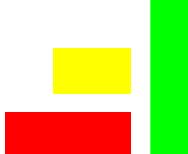


S&P 500 ETF

“SPY”

Gap Study: 2004 – 2010



Disclaimer

This material is intended for educational purposes only and is believed to be accurate, but its accuracy is not guaranteed. Trading and investing has large potential rewards and large potential risks. You must be aware of, and fully understand, these risks and be willing to accept them in order to invest in equity, futures, options, currencies and other financial markets. Do not trade with money that you cannot afford to lose. This material is neither a solicitation nor an offer to buy or sell equities, futures, options, or currencies. No representation is being made that any account will or is likely to achieve profits or losses similar to those discussed. The past performance of any trading system or methodology is not necessarily indicative of future results.

CFTC RULE 4.41 - HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING. ALSO, SINCE THE TRADES HAVE NOT BEEN EXECUTED, THE RESULTS MAY HAVE UNDER-OR-OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFIT OR LOSSES SIMILAR TO THOSE SHOWN.

Use this information at your own risk!!



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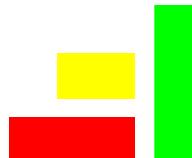
How to Use This Research

Do:

- ✓ Create a gap trading plan using historical data as a guideline
- ✓ Focus on avoiding the riskiest scenarios
- ✓ Remember: “high probability” does not equal “certainty”
- ✓ Focus on largest sample sizes and use great caution with small sample sizes

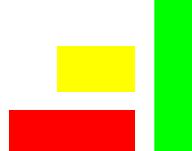
Don’t:

- ✗ Bet the farm on this data!
- ✗ Rely on small sample sizes
- ✗ Over-interpret the data
- ✗ Expect the future to perfectly reflect the past
- ✗ Focus on scenarios based solely on expected profit – win rate should be considered since it is what helps you “stick with your plan long term”



Testing Parameters

- Historical data: 7 years (~ 1,500 opening gaps)
- Start date: 12/15/03, End date: 12/31/10
- Session time: 9:30am ET to 4:00pm ET
- Gap size: 5% min – 100% max (% of 5 day ATR)
- Entry: Market order at 9:30am ET (*fade the open*)
- Stop size: 30% of 5 day ATR (*unless stated otherwise*)
- Target: Gap fill (previous day's close) – *unless stated otherwise*
- Exit: at end of day (4:00pm ET) if neither target nor stop was hit
- Position Size: 100 shares
- Commissions per trade: none
- Slippage: none
- All data was generated using TradeStation



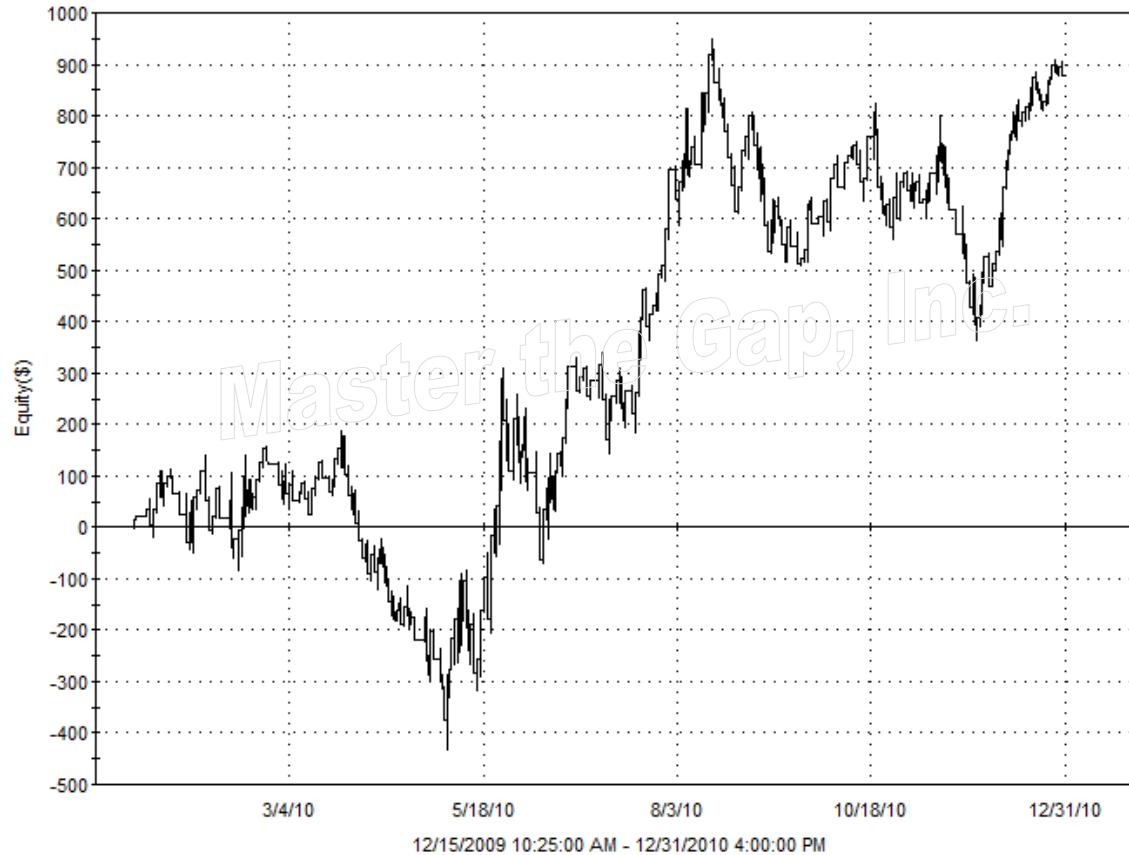
Performance Summary – 1yr

TradeStation Performance Summary		Expand ▾		
		All Trades	Long Trades	Short Trades
Total Net Profit	\$879.00	\$1,417.00	(\$538.00)	
Gross Profit	\$5,571.00	\$3,223.00	\$2,348.00	
Gross Loss	(\$4,692.00)	(\$1,806.00)	(\$2,886.00)	
Profit Factor	1.19	1.78	0.81	
Total Number of Trades	222	105	117	
Percent Profitable	54.50%	60.95%	48.72%	
Winning Trades	121	64	57	
Losing Trades	101	41	60	
Even Trades	0	0	0	
Avg. Trade Net Profit	\$3.96	\$13.50	(\$4.60)	
Avg. Winning Trade	\$46.04	\$50.36	\$41.19	
Avg. Losing Trade	(\$46.46)	(\$44.05)	(\$48.10)	
Ratio Avg. Win:Avg. Loss	0.99	1.14	0.86	
Largest Winning Trade	\$261.00	\$261.00	\$140.00	
Largest Losing Trade	(\$116.00)	(\$94.00)	(\$116.00)	
Max. Consecutive Winning Trades	7	9	5	
Max. Consecutive Losing Trades	8	5	10	
Avg. Bars in Winning Trades	18.46	19.05	17.81	
Avg. Bars in Losing Trades	21.37	15.20	25.58	
Avg. Bars in Even Trades	0.00	0.00	0.00	
Max. Shares/Contracts Held	100	100	100	
Total Shares/Contracts Held	22200	10500	11700	
Account Size Required	\$533.00	\$233.00	\$1,022.00	



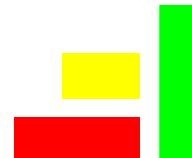
Equity Curve – 1yr

Equity Curve Detailed - SPY 5 min.(12/15/09 09:35 - 12/31/10 16:00)



Performance Summary – 7yr

TradeStation Performance Summary		Expand ▾		
		All Trades	Long Trades	Short Trades
Total Net Profit	\$3,854.00	\$2,905.00	\$949.00	
Gross Profit	\$36,600.00	\$18,107.00	\$18,493.00	
Gross Loss	(\$32,746.00)	(\$15,202.00)	(\$17,544.00)	
Profit Factor	1.12	1.19	1.05	
Total Number of Trades	1514	680	834	
Percent Profitable	57.20%	57.35%	57.07%	
Winning Trades	866	390	476	
Losing Trades	648	290	358	
Even Trades	0	0	0	
Avg. Trade Net Profit	\$2.55	\$4.27	\$1.14	
Avg. Winning Trade	\$42.26	\$46.43	\$38.85	
Avg. Losing Trade	(\$50.53)	(\$52.42)	(\$49.01)	
Ratio Avg. Win:Avg. Loss	0.84	0.89	0.79	
Largest Winning Trade	\$388.00	\$388.00	\$384.00	
Largest Losing Trade	(\$286.00)	(\$286.00)	(\$279.00)	
Max. Consecutive Winning Trades	11	10	11	
Max. Consecutive Losing Trades	8	5	10	
Avg. Bars in Winning Trades	15.49	16.42	14.72	
Avg. Bars in Losing Trades	21.31	19.85	22.49	
Avg. Bars in Even Trades	0.00	0.00	0.00	
Max. Shares/Contracts Held	100	100	100	
Total Shares/Contracts Held	151400	68000	83400	
Account Size Required	\$1,075.00	\$745.00	\$1,594.00	



Results by Year

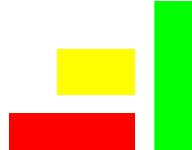
TradeStation Periodical Returns: Annual

Mark-To-Market Period Analysis:

Period	Net Profit	% Gain	Profit Factor	# Trades	% Profitable
Last 12 month	\$879.00	0.85%	1.19	222	54.50%
1/1/2010	\$856.00	0.83%	1.18	221	54.30%
1/1/2009	(\$108.00)	(0.10%)	0.98	222	54.50%
1/1/2008	\$3,413.00	3.42%	1.43	219	64.38%
1/1/2007	\$15.00	0.02%	1.00	213	52.58%
1/1/2006	(\$328.00)	(0.33%)	0.90	216	56.94%
1/1/2005	\$35.00	0.04%	1.01	215	60.93%
1/1/2004	(\$9.00)	(0.01%)	1.00	207	57.00%
1/1/2003	(\$20.00)	(0.02%)	0.00	1	0.00%

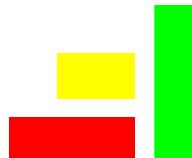
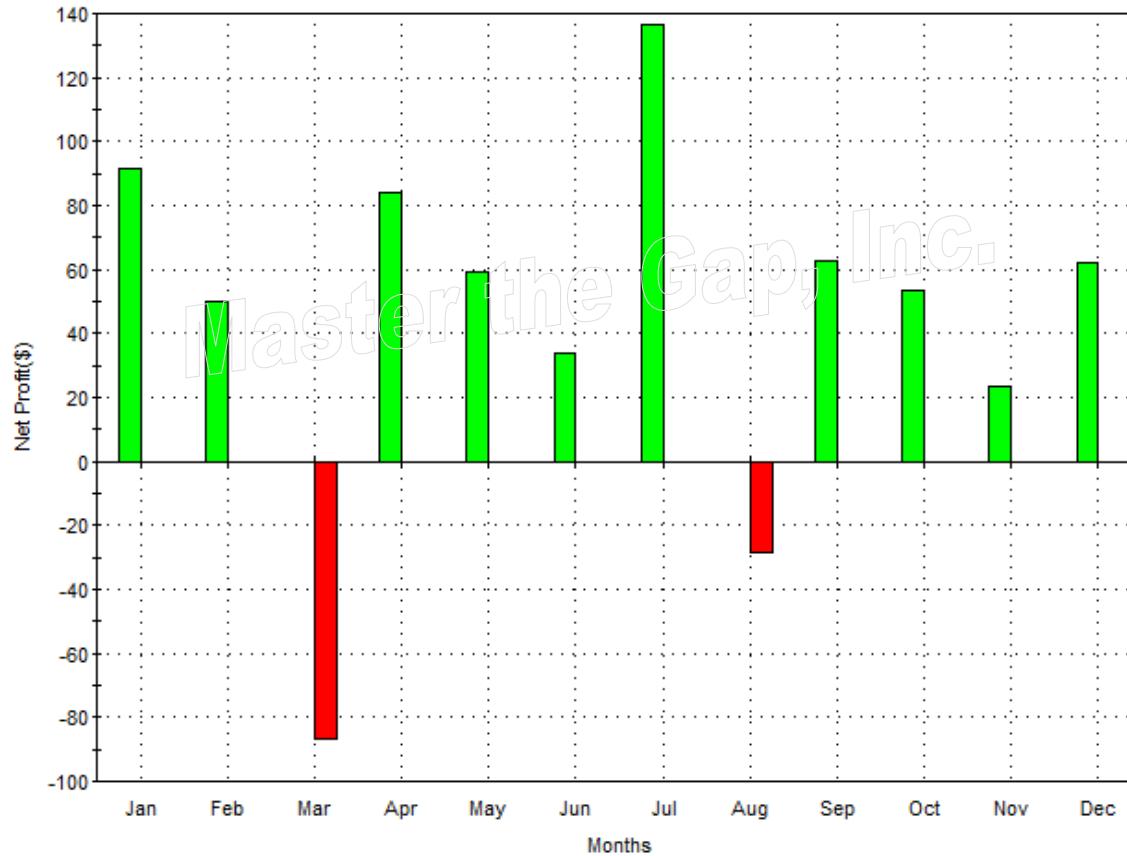
Mark-To-Market Rolling Period Analysis:

Period	Net Profit	% Gain	Profit Factor	# Trades	% Profitable
1/1/2010 - Today	\$856.00	0.83%	1.18	221	54.30%
1/1/2009 - 1/1/2010	\$748.00	0.73%	1.07	443	54.40%
1/1/2008 - 1/1/2010	\$4,161.00	4.17%	1.22	662	57.70%
1/1/2007 - 1/1/2010	\$4,176.00	4.19%	1.18	875	56.46%
1/1/2006 - 1/1/2010	\$3,848.00	3.85%	1.14	1091	56.55%
1/1/2005 - 1/1/2010	\$3,883.00	3.88%	1.13	1306	57.27%
1/1/2004 - 1/1/2010	\$3,874.00	3.87%	1.12	1513	57.24%
1/1/2003 - 1/1/2010	\$3,854.00	3.85%	1.12	1514	57.20%



Results by Month

Average Profit by Month - SPY 5 min.(12/15/03 09:35 - 12/31/10 16:00)



Results by Month

TradeStation Periodical Returns: Monthly

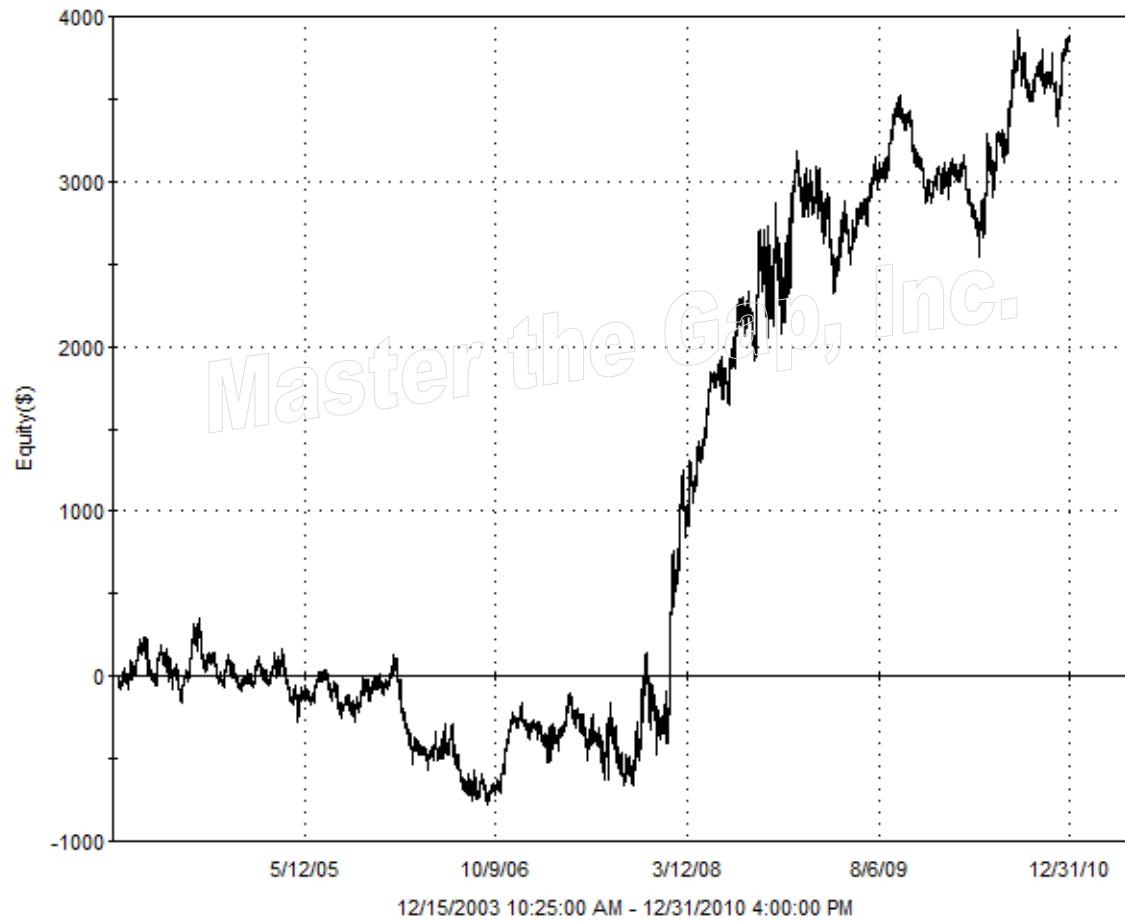
Mark-To-Market Monthly Average Analysis:

Period	Avg. Net Profit	% Gain	% Profitable
January	\$91.71	0.09%	54.47%
February	\$49.86	0.05%	59.46%
March	(\$86.57)	(0.09%)	50.00%
April	\$84.29	0.08%	60.33%
May	\$59.00	0.06%	55.47%
June	\$33.86	0.03%	61.36%
July	\$136.43	0.14%	62.31%
August	(\$28.43)	(0.03%)	51.52%
September	\$62.57	0.06%	55.83%
October	\$53.43	0.05%	57.46%
November	\$23.43	0.02%	60.16%
December	\$62.12	0.06%	58.73%



Equity Curve – 7yr

Equity Curve Detailed - SPY 5 min.(12/15/03 09:35 - 12/31/10 16:00)



By Day of Week

Day of Week	All	All	All	All	Long	Long	Long	Long	Short	Short	Short	Short
	Total Trades	Net Profit	% Profitable	Profit Factor	Total Trades	Net Profit	% Profitable	Profit Factor	Total Trades	Net Profit	% Profitable	Profit Factor
Monday	282	(\$643)	55.3	0.91	113	\$194	57.5	1.07	169	(\$837)	53.8	0.80
Tuesday	315	\$1,004	54.6	1.15	147	\$734	55.1	1.24	168	\$270	54.2	1.07
Wednesday	316	(\$172)	55.4	0.98	145	\$917	62.1	1.30	171	(\$1,089)	49.7	0.74
Thursday	312	\$1,517	60.6	1.25	143	\$287	56.6	1.09	169	\$1,230	63.9	1.43
Friday	289	\$2,148	60.2	1.38	132	\$773	55.3	1.25	157	\$1,375	64.3	1.52



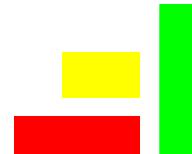
By Day of Month

Day of Month	All Trades	All Net Profit	All Profitable	All Factor	Long Total Trades	Long Net Profit	Long Profitable	Long Factor	Short Total Trades	Short Net Profit	Short % Profitable	Short Factor
1	50	(\$544)	40.0	0.62	15	\$186	60.0	1.47	35	(\$730)	31.4	0.29
2	52	\$75	61.5	1.06	20	\$286	75.0	1.79	32	(\$211)	53.1	0.75
3	52	\$334	51.9	1.32	25	\$389	60.0	2.15	27	(\$55)	44.4	0.92
4	44	(\$767)	43.2	0.45	18	(\$181)	44.4	0.67	26	(\$586)	42.3	0.29
5	49	(\$695)	42.9	0.55	26	(\$224)	46.2	0.75	23	(\$471)	39.1	0.29
6	52	(\$433)	50.0	0.70	26	(\$226)	50.0	0.68	26	(\$207)	50.0	0.71
7	53	\$87	52.8	1.08	27	(\$275)	40.7	0.62	26	\$362	65.4	1.85
8	52	\$486	71.2	1.64	26	\$529	76.9	3.65	26	(\$43)	65.4	0.92
9	50	\$820	70.0	2.16	15	\$377	73.3	2.78	35	\$443	68.6	1.90
10	46	\$491	63.0	1.53	23	\$202	65.2	1.39	23	\$289	60.9	1.69
11	49	(\$148)	51.0	0.88	24	(\$96)	45.8	0.87	25	(\$52)	56.0	0.88
12	54	\$42	59.3	1.04	33	\$121	57.6	1.16	21	(\$79)	61.9	0.81
13	56	(\$309)	60.7	0.78	26	(\$150)	57.7	0.74	30	(\$159)	63.3	0.81
14	45	\$578	60.0	1.62	20	(\$31)	65.0	0.94	25	\$609	56.0	2.56
15	48	(\$11)	68.8	0.99	24	(\$284)	62.5	0.61	24	\$273	75.0	1.92
16	55	\$232	50.9	1.19	24	\$207	50.0	1.39	31	\$25	51.6	1.04
17	44	\$699	59.1	1.98	26	\$533	57.7	2.20	18	\$166	61.1	1.61
18	47	\$358	59.6	1.43	19	\$120	63.2	1.44	28	\$238	57.1	1.43
19	49	\$318	55.1	1.35	23	(\$196)	43.5	0.66	26	\$514	65.4	2.64
20	46	(\$611)	47.8	0.56	22	(\$442)	31.8	0.46	24	(\$169)	62.5	0.71
21	49	\$977	65.3	2.31	14	\$365	57.1	2.31	35	\$612	68.6	2.32
22	51	(\$676)	47.1	0.55	28	(\$430)	50.0	0.59	23	(\$246)	43.5	0.46
23	48	\$910	68.8	2.34	20	\$618	70.0	3.49	28	\$292	67.9	1.68
24	51	(\$593)	51.0	0.56	19	(\$91)	52.6	0.78	32	(\$502)	50.0	0.47
25	41	\$339	58.5	1.35	14	\$227	64.3	1.87	27	\$112	55.6	1.16
26	46	\$637	65.2	1.75	20	\$684	80.0	4.01	26	(\$47)	53.8	0.92
27	50	\$192	58.0	1.21	26	\$224	53.8	1.47	24	(\$32)	62.5	0.93
28	57	\$610	66.7	1.67	22	\$14	59.1	1.04	35	\$596	71.4	2.10
29	51	(\$254)	52.9	0.78	20	(\$133)	65.0	0.70	31	(\$121)	45.2	0.83
30	48	\$549	66.7	1.80	24	\$379	66.7	2.20	24	\$170	66.7	1.46
31	29	\$161	51.7	1.29	11	\$203	45.5	2.04	18	(\$42)	55.6	0.88

By Gap Size: Small & Medium

(5 - 40% of 5 day ATR)

TradeStation Performance Summary		Expand ▾		
		All Trades	Long Trades	Short Trades
Total Net Profit	\$3,790.00	\$1,538.00	\$2,252.00	
Gross Profit	\$24,493.00	\$10,943.00	\$13,550.00	
Gross Loss	(\$20,703.00)	(\$9,405.00)	(\$11,298.00)	
Profit Factor	1.18	1.16	1.20	
Total Number of Trades	1134	503	631	
Percent Profitable	64.55%	63.42%	65.45%	
Winning Trades	732	319	413	
Losing Trades	402	184	218	
Even Trades	0	0	0	
Avg. Trade Net Profit	\$3.34	\$3.06	\$3.57	
Avg. Winning Trade	\$33.46	\$34.30	\$32.81	
Avg. Losing Trade	(\$51.50)	(\$51.11)	(\$51.83)	
Ratio Avg. Win:Avg. Loss	0.65	0.67	0.63	
Largest Winning Trade	\$247.00	\$241.00	\$247.00	
Largest Losing Trade	(\$286.00)	(\$286.00)	(\$279.00)	
Max. Consecutive Winning Trades	13	9	10	
Max. Consecutive Losing Trades	6	5	6	
Avg. Bars in Winning Trades	11.90	11.98	11.84	
Avg. Bars in Losing Trades	19.64	19.35	19.89	
Avg. Bars in Even Trades	0.00	0.00	0.00	
Max. Shares/Contracts Held	100	100	100	
Total Shares/Contracts Held	113400	50300	63100	
Account Size Required	\$811.00	\$772.00	\$710.00	



By Gap Size: Large

(40 - 100% of 5 day ATR)

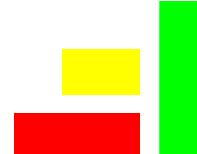
TradeStation Performance Summary		Expand ▾		
		All Trades	Long Trades	Short Trades
Total Net Profit	\$13.00	\$1,316.00	(\$1,303.00)	
Gross Profit	\$12,010.00	\$7,067.00	\$4,943.00	
Gross Loss	(\$11,997.00)	(\$5,751.00)	(\$6,246.00)	
Profit Factor	1.00	1.23	0.79	
Total Number of Trades	378	175	203	
Percent Profitable	35.19%	40.00%	31.03%	
Winning Trades	133	70	63	
Losing Trades	245	105	140	
Even Trades	0	0	0	
Avg. Trade Net Profit	\$0.03	\$7.52	(\$6.42)	
Avg. Winning Trade	\$90.30	\$100.96	\$78.46	
Avg. Losing Trade	(\$48.97)	(\$54.77)	(\$44.61)	
Ratio Avg. Win:Avg. Loss	1.84	1.84	1.76	
Largest Winning Trade	\$388.00	\$388.00	\$384.00	
Largest Losing Trade	(\$235.00)	(\$235.00)	(\$161.00)	
Max. Consecutive Winning Trades	5	4	4	
Max. Consecutive Losing Trades	12	7	9	
Avg. Bars in Winning Trades	35.23	36.66	33.63	
Avg. Bars in Losing Trades	23.93	20.45	26.54	
Avg. Bars in Even Trades	0.00	0.00	0.00	
Max. Shares/Contracts Held	100	100	100	
Total Shares/Contracts Held	37800	17500	20300	
Account Size Required	\$1,705.00	\$917.00	\$1,674.00	



By Gap Size: Monster

(> 100% of 5 day ATR)

TradeStation Performance Summary		Expand ▾		
		All Trades	Long Trades	Short Trades
Total Net Profit		\$1,264.00	\$836.00	\$428.00
Gross Profit		\$1,934.00	\$1,212.00	\$722.00
Gross Loss		(\$670.00)	(\$376.00)	(\$294.00)
Profit Factor		2.89	3.22	2.46
Total Number of Trades		26	13	13
Percent Profitable		46.15%	46.15%	46.15%
Winning Trades		12	6	6
Losing Trades		14	7	7
Even Trades		0	0	0
Avg. Trade Net Profit		\$48.62	\$64.31	\$32.92
Avg. Winning Trade		\$161.17	\$202.00	\$120.33
Avg. Losing Trade		(\$47.86)	(\$53.71)	(\$42.00)
Ratio Avg. Win:Avg. Loss		3.37	3.76	2.87
Largest Winning Trade		\$456.00	\$456.00	\$328.00
Largest Losing Trade		(\$103.00)	(\$103.00)	(\$84.00)
Max. Consecutive Winning Trades		3	2	3
Max. Consecutive Losing Trades		3	2	4
Avg. Bars in Winning Trades		70.17	63.33	77.00
Avg. Bars in Losing Trades		26.64	18.14	35.14
Avg. Bars in Even Trades		0.00	0.00	0.00
Max. Shares/Contracts Held		100	100	100
Total Shares/Contracts Held		2600	1300	1300
Account Size Required		\$160.00	\$158.00	\$154.00



By Market Condition:

Above/Below 10 Day SMA

Above/Below MA	All Total		All Net		All % Profitable		All Total		Long Total		Long Net		Long % Profitable		Long Total		Short Total		Short Net		Short % Profitable		Short Factor	
	Trades	Profit							Trades	Profit					Trades	Profit								
Above	881	\$2,136		58.6		1.13		416	\$1,320		58.4		1.17		465	\$816		58.7		1.10				
Below	634	\$1,698		55.2		1.10		264	\$1,585		55.7		1.21		370	\$113		54.9		1.01				
Above or Below	1514	\$3,854		57.2		1.12		680	\$2,905		57.4		1.19		834	\$949		57.1		1.05				



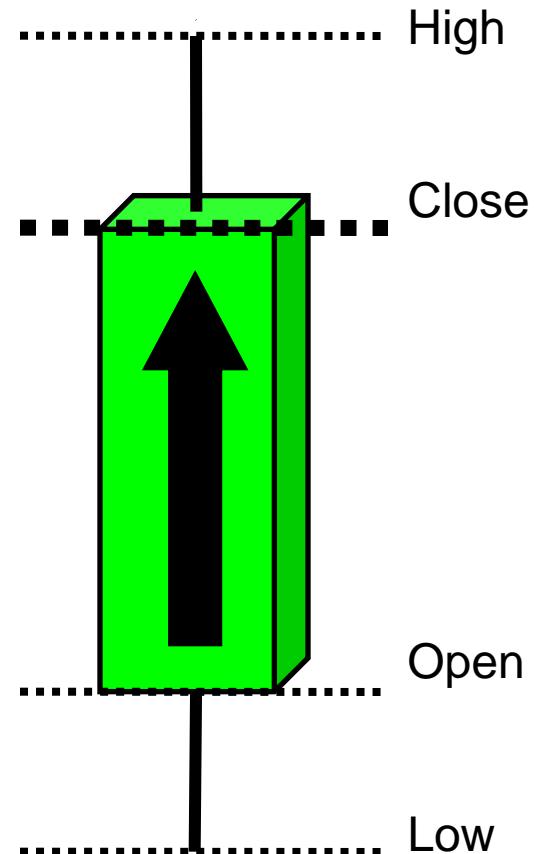
By “Gap Zone”

(opening location)

Definition:

Location of the opening price gap relative to the prior day's key price levels:

- Open
- High
- Low
- Close



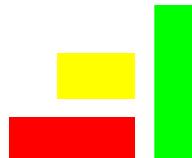
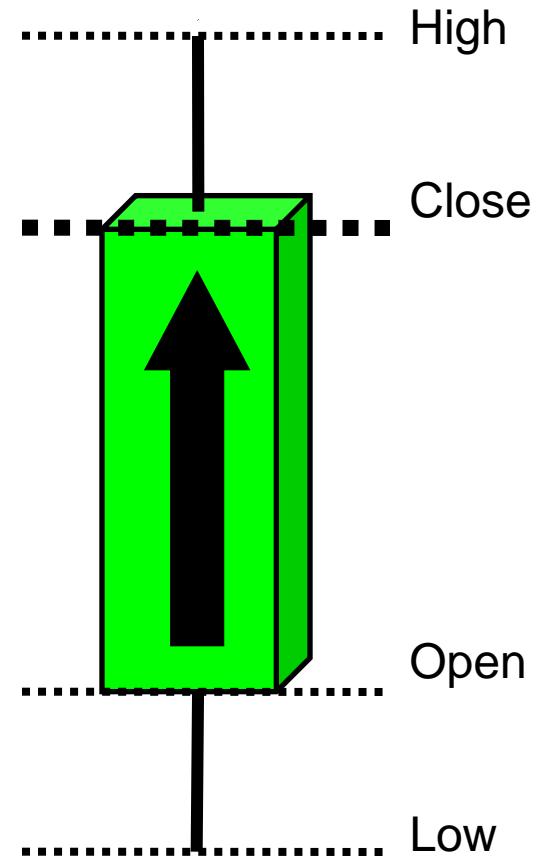
“Location, location, location”... applies to gaps too!

Why Gap Zones Work

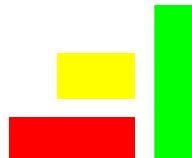
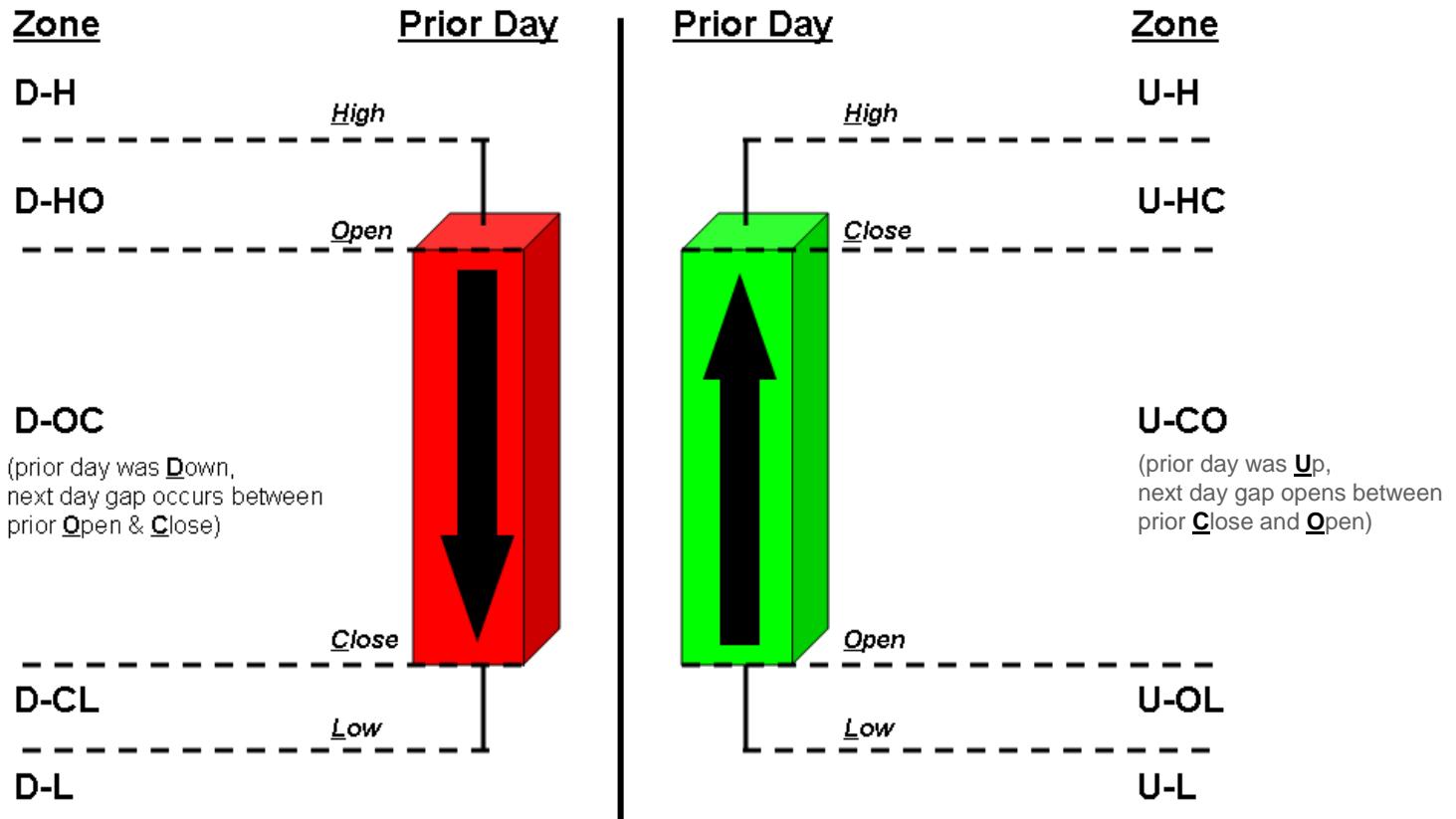
(opening location)

They inherently incorporate:

- ✓ Proven support & resistance
- ✓ Short term trend
- ✓ Gap size
- ✓ Trader psychology

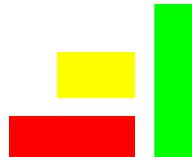


Gap ZoneSM Map



By Gap Zone

Gap Zone	All Total Trades	All Net Profit	All % Profitable	All Profit Factor	Long Total Trades	Long Net Profit	Long % Profitable	Long Profit Factor	Short Total Trades	Short Net Profit	Short % Profitable	Short Profit Factor
D-H	62	(\$352)	32.3	0.78					62	(\$352)	32.3	0.78
D-HO	87	(\$472)	44.8	0.79					87	(\$472)	44.8	0.79
D-OC	260	\$1,029	61.9	1.21					260	\$1,029	61.9	1.21
D-CL	112	\$432	70.5	1.22	112	\$432	70.5	1.22				
D-L	152	\$1,677	52.6	1.39	152	\$1,677	52.6	1.39				
U-H	236	\$781	52.5	1.14					236	\$781	52.5	1.14
U-HC	142	(\$145)	73.2	0.94					142	(\$145)	73.2	0.94
U-CO	237	\$1,876	65.8	1.48	237	\$1,876	65.8	1.48				
U-OL	89	(\$548)	44.9	0.77	89	(\$548)	44.9	0.77				
U-L	54	(\$406)	31.5	0.79	54	(\$406)	31.5	0.79				



By Stop Size (% of 5 Day ATR)

Target = Gap Fill / Prior Close

Stop Size	All Total Trades	All Net Profit	All % Profitable	All Profit Factor	Long Total Trades	Long Net Profit	Long % Profitable	Long Profit Factor	Short Total Trades	Short Net Profit	Short % Profitable	Short Profit Factor
	1514	\$3,174	31.9	1.18	680	\$2,211	31.0	1.26	834	\$963	32.6	1.10
20%	1514	\$4,977	48.9	1.19	680	\$3,077	49.0	1.25	834	\$1,900	48.9	1.13
30%	1514	\$3,854	57.2	1.12	680	\$2,905	57.4	1.19	834	\$949	57.1	1.05
40%	1514	\$2,880	62.0	1.08	680	\$1,889	61.8	1.11	834	\$991	62.1	1.05
50%	1514	\$3,801	65.2	1.10	680	\$2,681	64.9	1.14	834	\$1,120	65.5	1.05
60%	1514	\$4,228	67.6	1.11	680	\$2,741	67.6	1.14	834	\$1,487	67.5	1.07
70%	1514	\$2,903	68.5	1.07	680	\$1,656	68.4	1.08	834	\$1,247	68.6	1.06
80%	1514	\$1,907	69.0	1.04	680	\$1,133	68.8	1.05	834	\$774	69.2	1.04
90%	1514	\$1,119	69.2	1.03	680	\$628	69.0	1.03	834	\$491	69.3	1.02
100%	1514	\$829	69.3	1.02	680	\$324	69.3	1.01	834	\$505	69.3	1.02



By Stop Size (% of 5 Day ATR)

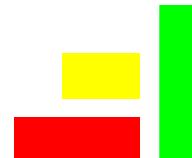
Target = 15% of 5 Day ATR Beyond Gap Fill

Stop Size	All Total Trades	All Net Profit	All % Profitable	All Profit Factor	Long Total Trades	Long Net Profit	Long % Profitable	Long Profit Factor	Short Total Trades	Short Net Profit	Short % Profitable	Short Profit Factor
	1514	\$5,527	22.6	1.27	680	\$3,186	22.6	1.34	834	\$2,341	22.5	1.21
20%	1514	\$8,708	38.6	1.27	680	\$4,909	39.7	1.33	834	\$3,799	37.8	1.22
30%	1514	\$7,245	47.1	1.18	680	\$4,528	48.4	1.25	834	\$2,717	46.0	1.13
40%	1514	\$6,628	52.4	1.15	680	\$3,274	52.9	1.15	834	\$3,354	52.0	1.14
50%	1514	\$6,939	55.6	1.15	680	\$3,895	56.3	1.17	834	\$3,044	55.0	1.12
60%	1514	\$7,520	58.2	1.15	680	\$4,173	59.7	1.18	834	\$3,347	57.0	1.13
70%	1514	\$5,777	59.0	1.11	680	\$2,865	60.3	1.12	834	\$2,912	57.9	1.11
80%	1514	\$4,855	59.7	1.09	680	\$2,282	61.0	1.09	834	\$2,573	58.6	1.10
90%	1514	\$3,841	59.8	1.07	680	\$1,693	61.2	1.06	834	\$2,148	58.8	1.08
100%	1514	\$3,613	60.0	1.07	680	\$1,372	61.5	1.05	834	\$2,241	58.9	1.08



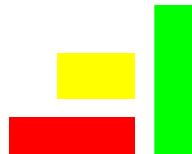
Stop & Target as % of Gap Size

Stop % of Gap Size	Target % of Gap Size	All				Long			Long			Short			
		Total Trades	Net Profit	% Profitable	Profit Factor	Total Trades	Net Profit	% Profitable	Profit Factor	Total Trades	Net Profit	% Profitable	Profit Factor	Total Trades	Net Profit
25%	25%	1514	(\$887)	48.4	0.92	680	(\$443)	47.2	0.91	834	(\$444)	49.4	0.92	834	(\$444)
25%	50%	1514	(\$407)	30.7	0.97	680	\$123	30.1	1.02	834	(\$530)	31.2	0.93	834	(\$530)
25%	75%	1514	\$1,542	24.3	1.10	680	\$1,455	23.8	1.21	834	\$87	24.7	1.01	834	\$87
25%	100%	1514	\$1,593	19.5	1.10	680	\$1,451	19.0	1.19	834	\$142	19.9	1.02	834	\$142
25%	125%	1514	\$3,089	17.1	1.19	680	\$2,153	16.9	1.28	834	\$936	17.3	1.11	834	\$936
25%	150%	1514	\$3,823	16.1	1.23	680	\$2,313	15.7	1.30	834	\$1,510	16.4	1.18	834	\$1,510
50%	25%	1514	(\$598)	66.2	0.96	680	\$98	67.2	1.01	834	(\$696)	65.3	0.91	834	(\$696)
50%	50%	1514	(\$833)	47.8	0.96	680	(\$131)	47.9	0.99	834	(\$702)	47.7	0.93	834	(\$702)
50%	75%	1514	\$793	38.4	1.03	680	\$1,069	38.5	1.10	834	(\$276)	38.4	0.98	834	(\$276)
50%	100%	1514	\$812	32.2	1.03	680	\$927	31.8	1.08	834	(\$115)	32.5	0.99	834	(\$115)
50%	125%	1514	\$2,017	28.5	1.07	680	\$1,237	27.9	1.10	834	\$780	28.9	1.06	834	\$780
50%	150%	1514	\$2,634	26.5	1.10	680	\$1,781	26.5	1.13	834	\$853	26.5	1.06	834	\$853
75%	25%	1514	(\$532)	75.8	0.97	680	\$129	76.0	1.02	834	(\$661)	75.7	0.92	834	(\$661)
75%	50%	1514	(\$1,242)	58.7	0.95	680	(\$716)	57.9	0.94	834	(\$526)	59.4	0.96	834	(\$526)
75%	75%	1514	\$1,083	49.7	1.04	680	\$1,005	49.7	1.07	834	\$78	49.8	1.01	834	\$78
75%	100%	1514	\$923	42.9	1.03	680	\$813	42.2	1.05	834	\$110	43.4	1.01	834	\$110
75%	125%	1514	\$2,671	39.0	1.08	680	\$1,217	37.6	1.07	834	\$1,454	40.0	1.08	834	\$1,454
75%	150%	1514	\$2,851	36.4	1.08	680	\$1,644	36.0	1.10	834	\$1,207	36.7	1.07	834	\$1,207
100%	25%	1514	(\$1,068)	80.9	0.94	680	(\$280)	81.3	0.97	834	(\$788)	80.6	0.91	834	(\$788)
100%	50%	1514	(\$1,577)	65.7	0.94	680	(\$780)	65.4	0.94	834	(\$797)	65.8	0.94	834	(\$797)
100%	75%	1514	\$1,371	56.6	1.04	680	\$1,267	57.2	1.08	834	\$104	56.1	1.01	834	\$104
100%	100%	1514	\$1,805	50.0	1.05	680	\$1,583	50.4	1.09	834	\$222	49.6	1.01	834	\$222
100%	125%	1514	\$3,655	46.0	1.10	680	\$2,115	46.0	1.12	834	\$1,540	46.0	1.08	834	\$1,540
100%	150%	1514	\$4,320	43.9	1.11	680	\$2,475	44.4	1.13	834	\$1,845	43.4	1.09	834	\$1,845
125%	25%	1514	(\$2,409)	83.6	0.87	680	(\$985)	84.0	0.89	834	(\$1,424)	83.2	0.85	834	(\$1,424)
125%	50%	1514	(\$2,049)	70.7	0.93	680	(\$1,117)	70.9	0.92	834	(\$932)	70.5	0.94	834	(\$932)
125%	75%	1514	\$1,381	62.1	1.04	680	\$1,106	62.6	1.07	834	\$275	61.6	1.02	834	\$275
125%	100%	1514	\$2,757	56.1	1.07	680	\$2,361	56.8	1.13	834	\$396	55.6	1.02	834	\$396
125%	125%	1514	\$4,936	52.2	1.12	680	\$3,348	52.9	1.18	834	\$1,588	51.7	1.08	834	\$1,588
125%	150%	1514	\$5,152	49.7	1.12	680	\$3,133	50.7	1.16	834	\$2,019	48.9	1.09	834	\$2,019
150%	25%	1514	(\$3,495)	84.8	0.82	680	(\$1,696)	85.0	0.83	834	(\$1,799)	84.7	0.82	834	(\$1,799)
150%	50%	1514	(\$2,819)	73.0	0.91	680	(\$1,992)	73.2	0.87	834	(\$827)	72.8	0.94	834	(\$827)
150%	75%	1514	\$918	64.9	1.03	680	\$305	65.4	1.02	834	\$613	64.5	1.03	834	\$613
150%	100%	1514	\$1,642	59.1	1.04	680	\$1,470	60.0	1.08	834	\$172	58.4	1.01	834	\$172
150%	125%	1514	\$4,096	55.4	1.10	680	\$2,604	56.3	1.13	834	\$1,492	54.6	1.07	834	\$1,492
150%	150%	1514	\$4,329	52.8	1.10	680	\$2,368	54.1	1.11	834	\$1,961	51.8	1.09	834	\$1,961



SPY Summary

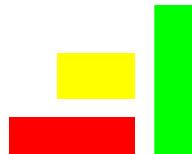
- ✓ Observation: Down gaps are more profitable than up gaps
Idea: Reduce position size for up gaps
- ✓ Observation: March and August are riskier months
Idea: Reduce position size in those months
- ✓ Observation: Up gaps on Mon/Wed are riskier
Idea: Don't trade up gaps on those days
- ✓ Observation: Beginning of the month up gaps are riskier
Idea: Don't trade up gaps at the beginning of the month
- ✓ Observation: Small/Medium gaps outperform Large/Monster
Idea: Consider size of gap as part of your trading plan
- ✓ Observation: Zone selection is important
Idea: Reduce position size or don't trade gaps in risky zones



Final Thoughts...

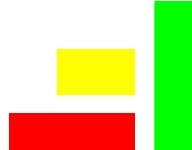
- ✓ This research should help create your gap trading plan.
(it is not the plan)
- ✓ Forward test by paper trading or using a simulator before risking your capital.
- ✓ Be conservative and use your own judgment (when in doubt, sit it out!)
- ✓ For Daily Gap probabilities, First Hour Range probabilities, testing tools, other research, and assistance with your trading plan, check out: www.masterthegap.com
- ✓ *Please credit MasterTheGap.com if referencing or using this data in anyway other than for your personal use.*

Thank You & Good Gappin'!



Glossary

- ATR:** Average True Range. ATR is a useful calculation for measuring the volatility of a market. It is calculated by measuring the distance between the extreme high and low of a day, including the prior closing price (if it is beyond the day's trading range). By incorporating the prior day close, a more accurate measurement of a market's daily movement can be determined since the overnight gaps are included.
- Breakaway Gaps:** These gaps occur after a period of price consolidation. They are caused by a surge of demand to buy or sell the market, typically in response to a significant event. The gaps are not filled during the same trading day (often not for many days or weeks) and are associated with above average volume. Gap traders "go with" / "follow" these opening gaps by trading in the same direction.
- Common Gaps:** These gaps occur throughout a market's typical ebb and flow in response to a wide variety of events and news. They are often associated with average or below average volume and generally fill the same day. Gap traders "fade" these types of gaps by trading in the opposite direction of the gap.
- Continuation (or Runaway) Gaps:** These gaps occur during, and in the direction of, an ongoing trend and are generally viewed as confirmation of a trend's strength. They are associated with above average volume and often do not fill the same day. Gap traders "go with" / "follow" these opening gaps by trading in the same direction.
- Exhaustion Gaps:** These gaps occur at or very near the end of a trend. They are typically associated with very high volume as the very last buyers (or sellers if the asset is in a downtrend) jump aboard a trend that is ending and are overrun by opposing market forces as prices stall and often reverse sharply that day. Gap traders "fade" these types of gaps by trading in the opposite direction of the gap.
- Extended Target:** This term refers to the placement of an exit price for a gap trade that is beyond or through the gap fill area (prior day/session closing price). It is often quite profitable to trade gaps using an extended target if historical data supports the probability of price continuation.
- Fade:** This term means to enter a trade in the opposite direction of the opening gap move. For example, to fade an "up" gap, you would "sell" / "go short." To fade a "down" gap, you would "buy" / "go long."



Glossary (*continued*)

Futures Contract: A standardized financial obligation for a buyer to purchase an asset (or the seller to sell an asset), such as a financial instrument or physical commodity at a pre-set future date and price. Futures are used to hedge or speculate on the price movement of an asset. While a futures contract does obligate the trader; in real life, this obligation is avoided by simply exiting the position, much like selling a stock in the equity markets would close a trade.

Gap: The most common definition of a “gap” is the difference between an asset or instrument’s opening price and its prior day closing price. This difference shows up visually on a technical price chart as an open space or “gap.” (Note: some traders define a gap as the difference between the prior day high or low and the next day’s opening price.)

Gap Down / Down Gap: An opening price that is below the prior day/session closing price.

Gap Up / Up Gap: An opening price that is above the prior day/session closing price.

Gap Fill / Close: When prices pull back from the open of a session and retrace all the way back to the prior session’s closing price, the opening gap is considered to have “filled” or “closed.”

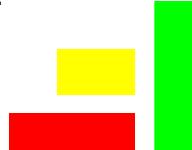
Go With/Follow: This is a trade where you “follow” the gap by trading in the direction of the gap (as opposed to fading it.) Prices opening in some zones increase the likelihood of a continuation or breakaway gap and are less likely to fill and may be candidates for “following” the gap.

Gapper: A unique individual that has evolved beyond his/her trading peers by recognizing the superior return on time, effort and capital of the "gap fade." This elite trader can be recognized by his/her enviable lifestyle and finances ☺

Gap Zones: The areas defined by the prior day's Open, High, Low and Close. By including the prior day's direction (open to close), gap zones can be extremely useful for segmenting, analyzing and trading opening gaps. Gap zones work well for analyzing gap setups because they inherently incorporate: support and resistance, short term trend, gap size, & trader psychology.

Go Long: This is when you buy a security in anticipation of being able to sell it later at a higher price for a profit.

Heat: This is a slang term for "maximum adverse excursion" which describes how far a trade moved away from the desired direction before becoming a winner. This is a good statistic to track for all trades.



Glossary (*continued*)

Mini / E-Mini: An electronically traded futures contract that is equal to only a small portion of a normal futures contract. E-minis contracts are available on many indices such as the S&P 500, Dow, NASDAQ 100, and Russell 2000, as well as commodities such as oil and gold. Trading E-mini contracts has many advantages for individuals, including high liquidity, low cost, tax advantages and nearly 24 hour trading.

Profit Expectancy / Expected Value (EV): In lay terms, it simply how much profit per trade one would expect to average over time (based upon historical averages) for a given set-up. The formula: (average profit per winner * probability of winning) - (average loss per loser * probability of losing). This is also known as EV or "expected value." Note: this number is far more important than just the probability of profits. It may feel good to have a high winning percentage, but it may not be profitable over the long term.

Profit Factor (PF): This is another way to measure the attractiveness of a trade set-up. It is the historical net profits of a strategy (generated by the winning trades) divided by the historical net losses of the losers. A profit factor greater than 1.0 was a money making strategy and less than 1.0 was a losing strategy. Generally, the bigger the profit factor, the greater its long term profitability and attractiveness.

Regular/ Pit Session: This term is synonymous with the "open outcry" or pit session hours for a given market, e.g. 9:30 – 16:15 EST for the S&P 500. Many markets trade nearly 24 hours a day electronically; however, the bulk of volume is transacted during their "regular" trading hours. For this reason, the regular session's open, high, low, and closing prices carry great significance for most traders and their systems.

Short: This is when you sell a security with anticipation of buying it back at a lower price for a profit.

SMA: Simple Moving Average – useful for segmenting and analyzing historical probabilities using daily data.

Win Rate: This term describe the percentage of trades for a given setup that hit their target or could have been exited at the end of the day for a profit.

Zone: The areas defined by the prior day's Open, High, Low and Close. By including the prior day's direction (open to close), gap zones can be extremely useful for segmenting, analyzing and trading opening gaps. Gap zones work well for analyzing gap setups because they inherently incorporate: support and resistance, short term trend, gap size, & trader psychology.

