	12	12	11	11
9.00	21	20	19	18	18	17	16	16	15	15	14	14	13	13	12	12	12	12	11	11
9.50	20	19	18	18	17	16	16	15	14	14	14	13	13	12	12	11	11	11	10	10
10.00	19	18	17	17	16	15	15	14	14	13	13	13	12	12	11	11	11	11	10	10

*Difference between High PE and Low PE

C   INPUT TABLE

Earnings	10.00	10.50	11.00	11.50	12.00	12.50	13.00	14.00	15.00
*1.00	100	95	91	87	83	80	77	71	67
1.25	80	78	73	70	65	63	62	61	60
1.50	67	63	61	58	56	53	51	48	44
1.75	58	54	53	50	48	47	45	42	39
2.00	50	47	45	43	41	40	38	35	33
2.25	45	44	40	39	36	35	34	33	32
2.50	40	39	36	35	32	31	31	30	30
2.75	36	36	33	32	30	28	27	27	26
3.00	33	32	30	29	28	26	25	24	22
3.25	31	30	28	27	26	25	23	22	21
3.50	29	27	26	25	24	23	22	21	20
3.75	27	27	24	23	22	22	21	19	18
4.00	25	23	22	21	20	20	19	17	16
4.25	24	23	21	21	19	18	18	17	16
4.50	22	22	20	20	18	17	17	16	16
4.75	21	21	19	19	17	16	16	15	15
5.00	20	20	18	18	16	16	16	14	14
5.50	18	18	17	17	15	14	14	13	13
6.00	16	16	15	15	14	13	12	12	11
6.50	15	15	14	13	13	12	11	11	11
7.00	14	13	13	12	12	11	11	10	10
7.50	13	12	12	11	11	10	10	9	9
8.00	12	11	11	10	10	10	9	8	8
8.50	11	11	11	10	10	10	9	8	8
9.00	11	11	10	10	9	9	8	8	8
9.50	10	10	10	9	9	8	8	7	7
10.00	10	10	9	9	8	8	8	7	7

*Difference between High PE and Low PE

VOLATILITY TABLE

Input C	1000	999-900	899-800	799-700	699-600	599-500	499-400	399-300	299-200	199-100	99-90	89-80	79-70	69-60	59-50	49-40	39-30
*1.00	10	9	8	7	6	5	4	3	2	1	1	1	1	1	1	1	1
1.25	13	12	10	9	7	6	5	4	2	1	1	1	1	1	1	1	1
1.50	15	14	12	11	9	8	6	5	3	1	1	1	1	1	1	1	1
1.75	18	16	14	12	11	9	7	5	3	2	1	1	1	1	1	1	1
2.00	20	18	16	14	12	10	8	6	4	2	2	2	2	1	1	1	1
2.25	23	21	18	16	13	11	9	7	4	2	2	2	2	1	1	1	1
2.50	25	24	20	18	14	12	10	8	5	2	2	2	2	2	1	1	1
2.75	28	26	22	20	16	13	11	8	5	3	2	2	2	2	1	1	1
3.00	30	27	24	21	18	15	12	9	6	3	3	3	3	2	2	2	1
3.25	33	30	26	23	20	17	13	10	6	3	3	3	3	2	2	2	1
3.50	35	32	28	25	21	18	14	11	7	3	3	3	3	2	2	2	1
3.75	38	34	30	27	23	19	15	11	7	3	3	3	3	2	2	2	1
4.00	40	36	32	28	24	20	16	12	8	4	3	3	3	2	2	2	1
4.25	43	39	34	30	26	22	17	13	8	4	4	4	4	3	2	2	2
4.50	45	41	36	32	27	23	18	14	9	4	4	4	4	3	2	2	2
4.75	48	43	38	34	29	24	19	14	9	4	4	4	4	3	2	2	2
5.00	50	45	40	35	30	25	20	15	10	5	4	4	4	3	3	2	2
5.50	55	50	44	39	33	28	22	17	11	5	5	5	5	4	3	2	2
6.00	60	54	48	42	36	30	24	18	12	6	5	5	5	4	3	3	2
6.50	65	59	52	46	39	33	26	20	13	6	5	6	5	4	3	3	2
7.00	70	63	56	49	42	35	28	21	14	7	6	6	6	5	4	3	2
7.50	75	68	60	53	45	38	30	23	15	7	6	6	6	5	4	3	2
8.00	80	72	64	56	48	40	32	24	16	8	7	7	6	5	4	3	3
8.50	85	77	68	60	51	43	34	26	17	8	7	7	7	6	5	3	3
9.00	90	81	72	63	54	45	36	27	18	9	8	7	7	6	5	4	3
9.50	95	86	76	67	57	48	38	29	19	9	8	8	7	6	5	4	3
10.00	100	90	80	70	60	50	40	30	20	10	9	8	8	6	5	4	3
12.50	125	113	100	88	75	63	50	38	25	13	11	10	9	8	6	5	4
15.00	150	135	120	105	90	75	60	45	30	15	14	12	11	9	8	6	5
17.50	175	158	140	122	105	88	70	53	35	17	16	14	12	11	9	7	5
20.00	200	180	160	140	120	100	80	60	40	20	18	16	14	12	10	8	6

*Difference between High PE and Low PE

(Manual Addendum)

Input B. This value can be weighted to express more exactly the
psychology of earnings and future market behavior of an individual
stock price. The procedure is as follows:

> If the difference in the Price Earnings Ratios
> calculated for the Input C is less than 2.25
> (example: 13.55 - 11.40 = 2.15), and the
> earnings are growing, use the full percentage
> increase in earnings added to 125 instead of
> 1/2. The reason for this is non-volatile
> stocks should have high growth rates magnified.

> If the difference in the Price Earnings Ratio
> is less than 1.75 and the earnings are growing,
> the full percentage increase multiplied by 4
> (to annualize the gain) can be added.

> When earnings are in declining trend, the full
> percentage drop should be subtracted from 125.

GRAPH FOR INPUT C AND DAILY ADJUSMENT DETERMINATION

STOCK PRICE

To determine the proper value for Input C,
move across the line representing the current
stock price until the solid curved line is
reached. Then go down the page to the Input
C scale and read the value.

To determine the amount of the daily adjust-
ment, move across the line representing the
current stock price until the dotted curved
line is reached. Then go down the page to
the daily adjustment scale and read the value.
If the price has moved up, add this value to
Input B, if the price has moved down, sub-
tract this value from Input B.

INPUT C SCALE

DAILY ADJUSTMENT SCALE

HOW TO GET QUOTES ON CBOE OPTIONS

Since many brokers are still not familiar with the CBOE, you may have to give him the symbol of an option when you wish a quote.

The procedure below will, after you know which system he is on, enable you to specify the symbols on most issues, except for the Ultronics Stockmaster.

For Ultronics Videomaster's prefix all options with "Q". No prefix is required on other systems. Suffix ".Q" on Quotron units. On Bunker Ramo suffix "." enough times to make the symbol 5 characters long.

After any required prefix, give the stock symbol. These are:

Alcoa	AA	Gulf & Wstrn	GW	Merck	MRK
AT&T	T	Halliburton	HAL	MMM	MMM
Atl. Richfield	ARC	Homestake	HM	Monsanto	MTC
Avon Prod.	AVP	IBM	IBM	NW Airlines	NWA
Beth Steel	BS	INA	INA	Pennzoil	PZL
Brunswick	BC	IT&T	ITT	Polaroid	PRD
Citicorp	FNC	Int. Minerals	IGL	RCA	RCA
Delta Air	DAL	Int. Paper	IP	Sears Roebuck	S
Dow Chem.	DOW	Int. Harvester	HR	Sperry Rand	SY
East Kodak	EK	Johnson & Johnson	JNJ	Syntex	SYN
Exxon	XON	Kennecott	KN	Tesoro Pet	TSO
Fed Nat Mtg	FNM	Kerr McGee	KMG	Texas Instr	TXN
Ford	F	Kresge	KG	Upjohn	UPJ
Gen Elect	GE	Loews	LTR	Weyerhaeuser	WY
Gen Motors	GM	McDonald's	MCD	Xerox	XRX
Grt Wstrn Fin	GWF				

Next you specify the expiration month:

    A = January
    B = April
    C = July
    D = October

Next you specify the striking price of the option, as follows:

    A = The 1st striking price authorized
    B = The 2nd striking price authorized
    C = The 3rd striking price authorized, etc.

Since options are usually listed on the Wall Street Journal in the order authorized, simply count down A, B, C, etc. till you come to the one you want. Then add any required suffix.

USING THE ISEC 250 COMPUTER TO CALCULATE

ANNUALIZED PERCENTAGE YIELD

First set the Dow Jones Dial at 1000, the "A" Dial at 100 and the "B" dial at 100. Next set in the Stock Price on the Stock Price Dial. Now reset the "B" Dial to read the value of the option premium x 10 + 100. An option selling at $2 would cause you to set the "B" Dial at 120 ($2 x 10 = 20. 20 + 100 = 120.) For an option selling at $7, 7 x 10 + 100 = 170. Be sure to take the full price of the option, even if the stock is over the striking price.

Now, while holding the Push to Read button in, adjust the "C" Dial so that the meter reads 0. The "C" Dial now reads at 10 times the percentage yield to expiration. Thus, a value of 40 on "C" represents a yield of 4% while a reading of 120 would be 12%.

To find the annualized yield, read the nearest percentage yield off the table down to the number of weeks to expiration. The value at the intersection of these two points is the annualized yield of a given transaction.

BASIC YIELD TO EXPIRATION IN PERCENT

Exp	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
1	26	52	78	104	130	156	182	208	234	260	286	312	338	364	390	416	442	468	494	520
2	13	26	39	52	65	78	91	104	117	130	143	156	169	182	195	208	221	234	247	260
3	8.7	17.3	26	34.7	43.3	52	60.7	69.3	78	86.7	95.3	104	113	121	130	139	147	156	165	173
4	6.5	13	19.5	26	32.5	39	45.5	52	58.5	65	71.5	78	84.5	91	97.5	104	110	117	124	130
5	5.2	10.4	15.6	20.8	26	31.2	36.4	41.6	46.8	52	57.2	62.4	67.6	72.8	78	83.2	88.4	93.6	98.8	104
6	4.3	8.7	13	17.3	21.7	26.0	30.3	34.7	39.0	43.3	47.7	52.0	56.3	60.7	65.0	69.3	73.7	78.0	82.3	86.7
7	3.7	7.4	11.1	14.9	18.6	22.3	26.0	29.7	33.4	37.1	40.9	44.6	48.3	52.0	55.7	59.4	63.1	66.9	70.6	74.3
8	3.3	6.5	9.8	13.0	16.3	19.5	22.8	26.0	29.3	32.5	35.8	39.0	42.3	45.5	48.8	52.0	55.3	58.6	61.8	65.0
9	2.9	5.8	8.7	11.6	14.4	17.3	20.2	23.1	26.0	28.9	31.8	34.7	37.6	40.4	43.3	46.2	49.1	52.0	54.9	57.8
10	2.6	5.2	7.8	10.4	13.0	15.6	18.2	20.8	23.4	26.0	28.6	31.2	33.8	36.4	39.0	41.6	44.2	46.8	49.4	52.0
11	2.4	4.7	7.1	9.5	11.8	14.2	16.5	18.9	21.3	23.6	26.0	28.4	30.7	33.1	35.5	37.8	40.2	42.5	44.9	47.2
12	2.2	4.3	6.5	8.7	10.8	13.0	15.2	17.3	19.5	21.7	23.8	26.0	28.2	30.3	32.5	34.7	36.8	39.0	41.2	43.3
13	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0	36.0	38.0	40.0
14	1.9	3.7	5.6	7.4	9.3	11.1	13.0	14.9	16.7	18.6	20.4	22.3	24.1	26.0	27.9	29.7	31.6	33.4	35.3	37.1
15	1.7	3.5	5.2	6.9	8.7	10.4	12.1	13.9	15.6	17.3	19.1	20.8	22.5	24.3	26.0	27.7	29.5	31.2	32.9	34.6
16	1.6	3.3	4.9	6.5	8.1	9.8	11.4	13.0	14.6	16.3	17.9	19.5	21.1	22.8	24.4	26.0	27.6	29.3	30.9	32.5
17	1.5	3.1	4.6	6.1	7.6	9.2	10.7	12.2	13.8	15.3	16.8	18.4	19.9	21.4	22.9	24.5	26.0	27.5	29.1	30.6
18	1.4	2.9	4.3	5.8	7.2	8.7	10.1	11.6	13.0	14.4	15.9	17.3	18.8	20.2	21.7	23.1	24.6	26.0	27.4	28.8
19	1.4	2.7	4.1	5.5	6.8	8.2	9.6	10.9	12.3	13.7	15.1	16.4	17.8	19.2	20.5	21.9	23.3	24.6	26.0	27.4
20	1.3	2.6	3.9	5.2	6.5	7.8	9.1	10.4	11.7	13.0	14.3	15.6	16.9	18.2	19.5	20.8	22.1	23.4	24.7	26.0
21	1.3	2.5	3.7	5.0	6.2	7.4	8.7	9.9	11.1	12.4	13.6	14.9	16.1	17.3	18.6	19.8	21.0	22.3	23.5	24.7
22	1.2	2.4	3.5	4.7	5.9	7.1	8.3	9.5	10.6	11.8	13.0	14.2	15.4	16.5	17.7	18.9	20.1	21.3	22.5	23.6
23	1.1	2.3	3.4	4.5	5.7	6.8	7.9	9.0	10.2	11.3	12.4	13.6	14.7	15.8	17.0	18.1	19.2	20.3	21.5	22.6
24	1.1	2.2	3.3	4.3	5.4	6.5	7.6	8.7	9.7	10.8	11.9	13.0	14.1	15.2	16.2	17.3	18.4	19.5	20.6	21.7
25	1.0	2.1	3.1	4.2	5.2	6.2	7.3	8.3	9.4	10.4	11.4	12.5	13.5	14.6	15.6	16.6	17.7	18.7	19.8	20.8
26	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
27	1.0	1.9	2.9	3.9	4.8	5.8	6.7	7.7	8.7	9.6	10.6	11.6	12.5	13.4	14.4	15.4	16.4	17.3	18.3	19.3
28	.9	1.9	2.8	3.7	4.6	5.6	6.5	7.4	8.4	9.3	10.2	11.1	12.1	13.0	13.9	14.9	15.8	16.7	17.6	18.6
29	.9	1.8	2.7	3.6	4.5	5.4	6.3	7.2	8.1	9.0	9.9	10.8	11.7	12.6	13.4	14.3	15.2	16.1	17.0	17.9
30	.9	1.7	2.6	3.5	4.3	5.2	6.1	6.9	7.8	8.7	9.5	10.4	11.3	12.1	13.0	13.9	14.7	15.6	16.5	17.3
31	.8	1.7	2.5	3.4	4.2	5.0	5.9	6.7	7.5	8.4	9.2	10.1	10.9	11.7	12.6	13.4	14.3	15.1	15.9	16.8
32	.8	1.6	2.4	3.3	4.1	4.9	5.7	6.5	7.3	8.1	8.9	9.8	10.6	11.4	12.2	13.0	13.8	14.6	15.4	16.2
33	.8	1.6	2.4	3.2	3.9	4.7	5.5	6.3	7.1	7.9	8.7	9.5	10.2	11.0	11.8	12.6	13.4	14.2	15.0	15.8
34	.8	1.5	2.3	3.1	3.8	4.6	5.4	6.1	6.9	7.6	8.4	9.2	9.9	10.7	11.5	12.2	13.0	13.8	14.5	15.3
35	.7	1.5	2.2	3.0	3.7	4.5	5.2	5.9	6.7	7.4	8.2	8.9	9.7	10.4	11.1	11.9	12.6	13.4	14.1	14.9
36	.7	1.4	2.2	2.9	3.6	4.3	5.1	5.8	6.5	7.2	7.9	8.7	9.4	10.1	10.8	11.6	12.3	13.0	13.7	14.4
37	.7	1.4	2.1	2.8	3.5	4.2	4.9	5.6	6.3	7.0	7.7	8.4	9.1	9.8	10.5	11.2	11.9	12.6	13.3	14.0
38	.7	1.4	2.1	2.7	3.4	4.1	4.8	5.5	6.2	6.8	7.5	8.2	8.9	9.6	10.3	10.9	11.6	12.3	13.0	13.7
39	.7	1.3	2.0	2.7	3.3	4.0	4.7	5.3	6.0	6.7	7.3	8.0	8.7	9.3	10.0	10.7	11.3	12.0	12.7	13.3

Calculating Option Premiums

Time premiums carry a precise mathematical definition and it is important to know how to calculate them exactly.

1. When the stock price is below the striking price for a given option, then the option price equals the option premium.

2. When the stock price is above the striking price for a given option, then the premium is equal to the striking price plus the option price less the stock price.

       Example: 1. April 100's @ $3 1/2
                   Stock price @ $97
                   Premium   = $3 1/2

                2. April 100's @ $8 1/2
                   Stock price @ $102
                   Striking price (100) plus Option Price
                   (8 1/2) less Stock Price (102) equals
                   Premium   (6 1/2)

USING THE OPTION TRADER

There are five basic reasons for writing or buying options:

1. Arbitrage
2. Buying for price appreciation
3. Writing or buying for portfolio protection
4. Writing options for portfolio yield
5. Writing naked options in anticipation of market and stock price declines.

1.   Arbitrage is the simultaneous purchase and sale of the same or
similar securities from which one can profit due to minor price
differences between the securities. Individuals with considerable sums
to invest can, for example, buy a stock which is about to split and
sell the "when issued" stock knowing that any price difference will be
resolved when the old stock stops trading.

Smaller investors can use the CBOE options to earn the same kind of
"safe" profits.

Writing options for arbitrage is an extremely low risk method of
producing small consistent gains in capital. However, gains can approach
1% per day over short periods. Successful arbitrage depends on the
price of an option further from expiration rising unusually high relative
to a nearer term option of the same striking price. The absolute price
spread required between the 2 options will depend on your capital and
your broker's capital requirements. If you wish to invest only a few
thousand dollars, you should probably have a spread of 4 points or more.
With $10-30,000 perhaps 2 or 3 points is enough.

"Normal" Premiums
More distant options usually carry a higher price or premium than
options which are nearer term and closer to expiration. For example,
if Ford April 45's are selling at $4, one would normally expect the
July 45's to sell at about $5, the difference being the additional time
premium paid for an option further from expiration.

However, when one looks at the time premium on a per day basis, the
picture is reversed. Here we find that the option furthest from expira-
tion carries a lower daily premium. This daily premium usually runs from
1 to 10¢ per day, except when an option has less than 3 weeks to run.

Distortions
Occasionally, the time premium for a nearer term option falls below
that for the next furthest out option. When this occurs the investor
can take advantage of this arbitrage-like situation. This situation
occurred in Xerox on the week ending 12/7/73. The July 140's had started
trading that week and closed at $11 1/4. The April 140's closed at
$6 3/4. With 165 days to run on the July option, the daily time premium
was $.071 vs. $.068 for the April 140. Here we have the ingredients for
successful arbitrage

1.   A lower daily time premium on the "nearer" option
2.   A large absolute spread in the 2 prices ($4.50).

This is a distortion that is usually corrected within 3 or 4 weeks. In
this case it took only a week.

How to Use Distortions

If one writes options (naked) on the July 140's and buys the same number of April 140's, one has only to wait for the distortion to correct itself, close out the position and collect the difference. In this case, an over correction occurred and the following week the Aprils were at $5 3/8 and the Julys at $6 1/4. Closing out the position here results in a 5 point gain on the written options, and a 1 3/8 point loss on the purchased options. Doing this on 5 options results in the following:

Invested capital (can vary by broker*)	$30,440
Gross Gain	1,812
Commissions	365
Net	1,447

This is a return of 4 3/4% on a 5 day investment which annualizes to 247%. More importantly, your risk was practically nonexistent.

What to look for

The best arbitrage situations seem to occur on the higher priced issues in more volatile stocks. A lower premium on Aprils vs. July (nearer lower than further) can be good. Arbitrage is a game of pennies, so make sure the absolute spread is big enough.

Using the Computer for Computing
Daily Time Premiums

To calculate the current daily time premium for an option:

1. Set the Stock Price dial to 0 and the Input C dial to 50.

2. Set the Trading days to expiration of the option on Input "A". The days to expiration are shown for each month on the Trader Report.

3. Multiply the current time premium of the option by 10 and set this number on the input "B" dial.

   Examples: An option premium at $2.75 =   27.5 on input B
                       An option premium at $10.50 = 105 on input B
                       An option premium at $ 5/16 =   3.1 on input B

4. Push in the Push to Read button and adjust the Dow Jones dial until the meter reads zero. Note the setting of the Dow Jones dial. The time premium is this number divided by 10,000.

*Usually 1/2 the stock price, times number of options written, less money received on the written options, plus costs of purchased options.

Examples: A Dow Jones setting of 380   = $.038 daily premium
            A Dow Jones setting of 1040   = $.104 daily premium
            A Dow Jones setting of 50   = $.005 daily premium

Using the Computer to Find
Potential Arbitrage Situations

1. Find an option where there is potential Arbitrage by scanning all the current option prices; that is, where the option further from expiration is at least 3 or more points above the nearer term.

2. Compute the premium for the nearer term option as explained above.

3. Set the Input A dial for the number of days to expiration of the further option. Keep "C" at 50 and "Stock Price" at 0.

4. If the stock is above the striking price of the option, set the premium only on the B Input Dial. If the stock is below the striking price, set in the entire option price. Leave the Dow Jones dial at the setting of the nearer term option premium previously calculated.

5. Depress the Push to Read button. A reading in the green area represents a potentially good arbitrage opportunity. A reading in the red or white area indicates a relatively poor arbitrage opportunity.

    Example: The week ending February 1, 1974, Texas Instruments April 100's were at 13 1/2. The July 100's were at 19 3/4 and the stock was at 109. The 6 1/4 price differential between the April and July options is ample for arbitrage. Since the stock is over the striking price, we deduct the amount over the striking price (9 points) from the two options and get 4 1/2 and 10 3/4 dollar time premiums respectively.

    Set "A" at 62 (the number of days to expiration for the April option), "B" to 45 (10 times 4 1/2), "C" to 50, "Stock Price" to 0. Depress the "Push to Read" button and adjust "Dow Jones to get a zero reading on the meter. With the meter at zero, read the "Dow Jones" setting. It should be near 700, indicating about a 7¢ per day premium for the April 100's.

    Without resetting any other dials, set the "A" dial to 127 (the days to expiration for the Julys) and the "B" dial to 107.5 (the July premium times 10).

    Push the "Press to Read" button and read the meter. A rating in the green area indicates a good arbitrage situation. In this case the reading should be about +18.

    If you now wish to determine the premium for the July 100's, simply adjust the "Dow Jones to get a zero meter reading and read the premium off the Dow Jones dial.

The following week the position could be closed out with a tidy
profit. The July 100's were 10 1/2 and the April 100's at 7 for
a $325 profit, less commissions.

When comparing two premiums, any plus reading on the meter in con-
junction with a price spread of about 3 or more points indicates a dis-
tortion and an arbitrage opportunity. However, the higher the reading
on the meter the greater the distortion and the more lucrative the
potential.

2.   Buying for price appreciation. This is potentially the fastest way
to make your capital grow--also the highest risk method. The purchase
of naked options is for those who pay attention and act quickly. There
are enough opportunities in the option market so that one can use short
swift rises and then go to stop losses on the purchased options, take
additional gains, if they come or get out if the stop is hit.

The weekly ratings can be used to evaluate potential purchases in
several ways. A good cautious strategy is to purchase options when the
stock's ISEC rating makes a higher bottom. Successive weekly ratings of
6, 1, 10, 6, 5, 14 illustrate this. These are the actual ratings for
Brunswick as shown on the chart on the following page. The upward arrow
marks the week the "buy" was signaled.

A higher bottom nearly always precedes a 5-15 day move in the stock
price, even in bear markets. Study of the weekly charts will suggest
the way you will want to work with the ratings. A higher bottom which
occurs after a strong one week price move in the stock should be ignored.
If a buy signal is given after a stock is up even moderately for 2 or 3
weeks the signal should also be ignored. The charts will help you assess
this. At the end of 5-10 days if you do not wish to take profits (in
soft markets, you almost always should, however), we strongly urge the
use of stop losses to protect your position.

A second, somewhat less cautious strategy, which can be used during
stronger markets is to buy on higher bottoms and sell when the stock
rating forms a lower top. This is marked with a downward arrow on the
Brunswick chart.

One can also use weekly ratings or daily updating and whenever the
weekly is over +10 or the daily rating for a stock is +12 or over, the
various options for that security can be purchased. If there are a number
of ratings over +12, the ones with the highest values will be better buys
and will tend to outperform lower rated options. Using this strategy a
sell signal is given when the weekly ratings go below -10 or reach -12
if you are using daily updating. In the case of Brunswick, this signal
was given the first week of November and is marked with a double downward
arrow. Note that using daily adjustments would have given a sell about
3 weeks earlier (the weekly rating reached -9) at somewhat more favorable
prices.

BRUNSWICK
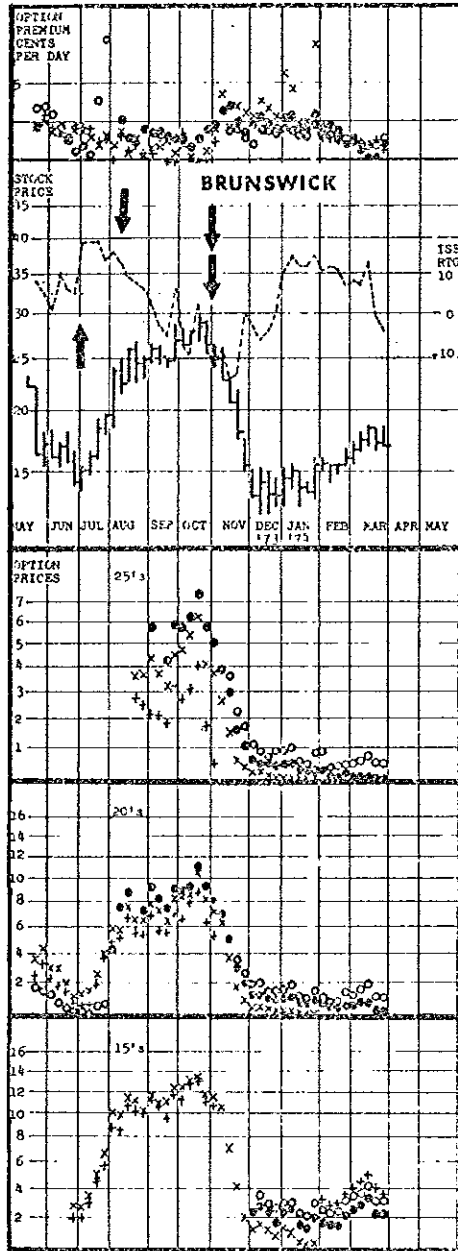
To summarize, options can be purchased whenever the ratings go over +10 weekly (+12 daily) or form a higher bottom and the stock is not up more than 1 week. The options should be sold, depending on the way you wish to work, after:

1. 5 to 15 days

2. The ratings form a lower top

3. The ratings fall below -10 on a weekly basis or below -12, if you use daily updating.

In each stock there will be at least three options trading. The potential price changes affecting all of the options are based on the underlying stock activity. The ISEC system will highlight stocks for further attention but does not tell you which of several options to buy. Whenever a stock is selling under the striking price the potential percentage move of an option will vastly exceed that of the stock itself. Therefore, when a stock is bullish it is better to buy an option than the stock.

In general, a nearer term option is a better purchase than a more distant one. The reasoning is that better volume and a more liquid market exists in these options. The major exception to this would be if the nearer term had less than 40 days to run. Also, the premium being paid for time is a smaller percentage of the price. It is also better to buy an option with a striking price a few points above the price of the stock.

For example, in early July 1973 there were two October options for Brunswick; one with a striking price of 20 and the other with a striking price of 15. On July 2, 1973 the stock closed at 14 7/8, the October $15

option closed at 1 3/4 while the October $20 closed at 1/2. In the next
two weeks the stock price went to 18 3/4 for a 26 percent gain, the
October $15 went to 4 1/2 for a 157 percent gain, while the October $20
went to 1 7/8 for a 275 percent gain. By July 30, 1973 Brunswick was
at 24 3/4, the October $15 at 9 1/2 and October $20 at 5 1/4 for percentage
gains of 66%, 443%, 950% respectively.

Remember, however, that a move of only 2 or 3 weeks would not have
moved the higher priced option, whereas the lower striking price began to
move almost the first week.

There are a number of strategies which can be employed in placing
orders. One can go in at the market and purchase an option immediately.
If a few options are involved the price will probably be very close to
the last trade. However, for larger positions a limit should be placed
on the price one is willing to pay, so that the option price is not
inflated by your own orders. It is probably better to take a position on
a scale-down buying program with purchases being made of successively
larger quantities at lower levels. An example would be to place an order
for October $40 Sperry Rand options starting at 4 1/2 on a 1/4 point
scale-down. Such as: 4 at 4 1/2, 6 at 4 1/4, 10 at 4. This keeps your
average cost low and lets you take advantage of temporary weakness. If
your purchase or sale will account for more than 10% of the daily volume
on an option, your transaction will be a major factor in setting the price
of the option.

Options should be sold whenever the daily rating gets below -12. A
second opportunity to sell would be after a major gain to preserve profits
(part of a position could be sold). A third reason for selling is when
the option is about to expire.

Time Factor--one very important feature of options should not be
overlooked. This is the option premium paid for time. The longer the
option has to run, the higher the premium. All of the premium will
disappear by the time the option expires. It is desirable to realize
gains quickly and minimize the premium drop.

A second factor in favor of short holding periods is that most big
stock market moves are over very quickly. Ten to fifteen days will usually
encompass a major move and then the stock will react, and move into a
consolidation pattern for a month or two before a new buying opportunity
occurs. To option holders, this sideways period means a gradual loss of
profits as the premium is reduced as time passes. Therefore, be quick to
sell. However, it is possible to preserve profits in trying for long
term capital gains. This can be attempted by the use of stop loss orders
once an option has become profitable. These stop losses are orders placed
to sell an option position if the option price drops to a certain level.
The exact price for the order should be just below the price the option
reached when the underlying stock was at a low.

1. Set Dial "A" with the number following "Input A" at the
    top of your latest Input Data Sheet.

2. Set the Dow Jones Dial to the value of the current Dow
    Jones Industrial Average which you will find listed in
    the Wall Street Journal, New York Times or other daily
    paper.

3. Set the market trend switch in the Up position.

You have now completed the general steps. These first three steps
need not be repeated when evaluating additional stocks.

4. Pick a stock you wish to evaluate, set Dial "B" to the
    number shown on the ISEC Option Index for the specific
    stock.

5. Set the "C" Range switch in the 1000 position if "C" on
    the Data Sheet is between 101 and 1000. Set the "C"
    Range switch in the 100 position if "C" is between 0 and
    100. Now set Dial "C" to the number shown on the ISEC
    Index for the stock.
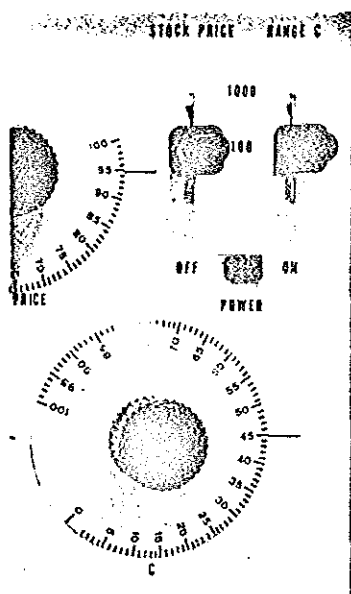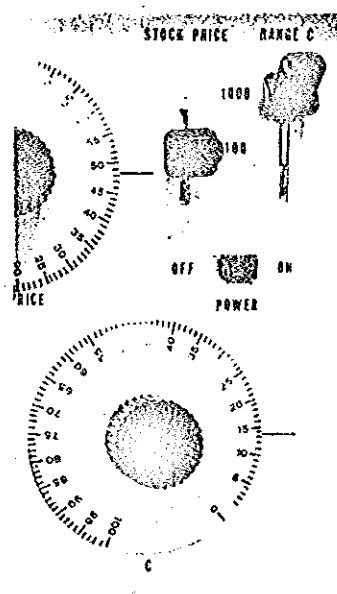
(Picture 1)   (Picture 2)

Example 1.   In Picture #1, the "C" setting is equal to 45.
Example 2.   In Picture #2, the "C" setting is equal to 135.

RELATIVE STRENGTH PROGRAM

The concept of relative strength is well known to stock market analysts. The basic idea is that a stock that is stronger than the market is a better stock to own than one that is not as strong as the market. Furthermore, when the market is in a downtrend a stock that is stronger will be the one to do better after the market turns up. Since many market theories have some basic truth to them, a study of relative strength and its use for timing the purchase and sale of securities could help portfolio performance.

What is relative strength? Very simply it is a method of describing how an individual stock is performing relative to the market. For example: If the Dow Jones Average goes from 820 to 861 in one week, it has appreciated by 41 points or 5%. At the same time, if Exxon has moved from 80 to 88 it has appreciated by 8 points or 10%. This is a 5% better move than the Dow Jones managed and would certainly be a worthwhile stock to continue to hold if the price can be counted on to move up 5% faster than the market in the future. In any case, the relative strength for this one week would be +5% for Exxon.

The next week if the Dow Jones average drops from 861 to 820, a 41 point drop or 5% from low to high and Exxon drops from 88 to 83 3/4, a 4 1/4 point drop or 5% from low to high, the stock's relative strength would be 0. This is because both the Dow Jones and Exxon dropped 5%. If Exxon had remained unchanged while the Dow Jones dropped, the relative strength would have been +5%. This is because relatively Exxon was 5% stronger than the market.

It is obvious that many market factors can influence one week's relative strength. A news event, a fund purchase of a stock or even a rumor can cause a major transient price move. Therefore, most students of relative strength use a longer history than one week to determine whether the stock is truly stronger than the market. Several different time periods appear to offer enough history for significant validity.

Selecting the time span.
There are a number of studies of price activity in the stock market which seem to confirm that some regular periodic price movement can be detected. One of these indicates prominent cycles of 6.5 weeks, 13 weeks, 26 weeks and 39 weeks among others.[1] Examination of the sample charts show several possible time spans which seem to confirm this. If many charts are studied much periodic action appears to be evident. In any case, the important thing to be derived from these studies is that significant relative strength signals coincide with these periods. Therefore, when selecting a time period to study relative strength, if the time period

[1] J.M. Hurst, "The Profit Magic of Stock Transaction Timing", Prentice Hall, Inc.

is picked which seems to coincide with possible cyclic activity, the market results should be substantially better than if some intermediate period is picked.
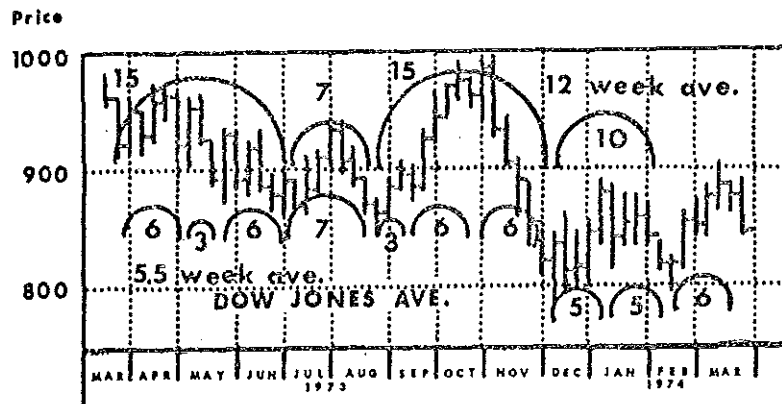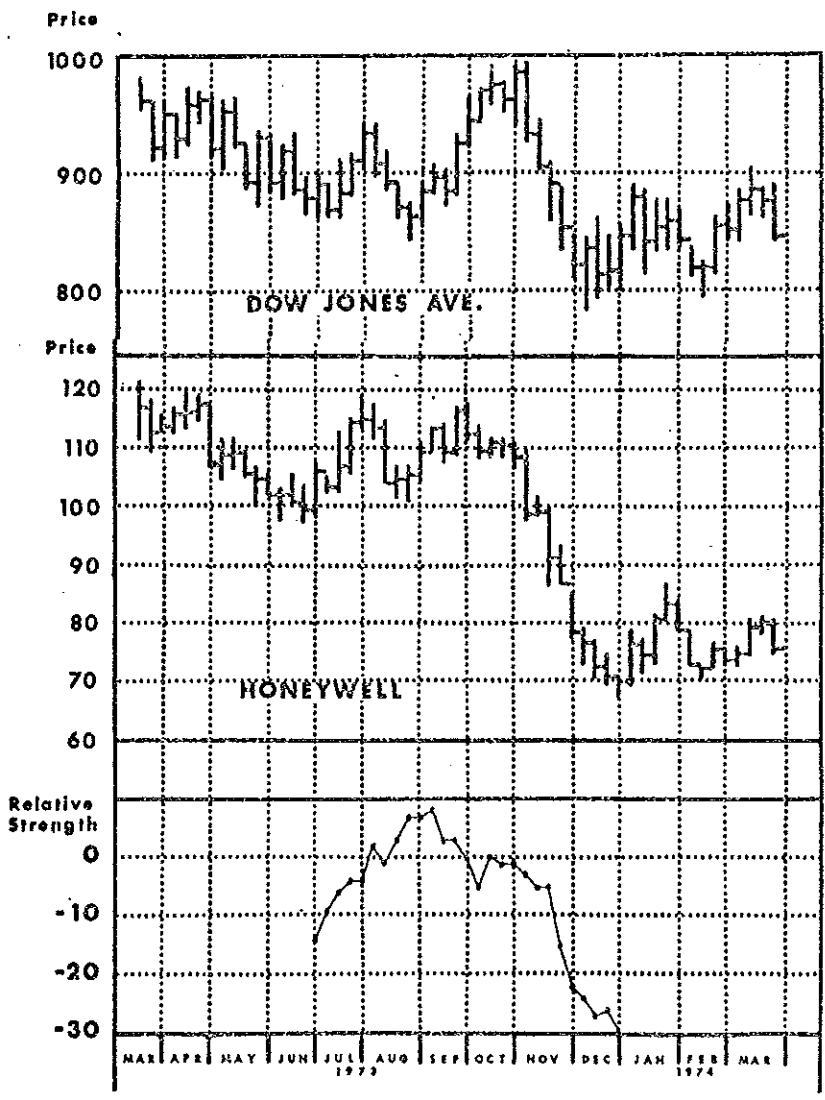
Price

Three relatively short time spans seem to have a fairly reliable correspondence to many individual stock price movements. These are 6 weeks (30 trading days), 6 months (26 weeks) and 200 days. The 6 week period appears to be in line with minimum significant market moves. The 6 month period represents the current capital gain minimum holding period. The 200 day period represents a standard price average. Some of the published literature indicates strategies which apply to changes in relative strength.[2] These include:

1. Buy the 5% strongest stocks on a long term basis and hold them until their relative strength reaches 0.

2. Buy volatile stocks with strong relative strength.

3. Buy strong relative strength stocks when the market is strong.

4. Sell short on short term rallies stocks which have very weak long term relative strength.

[2]Robert Levy, "The Relative Strength Concept of Common Stock Price Forecasting", Investors Intelligence, Inc.

USPC
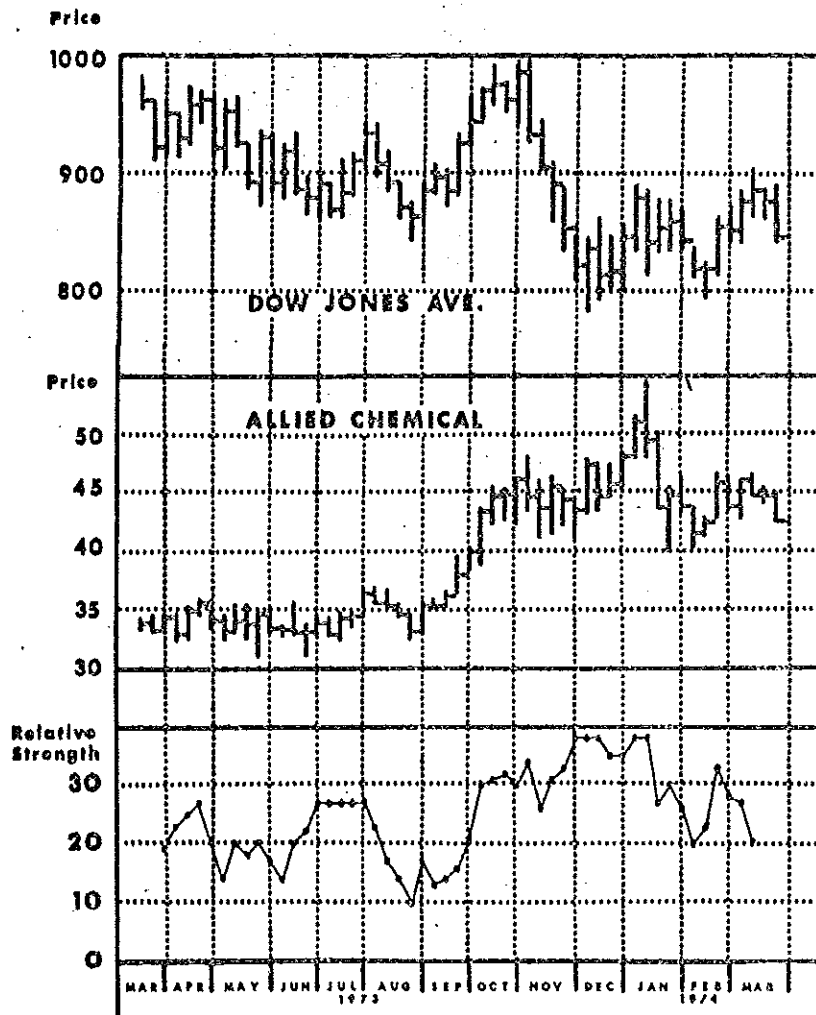
The sample charts illustrate a particularly strong relative strength situation and are based on a 6 month or 26 week time period. During the March 1973 to August 1973 period, the Dow Jones Average was in a very strong downtrend. Allied Chemical, on the other hand, traded in a very narrow range through most of this period and indicated great relative strength. At the market low point in August the relative strength values indicated the stock was still 10% stronger than the market. This residual stock price strength was proven on the subsequent move into January 1974 when the price moved up 15 points against a continuing weak market.

On the other hand, in October as the market made a new recovery
high and the relative strength of Allied Chemical continued very strong,
Honeywell had a relative strength showing exceptional weakness. While
the stock price was near its rally high point the whole rally movement
was weaker than the market over the 6 month period. The subsequent
price action with a drop to the 69-70 area was correctly forecast by the
relative strength action. These illustrations occur often enough in
stock price analysis to make the relative strength calculations signi-
ficantly useful as a money management tool.
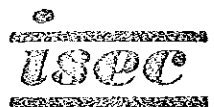
USING THE ISEC COMPUTER TO CALCULATE RELATIVE STRENGTH.

For all calculations the Market Trend Switch is left in the up position.

STEP 1.   Determine the length of time you wish to calculate relative strength for and then set the old Dow Jones Average on the Dow Jones dial. If the time period selected is 200 days set the Dow Value for that date.

STEP 2.   Set the Input A dial at 100.

STEP 3.   Set the Input B dial at 120.

STEP 4.   Set the stock price for the same day as the Dow Jones Average value on the Stock Price dial.

STEP 5.   Turn the Input C dial with the Push to Read button pushed in, until the meter reads 0. The C dial will read under 100 if the stock price is relatively high and over 100 if the stock price is under 20. The exact value is not as important as getting the meter to read 0. The computer is now set up with all the historical values for the time period desired. The next few steps put in the current situation and calculates the relative strength.

STEP 6.   Set in the current Dow Jones Average.

STEP 7.   Set in the current Stock Price.

STEP 8.   Reset Input B to the value indicated in the accompanying tables.

STEP 9.   Read the relative strength from the meter in % by pushing the Press to Read button.

PROGRAM DISCUSSION.

Before starting Step #1 it is obvious that a time period consistent with the type of portfolio operations desired must be selected. Longer term objectives should use the 200 day time periods or the 6 month period. Shorter term trading should use the 30 day period. It is also obvious that any other time period can be used. You should carefully decide on the characteristics desired in your own portfolio management before selection of a specific time period.
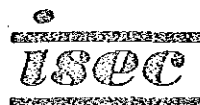
After deciding on a desired time period, for example a 6 month period, the Dow Jones average at the start is entered. In the following example, the figures are as follows:
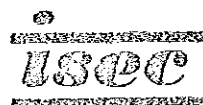
	Dow Jones Average /	Allied Chemical
March 16, 1973	963.05	33 7/8
September 17, 1973	892.99	36 3/4

Step 1. Set 963 on the Dow Jones Dial.

Step 2. Set Input A dial at 100.

Step 3. Set Input B dial at 120.

Step 4. Set the Stock Price dial at 33 7/8

Step 5. Turn the Input C dial to get a 0 reading when the Push to Read button is depressed. The C dial should read between 64 and 70.

Step 6. Move the Dow Jones dial to 893.

Step 7. Move the Stock Price dial to 36 3/4.

Step 8. Move the Input B dial in accordance with the table of values to 131. The table shows that a 30 dollar stock calls for adding 4 points to the Input B value for each 1 point gain in stock price. Since the total gain was a little less than 3 points, 11 points was added to the starting Input B value of 120.

Step 9. When the Press to Read button is pushed, the meter should read about +16 in the green area. This indicates that Allied Chemical was about 16% stronger than the market on September 17, 1973.

Three months later on December 14, 1973 the situation would have been programmed with these numbers:

	Dow Jones Average /	Allied Chemical
June 15, 1973	888.55	33
December 14, 1973	815.65	44 3/4

Programming the computer, exactly as before, with Step #8 calling for adding 48 points [4 x (44 3/4-33)] to the Input B value of 120, results in a Relative Strength figure off the scale to + green side of the meter. This is in excess of 30% stronger than the market.

Three months later on March 15, 1974 the situation would be repro-
grammed as follows:

	Dow Jones Average	Allied Chemical
September 17, 1973	892.99	36 3/4
March 15, 1974	887.83	44 7/8

Again after setting up the computer as before and using an adjust-
ment for Input B of 3.5 points for each 1 point gain in the price of the
stock, which results in a 26 point addition to 120, the Relative Strength
reads about +20.

The relationships of the various relative strength
ratings are summarized below:

	Dow Jones	Allied Chemical	Relative Strength
September 17, 1973	892.99	36 3/4	+16
December 14, 1973	815.65	44 3/4	+30
March 15, 1974	887.83	44 7/8	+20

During this six month period the Dow Jones Average ended up almost
unchanged while Allied Chemical ended up about 20% higher. At the end of
the period the relative strength in Allied appeared to be ebbing and
several strategies could be followed to protect profits. A stop loss,
could be placed, the stock could be sold because over 1/3 of the relative
strength had dissipated, the stock could be held until the relative
strength reaches 0 or below and weekly or daily monitoring of the 6 month
relative strength characteristic could be commenced to pinpoint the
necessary action.

ADDITIONAL TECHNIQUES

There are some potential added benefits to plotting the relative
strength figures on a chart. There are times when a higher bottom or
lower top will be significant signals which forecast major moves. This
is particularly true when shorter time periods are used. The longer
time periods will be significant when the absolute direction changes. In
all cases results should be significantly improved if all positions are
taken in line with the general market direction. Once such a position is
taken, use of various relative strength strategies to decide when to close
out the position provides help in logical decision making.

TABLE OF INPUT B ADJUSTMENTS

The values indicated should be added to an Input B value of 120 if the stock price is higher and subtracted if the stock price is lower. Each adjustment is for a 1 point change in stock price and fractional changes can be rounded off unless such a fractional price change is a significant percentage of the stock price. Most of the time, a simple interpolation will give adjustment values within the accuracy of the dial settings. If a $50 stock has a 2 point gain over the selected time period 2.5 is added to the 120 Input B value for each point the stock has gained, making the new Input B setting 125 (120 + 2 x 2.5).

STOCK PRICE	INPUT B ADJUST./$	STOCK PRICE	INPUT B ADJUST./$
4	31.	95	1.5
6	21.	100	1.25
8	15.5	110	1.0
10	12.5	120	1.0
15	8.5	130	1.0
20	6.0	140	1.0
25	5.0	150	1.0
30	4.0	160	.75
35	3.5	170	.75
40	3.0	180	.5
45	2.75	190	.5
50	2.5	200	.5
55	2.25	220	.5
60	2.0	240	.5
65	2.0	260	.5
70	2.0	280	.5
75	1.5	290	.5
80	1.5	300	.5
85	1.5	350	.5
90	1.5	400	.25