### **TSL Special Report on Robustness**

References: Futures Truth Reports TSL web site TSL internal tracked systems 10/5/2013

Michael L. Barna President and Founder Trading System Lab



### **REQUIRED DISCLAIMER**

HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN.

IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS.

THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS.



### Important Notes on Design

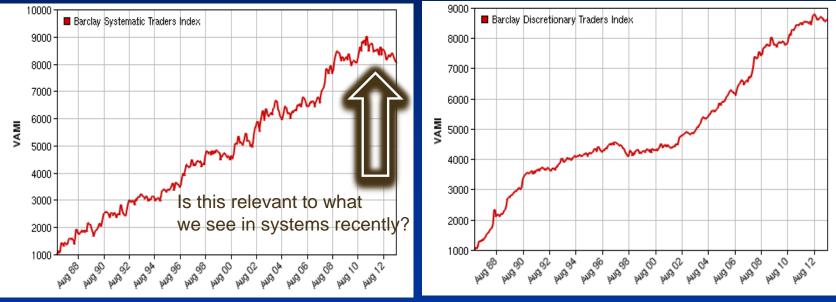
- 1. Do not use 40% OOS and expect robustness on noisy markets
- 2. Try using old data as OOS and new data as TRN data
- 3. If you want to hold out additional data then use less OOS. 20% OOS + 20% more OOS = 40% all OOS. This is too much OOS data!
- 4. Hold out minimal recent data as double OOS
- 5. You should train on the recent volatile market data
- 6. If you have to choose between systems, chose the simpler
- 7. Try for a TTPR of 100:1. Long only index systems might require lower TTPR due to stability of upward drift
- 8. For index markets look at long only systems
- 9. For agricultural markets look at weekly data
- 10. Pit contracts are going away but in 2006 when we TSL designed many systems pits were still fairly active. The transition to electronic contracts may not give the same results.
- 11. Designing on 200,000 5 minute bars is still only 9.8 years of data and if the market is trading like it did 12 years ago, you will not find good systems.



### SYSTEMATIC VERSES DISCRETIONARY CTA VAMI 1987-2013

#### **MECHANICAL SYSTEMS**

#### DISCRETIONARY



466 programs, \$260B

151 programs, \$24B

#### Notice the 2010 to 2013 Drawdown Source: BarclayHedge



### THIRD PARTY FORWARD TESTS

3 Strategies released in 2007 and 3 in 2010, Designs Frozen, Post OOS, Independent Third Party Comparative Ratings published April 2013

| Top 10 S&P S   | ystems                    |                                    |  | Top 10 Systems For The Past 12 Months   |                                |                  |  |
|----------------|---------------------------|------------------------------------|--|---|--------------------------------|------------------|--|
| ssue #1 2013   | - published in April      | 2013                               |  |   |                                |                  |  |
|                |                           | and the state of the second second |  |   | Issue #1 2013 - published in   | April 2013       |  |
|                | have been out for a since | e their release to us.             |  | Results based on performance through January 31, 2013.<br>Return is based on three times the required margin. |                                |                  |  |
|                |                           | igh January 31, 2013.              |  |   |                                |                  |  |
| Return is base | d on three times the r    | equired margin.                    |  |   | in is based on allee alles ale | required margin. |  |
| Dank           | System Name               | Annual %                           |  |   |                                |                  |  |
| Kalik          | System Mame               | Return                             |  |   |                                | Annual %         |  |
| 1.             | TSL-SP_1.0Z               | 63.8%                              |  | Rank  | System Name                    | Return           |  |
| 2.             | TSL-CEL_SP1               | 50.9%                              |  | 1   | TSL_US1                        | 170.5%           |  |
| 3.             |                           |                                    |  | 2   | Ruggiero Bond                  | 140.3%           |  |
| 4.             |                           |                                    |  | 3   | ATS-3200                       | 92.3%            |  |
| 5.             | %C Daybreaker             | 35.2%                              |  | 4   | MAR - SP Mini Sync             | 87.8%            |  |
| 6.             |                           | Ton 40 Quete                       | Din en Their De                              | 5   | Star ES                        | 87.6%            |  |
| 7.             |                           |                                    | ems Since Their Re<br>2013 - published in Ap |   |                                | 83.1%            |  |
| 8.             |                           | 155ue #1 2                         | 2015 - published in Ap                       | 111 2013  |                                | 70.8%<br>70.7%   |  |
| 9              | Systems included in thi   | is table must have been re         | eleased for at least 18 n                    | onths. Results b  | ased on performance through    | 64.8%            |  |
| 10.            |                           |                                    | January 31, 2013.                            |   |                                | 64.4%            |  |
| TU.            |                           | Return is based                    | I on three times the req                     | uired margin.   |                                | 01.170           |  |
|                | Rank                      | Syst                               | em Name                                      | Annua   | I % Return                     |                  |  |
|                | 1.                        | TSL_CEL_NG_1.1                     |  |   | 12.0%                          |                  |  |
|                | 2.                        | Delphi II EMD                      |  | 7   | 6.9%                           |                  |  |

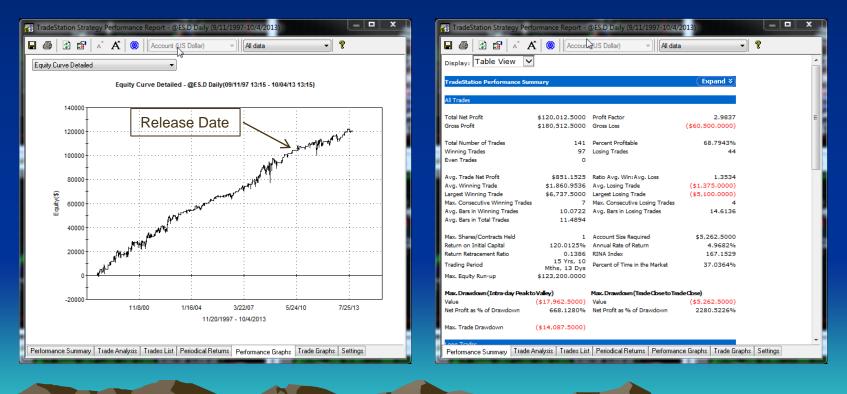
| 3.  | MAR - NewBondLiveSync | 73.5% |  |
|-----|-----------------------|-------|--|
| 4.  | TSL US1               | 71.5% |  |
| 5.  | TSL-SP 1.0Z           | 63.8% |  |
| 6.  | MAR - SP Mini Sync    | 59.9% |  |
| 7.  | NatGator Silver       | 53.4% |  |
| 8.  | TSL-CEL SP1           | 53.4% |  |
| 9.  | Propero ES            | 49.0% |  |
| 10. | Impetus SP            | 48.6% |  |
|     |                       |       |  |

ROI based on 3\*Margin and includes Slippage and Commission



### @ES.D Mini Spooz

#### Long Only TT1, PP1 Designed on @ES.D TTPR ~ 20:1 (Very Low)





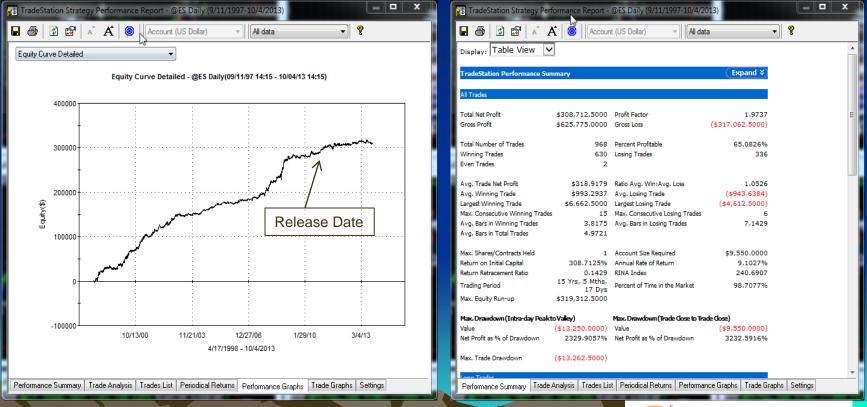
# @ES Daily System 1

#### PP5 TT5 FF34

#### Back OOS

Designed on @ES daily

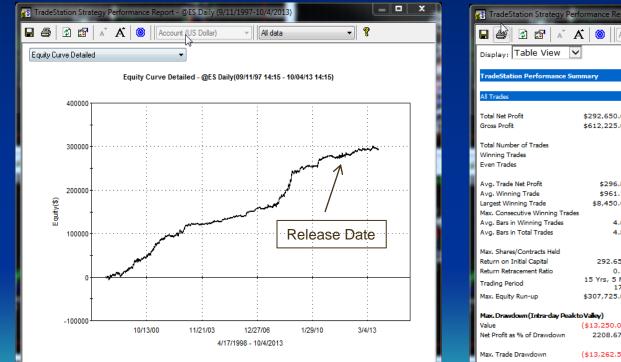
#### TTPR~88:1





# @ES Daily System 2

PP5 TT5 FF34 Back OOS Designed on @ES daily TTPR~100:1



Performance Summary Trade Analysis Trades List Periodical Returns Performance Graphs Trade Graphs Settings

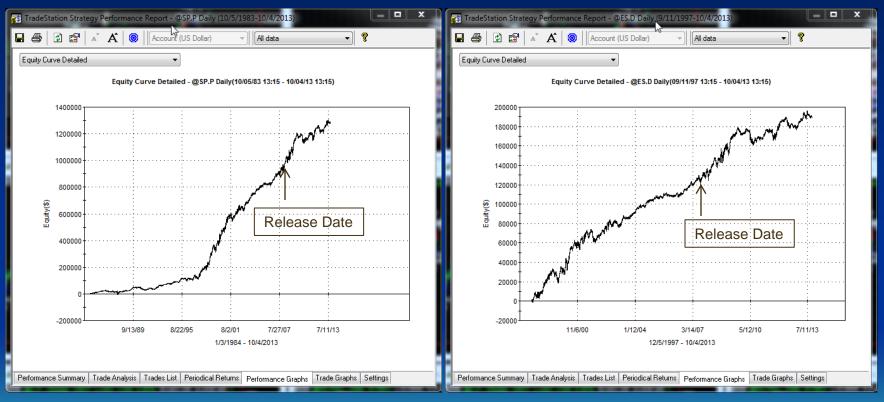
|                                 |                           | @ES Daily (9/11/1997-10/4/2<br>it (US Dollar) |                               |          |
|---------------------------------|---------------------------|---|-------------------------------|----------|
| Display: Table View 🗸           |                           |   |                               | -        |
| TradeStation Performance Sun    | nmary                     |   | Expand 📚                      |          |
| All Trades                      |                           |   |                               |          |
| Total Net Profit                | \$292,650.0000            | Profit Factor                                 | 1.9157                        | =        |
| Gross Profit                    | \$612,225.0000            | Gross Loss                                    | (\$319,575.0000)              |          |
| Total Number of Trades          | 986                       | Percent Profitable                            | 64.6045%                      |          |
| Winning Trades                  |                           | Losing Trades                                 | 344                           |          |
| Even Trades                     | 5                         |   |                               |          |
| Avg. Trade Net Profit           | \$296.8053                | Ratio Avg. Win: Avg. Loss                     | 1.0346                        |          |
| Avg. Winning Trade              | \$961.1068                | Avg. Losing Trade                             | (\$928.9971)                  |          |
| Largest Winning Trade           | \$8,450.0000              | Largest Losing Trade                          | (\$5,012.5000)                |          |
| Max. Consecutive Winning Trades |                           | Max. Consecutive Losing Trades                | 4                             |          |
| Avg. Bars in Winning Trades     | 4.0173                    | Avg. Bars in Losing Trades                    | 6.5552                        |          |
| Avg. Bars in Total Trades       | 4.8996                    |   |                               |          |
| Max. Shares/Contracts Held      | 1                         | Account Size Required                         | \$8,412.5000                  |          |
| Return on Initial Capital       | 292.6500%                 | Annual Rate of Return                         | 8.8435%                       |          |
| Return Retracement Ratio        | 0.1389                    | RINA Index                                    | 238.9812                      |          |
| Trading Period                  | 15 Yrs, 5 Mths,<br>17 Dvs | Percent of Time in the Market                 | 98.7077%                      |          |
| Max. Equity Run-up              | \$307,725.0000            |   |                               |          |
| Max. Drawdown (Intra-day Peakt  | oValley)                  | Max. Drawdown (Trade Close to Tra             | ade Close)                    |          |
| Value                           | (\$13,250.0000)           | •   | (\$8,412.5000)                |          |
| Net Profit as % of Drawdown     | 2208.6792%                | Net Profit as % of Drawdown                   | 3478.7519%                    |          |
| Max. Trade Drawdown             | (\$13,262.5000)           |   |                               |          |
| Long Trader                     |                           |   |                               |          |
| Performance Summary Trade.      | Analysis   Trades Lis     | t Periodical Returns Performa                 | nce Graphs   Trade Graphs   S | Settings |
|                                 |                           |   | 1.000                         |          |

Trading System Lab $^{\!\scriptscriptstyle \otimes}$ 

### @SP.P or @ES.D System FT Tracked as SP1

#### @SP.D

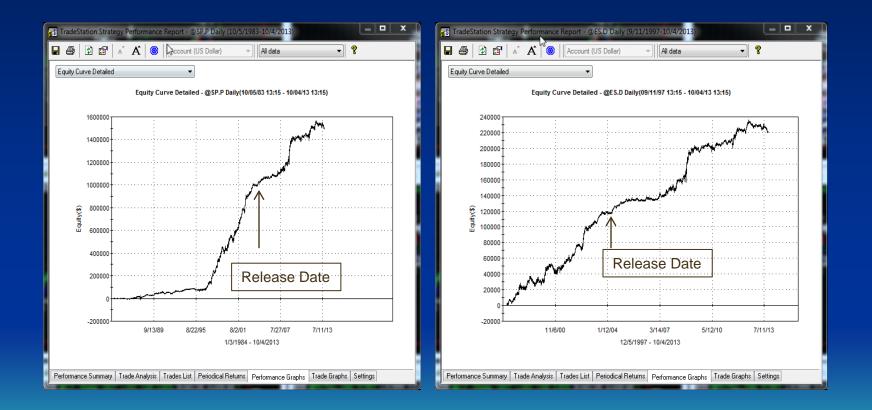
#### @ES.D





# @SP.P or @ES.D System

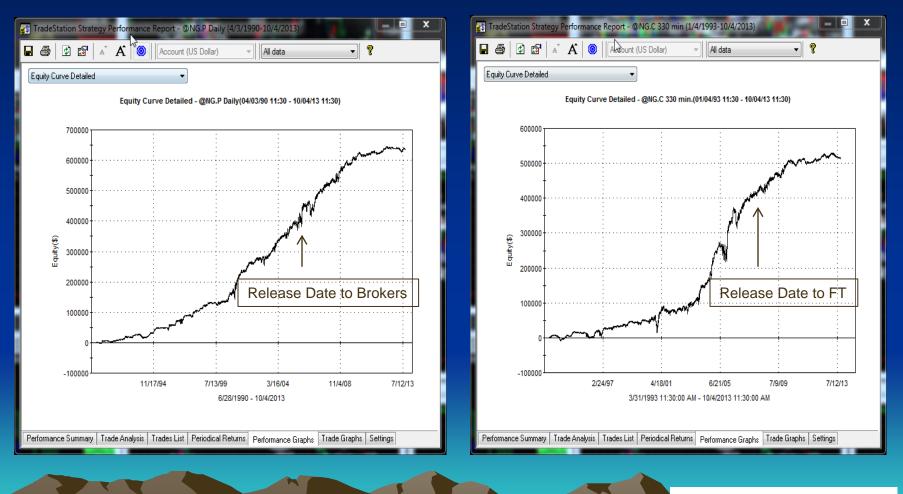
FT tracked as SP z1 Hybrid TSL DNA and Manual Designs





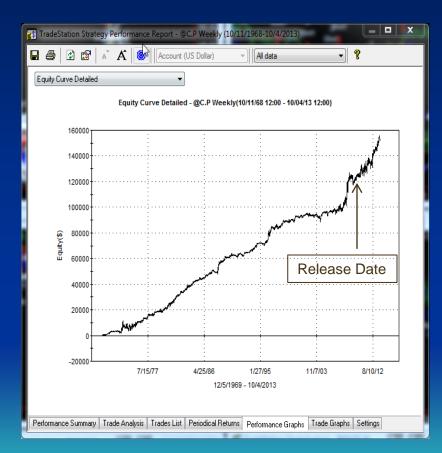
# @NG.P or @NG.C System FT Tracked

Nat Gas pit volume reduced following release so brokers switched to NG combined





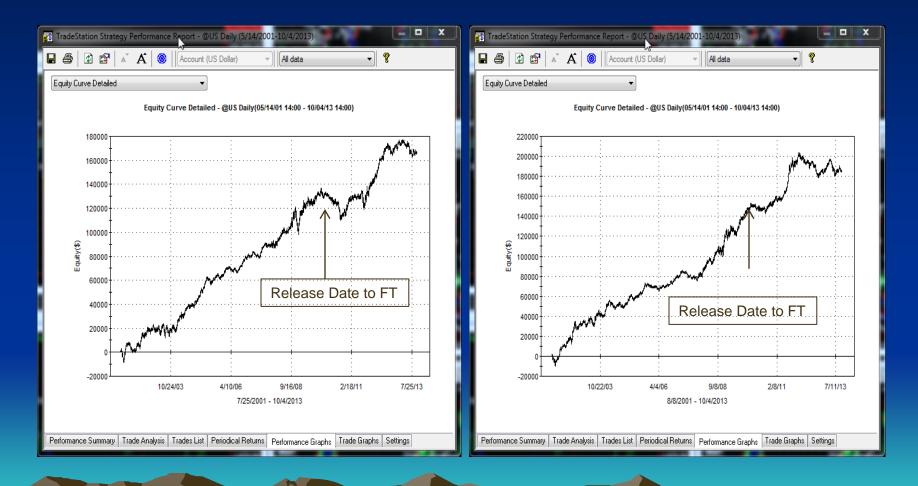
### @C System



| TradeStation Strategy Perfo                              | ormance Report - (        | @C.P Weekly (10/11/1968-10/     | 4/2013)                  |          | X        |
|--|---------------------------|---------------------------------|--------------------------|----------|----------|
| 🖬 🎒 🗗 🔺 A  | 🛛 🔘 🗌 Account             | : (US Dollar)                   | •                        | ?        |          |
| Display: Table View 🗸                                    |                           |                                 |                          |          | <b>^</b> |
| TradeStation Performance Sum                             | mary                      |                                 | Expand ¥                 |          |          |
| All Trades   |                           |                                 |                          |          |          |
| Total Net Profit   | \$152,337.5000            |                                 | 2.9437                   |          | E        |
| Gross Profit   | \$230,712.5000            | Gross Loss                      | (\$78,375.0000)          |          |          |
| Total Number of Trades                                   | 293                       | Percent Profitable              | 54.6075%                 |          |          |
| Winning Trades   | 160                       | Losing Trades                   | 131                      |          |          |
| Even Trades  | 2                         |                                 |                          |          |          |
| Avg. Trade Net Profit                                    |                           | Ratio Avg, Win: Avg, Loss       | 2.4102                   |          |          |
|  |                           | Avg. Losing Trade               | (\$598.2824)             |          |          |
| Largest Winning Trade                                    |                           | Largest Losing Trade            | (\$4,087.5000)           |          |          |
| Max. Consecutive Winning Trades                          |                           | Max. Consecutive Losing Trades  | 5                        |          |          |
| Avg. Bars in Winning Trades<br>Avg. Bars in Total Trades | 11.3500<br>8.7201         | Avg. Bars in Losing Trades      | 5.5954                   |          |          |
| Max. Shares/Contracts Held                               |                           | Account Size Required           | \$4,812.5000             |          |          |
| Return on Initial Capital                                |                           | Annual Rate of Return           | 2.1118%                  |          |          |
| Return Retracement Ratio                                 |                           | RINA Index                      | 183.6185                 |          |          |
| Trading Period   | 43 Yrs, 9 Mths,<br>29 Dys | Percent of Time in the Market   | 98.9506%                 |          |          |
| Max. Equity Run-up                                       | n/a                       |                                 |                          |          |          |
| Max. Drawdown (Intra-day Peakto                          | Valley)                   | Max. Drawdown (Trade Obseto Tra | deObse)                  |          |          |
| Value  | (\$9,587.5000)            | Value                           | (\$4,812.5000)           |          |          |
| Net Profit as % of Drawdown                              | 1588.9179%                | Net Profit as % of Drawdown     | 3165.4545%               |          |          |
| Max, Trade Drawdown                                      | (\$5,837.5000)            |                                 |                          |          |          |
| Long Trader  |                           |                                 |                          |          | -        |
| Performance Summary Trade A                              | nalysis   Trades List     | Periodical Returns Performan    | ce Graphs   Trade Graphs | Settings |          |
|  |                           | 7.00                            |                          |          | -        |



### @US Systems FT Tracked



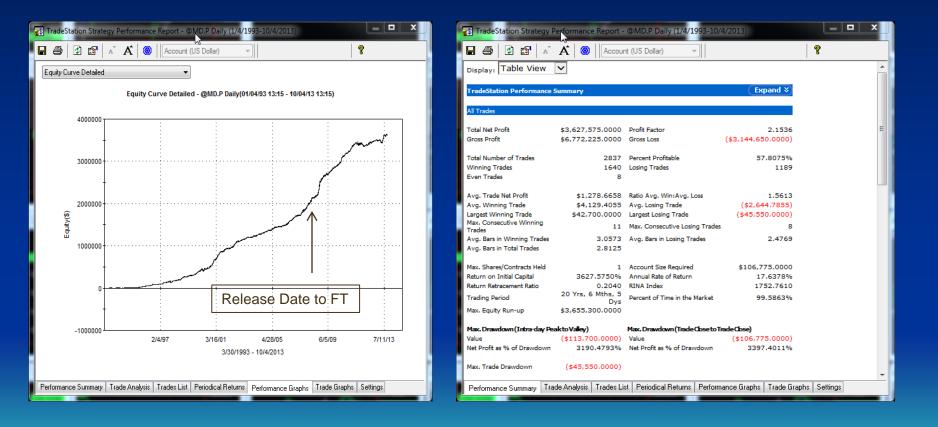


## @CT System

| 👔 TradeStation Strategy Performance Report - @CT Neekly (10/7/1983-10/4/2013)                              | TradeStation Strategy Perform ace Report - @CT Weekly (10/7/1983-10/4/2013)  |
|--|--|
| 🖬 🖶 🎒 😰 🔺 🏔 🔞 🛛 Account (US Dollar) 🔹 🛛 🖌 🖓  | F 🚭 🔯 🛱 🔺 🏟 🛛 Account (US Dollar) 🔹 🕅 All data 🔹 🔹   |
| Equity Curve Detailed  | Display: Table View 🗸  |
| Equity Curve Detailed - @CT Weekly(10/07/83 11:30 - 10/04/13 11:30)  | TradeStation Performance Summary Expand 🗧  |
| 240000   | All Trades   |
| 220000   | Total Net Profit         \$237,215.0000         Profit Factor         1.5724         E           Gross Profit         \$651,655.0000         Gross Loss         (\$414,440,0000)   |
| 200000   | Total Number of Trades 1004 Percent Profitable 51.3944%  |
| 180000   | Winning Trades         516         Losing Trades         483           Even Trades         5         5         5   |
| 160000   | Avg. Trade Net Profit \$236.2699 Ratio Avg. Win:Avg. Loss 1.4718   |
|  | Avg. Winning Trade         \$1,262.8973         Avg. Losing Trade         (\$858.0538)           Largest Winning Trade         \$16,085.0000         Largest Losing Trade         (\$9,000.0000)           Max. Consecutive Winning Trades         9         Max. Consecutive Losing Trades         12 |
| (한 120000<br>말 100000  | Avg. Bars in Vinning Trades         2.6783         Avg. Bars in Losing Trades         2.2257           Avg. Bars in Total Trades         2.4582         2.4582         2.4582  |
| 80000  | Max. Shares/Contracts Held 1 Account Size Required \$20,290.0000   |
| 40000  | Return on Initial Capital         237.2150%         Annual Rate of Return         4.1865%           Return Retracement Ratio         0.0785         RINA Index         204.1208  |
| 20000 Release Date   | Trading Period 29 Yrs, 11 Dys Percent of Time in the Market 96.6902%<br>Max. Equity Run-up n/a   |
|  | Max. Drawdown (Intra-day Peak to Valley) Max. Drawdown (Irade Gose to Trade Gose)  |
| -20000 <u>: : : : :</u><br>7/28/89 5/19/95 3/9/01 12/29/06 10/19/12  | Value         (\$27,200.0000)         Value         (\$20,290.0000)           Net Profit as % of Drawdown         872.1140%         Net Profit as % of Drawdown         1169.1227%   |
| 9/21/1984 - 10/4/2013  | Max. Trade Drawdown (\$11,530.0000)  |
|  | Long Trades  |
| Performance Summary Trade Analysis Trades List Periodical Returns Performance Graphs Trade Graphs Settings | Performance Summary Trade Analysis Trades List Periodical Returns Performance Graphs Trade Graphs Settings   |

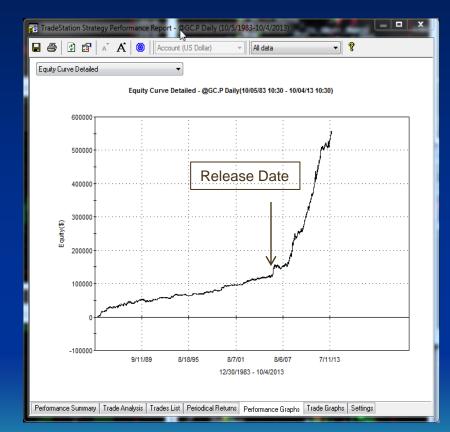


### @MD.P Systems FT Submitted-Can't track due to low volume





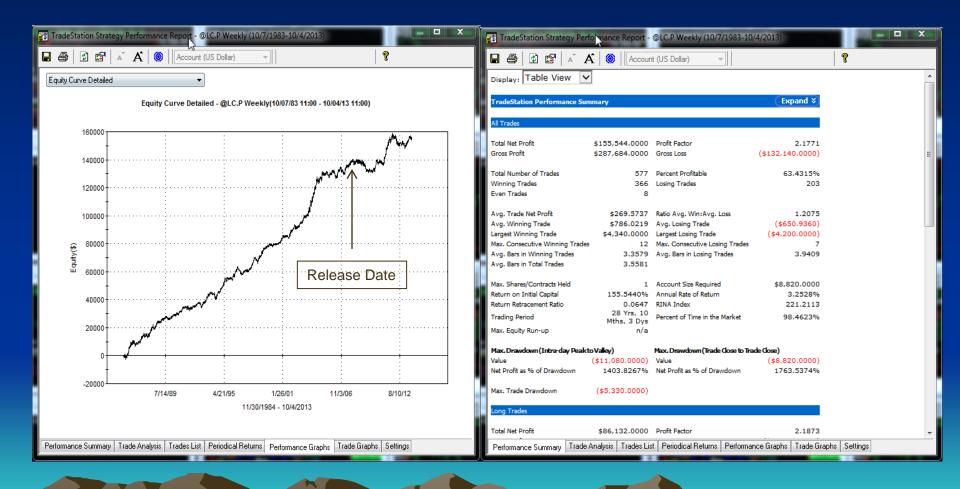
# @GC.P Systems



| Display: Table View                |                          |                               |                    |  |
|------------------------------------|--------------------------|-------------------------------|--------------------|--|
| Display: Table View                | •                        |                               |                    |  |
| TradeStation Performance           | Summary                  |                               | Expand 💝           |  |
|                                    |                          |                               |                    |  |
| All Trades                         |                          |                               |                    |  |
| Fotal Net Profit                   | \$552,640.0000           | Profit Factor                 | 1.5509             |  |
| Gross Profit                       | \$1,555,750.0000         | Gross Loss                    | (\$1,003,110.0000) |  |
| Total Number of Trades             | 4655                     | Percent Profitable            | 50,1182%           |  |
| Winning Trades                     | 2333                     | Losing Trades                 | 2262               |  |
| Even Trades                        | 60                       | -                             |                    |  |
| Avg, Trade Net Profit              | \$118,7197               | Ratio Avg, Win: Avg, Loss     | 1.5037             |  |
| Avg. Winning Trade                 |                          | Avg. Losing Trade             | (\$443.4615)       |  |
| argest Winning Trade               |                          | Largest Losing Trade          | (\$9,720.0000)     |  |
| Max. Consecutive Winning<br>Trades | 10                       | Max. Consecutive Losing Trade | 5 15               |  |
| Avg. Bars in Winning Trades        | 2.7741                   | Avg. Bars in Losing Trades    | 2.4262             |  |
| Avg. Bars in Total Trades          | 2.6002                   |                               |                    |  |
| Max, Shares/Contracts Held         | 1                        | Account Size Required         | \$19,690.0000      |  |
| Return on Initial Capital          | 552.6400%                | Annual Rate of Return         | 6.3026%            |  |
| Return Retracement Ratio           | 010002                   | RINA Index                    | 933.2933           |  |
| Trading Period                     | 29 Yrs, 9 Mths, 4<br>Dys | Percent of Time in the Market | 99.6964%           |  |
| Max, Equity Run-up                 | \$557,470.0000           |                               |                    |  |
| Max. Drawdown (Intra-day Pe        | aktoValley)              | Max. Drawdown (Trade Obseto)  | fradeClose)        |  |
| /alue                              | (\$23,780.0000)          | Value                         | (\$19,690.0000)    |  |
| Net Profit as % of Drawdown        | 2323.9697%               | Net Profit as % of Drawdown   | 2806.7039%         |  |
| Max. Trade Drawdown                | (\$9,720.0000)           |                               |                    |  |
| .ong Trades                        |                          |                               |                    |  |



### @LC.P Systems



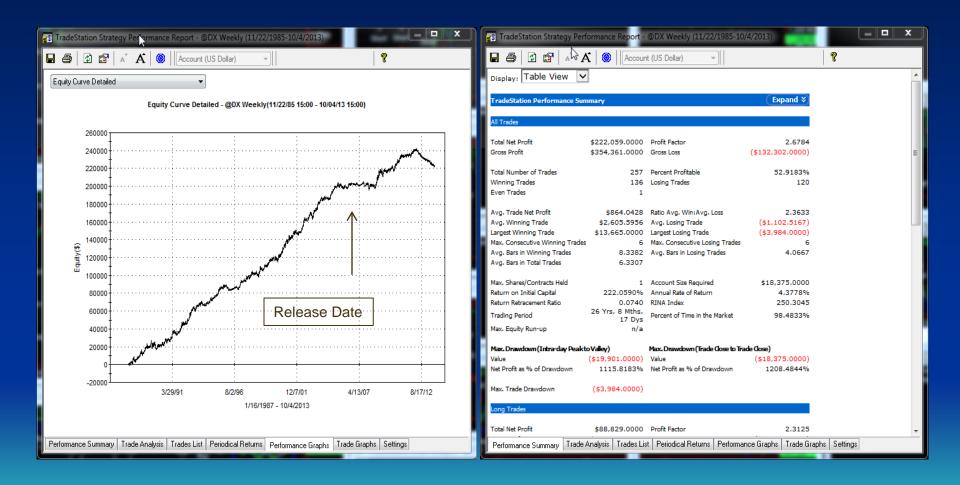


### @S.P Systems

| 👔 TradeStat | ion Strategy     | y Performance Report -                      | @S.P Weekly (10/5/1973-               | 10/4/2013)                                     |                 | 🗴 📄 👔 TradeStation Strate                   |                           | · @S.P Weekly (10/5/1973-                 | 10/4/2013)                     |              |
|-------------|------------------|---|---------------------------------------|--|-----------------|---|---------------------------|---|--------------------------------|--------------|
|             | à 😰 🖾            | 🕺 🗚 🛛 🛞 🗌 🗛 🗛                               | nt (US Dollar) 👻                      | 2  | <b>?</b>        |   | A 🖉 A A CCOU              | nt (US Dollar) 🔍                          |                                | <b>?</b>     |
| Equity Curv | e Detailed       |   | •                                     |  |                 | Display: Table View                         | N 🗸                       |   |                                | <u>^</u>     |
|             |                  | Equity Curve De                             | tailed - @S.P Weekly(10/0             | 5/73 12:00 - 10/04/13 12:                      | 00)             | TradeStation Performa                       | nce Summary               |   | Expand 📚                       |              |
|             |                  |   |                                       |  |                 | All Trades                                  |                           |   |                                |              |
|             | 260000           | :   | :                                     | : :  | :               | Total Net Profit                            | \$240,575.0000            | Droft Eactor                              | 1.8021                         |              |
|             | 240000           |   |                                       |  | ·····           | Gross Profit                                | \$540,493.7500            |   | (\$299,918.7500)               | =            |
|             | +                |   |                                       |  | N               |   | <i>40.10,1000,000</i>     |   | (+200,0000,000)                | -            |
|             | 220000 - · · · · | •     | ••••••                                | •••••••••••••••••••••••••••••••••••••••        | ······          | Total Number of Trades                      | 528                       | Percent Profitable                        | 40.7197%                       |              |
| •           | 200000           |   |                                       |  |                 | Winning Trades                              | 215                       | Losing Trades                             | 310                            |              |
|             |                  |   |                                       | ÷ ÷  |                 | Even Trades                                 | 3                         |   |                                |              |
|             | 180000 - · · · · |   |                                       |  | www.linder.com  |   |                           |   |                                |              |
|             | †                | :   | :                                     | <b>_</b> _                                     | A 11            | Avg. Trade Net Profit                       |                           | Ratio Avg. Win: Avg. Loss                 | 2.5984                         |              |
|             | 160000           |   |                                       | M M  |                 | Avg. Winning Trade<br>Largest Winning Trade |                           | Avg. Losing Trade<br>Largest Losing Trade | (\$967.4798)<br>(\$8,325.0000) |              |
|             | 40000 + · · · ·  |   |                                       | _ <b>/**</b> ∽*                                |                 | Max. Consecutive Winning                    |                           | Max. Consecutive Losing Trace             |                                |              |
| . 😌         | ł                |   | Martin Martin                         | • : :  |                 | Avg. Bars in Winning Tra                    |                           | Avg. Bars in Losing Trades                | 3.1581                         |              |
| Equity(\$)  | 120000 - · · · · | ••••••                                      | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · ·          | ·····           | Avg. Bars in Total Trades                   | 4.7898                    |   |                                |              |
|             |                  |   | an and                                | ÷ ÷  |                 |   |                           |   |                                |              |
|             | 100000           | Å   |                                       |  |                 | Max. Shares/Contracts He                    | d 1                       | Account Size Required                     | \$51,837.5000                  |              |
|             | 80000 - · · · ·  | <b></b>                                     |                                       |  | <u></u>         | Return on Initial Capital                   | 240.5750%                 | Annual Rate of Return                     | 3.1546%                        |              |
|             | ł                | and the second second                       |                                       | Release  | Date            | Return Retracement Ratio                    | 0.0540                    |   | 152,4707                       |              |
|             | 60000            | میں اور |                                       | · · <u>[· · · · · · · · · · · · · · · · · </u> | ·····           | Trading Period                              | 38 Yrs, 10<br>Mths, 4 Dys |   | 98.9569%                       |              |
|             | 40000            | ···· M                                      |                                       |  |                 | Max. Equity Run-up                          | n/a                       |   |                                |              |
|             | 20000 - · · · ·  | ···   | ••••••                                |  |                 | Max. Drawdown (Inbra-da                     | y Peakto Valley)          | Max. Drawdown (Trade Close t              | o Trade Close)                 |              |
|             | , t_u            | NN .  |                                       |  |                 | Value                                       | (\$57,637.5000)           |   | (\$51,837.5000)                |              |
|             | v<br>↓           |   |                                       |  |                 | Net Profit as % of Drawdo                   | wn 417.3932%              | Net Profit as % of Drawdown               | 464.0945%                      |              |
|             | -20000           | 7/10/81                                     | 4/21/89 1                             | /24/97 11/5/                                   |                 | Max. Trade Drawdown                         | (\$8,325.0000)            |   |                                |              |
|             |                  |   | 11/29/1974 -                          | 10/4/2013                                      |                 | Long Trades                                 |                           |   |                                |              |
|             |                  |   |                                       |  |                 | Total Net Profit                            | \$138,431.2500            | Profit Factor                             | 2.1975                         | -            |
| Performance | Summary T        | rade Analysis   Trades Li:                  | st Periodical Returns Perf            | ormance Graphs Trade                           | Graphs Settings | Performance Summary                         | Trade Analysis Trades Li  | st Periodical Returns Perfo               | ormance Graphs   Trade Gra     | phs Settings |
| Ľ           |                  |   | 1 100                                 |  | -               |   |                           |   |                                |              |

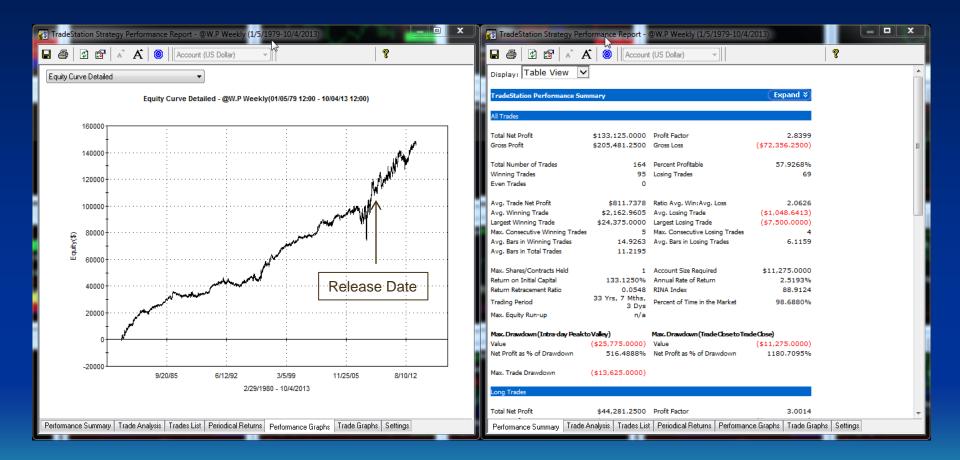


### @DX.P and @DX Systems



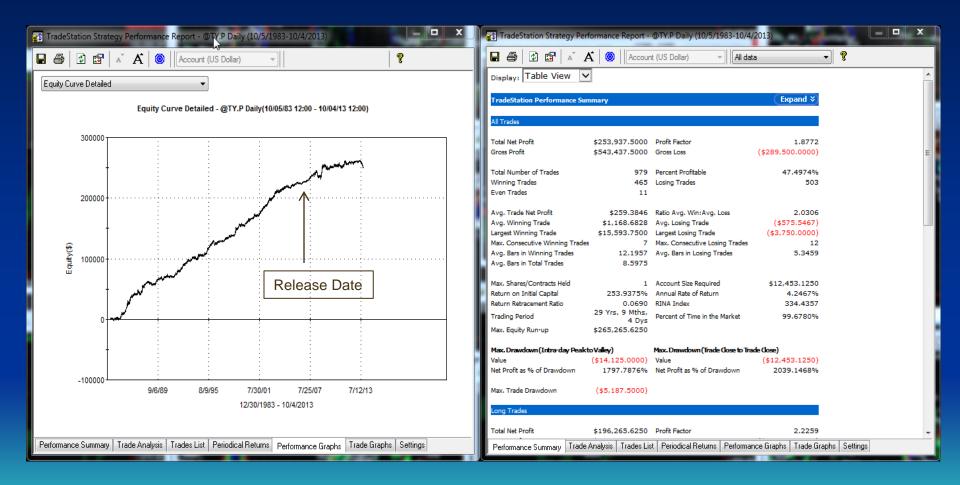


### @W.P Systems





### @TY.P Systems





# **EVOLUTION FAILURES**

- A low TTPR is suspicious
- Insufficient data
- Daytrading systems with small data sets
- Forward OOS on recent markets
- PP4 with older TSL version(pre 1.3.1)
- Too much OOS

