



Because you
can never have
too many
PowerTools

 **MetaStock17 is Here**

Featuring the **NEW OptionScope™**
and **QuoteCenter™** PowerTools

Discover the latest features at metastock.com/whats-new



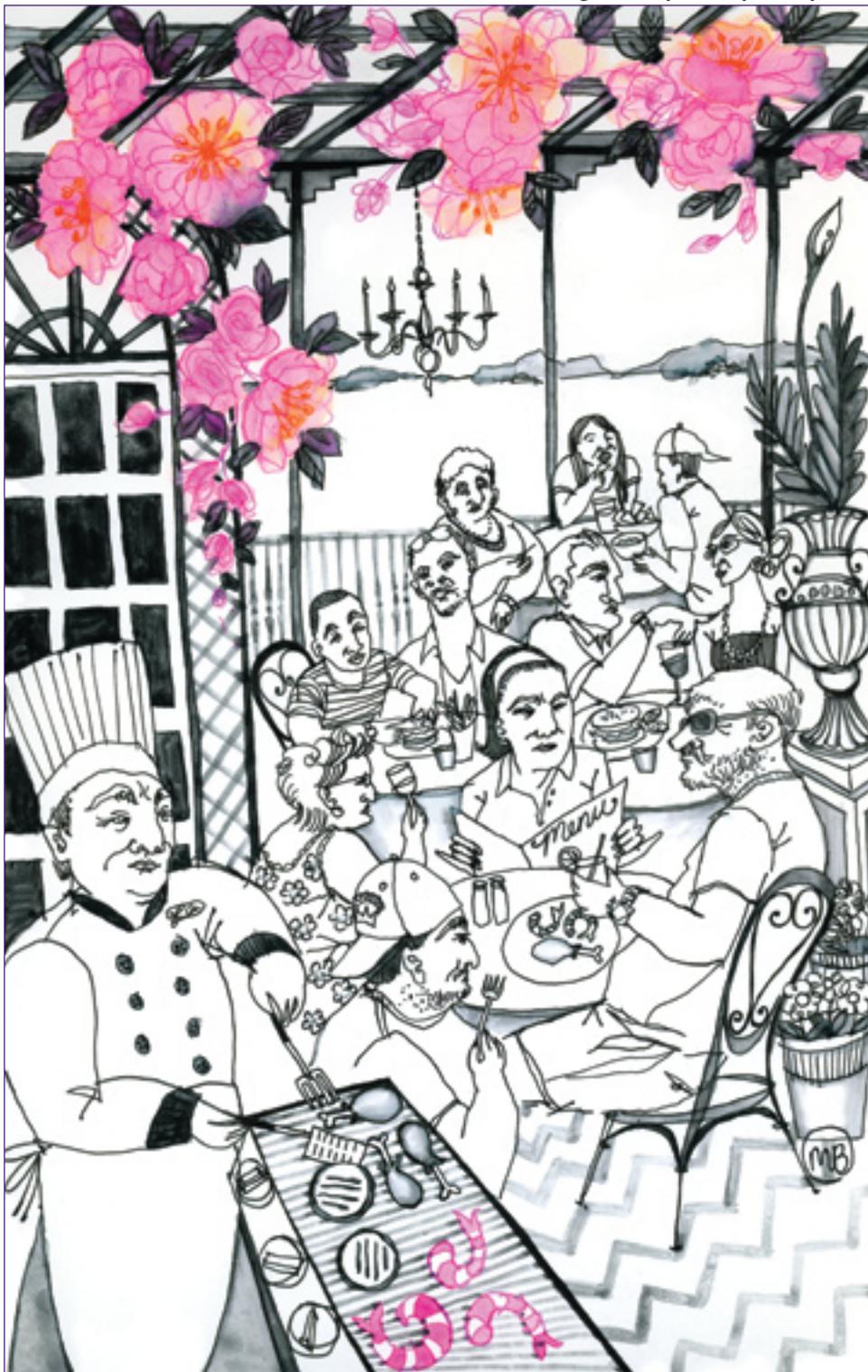
Traders take many paths to reach their destination.
Can your platform get you there?



Search apps and services to personalize the
NinjaTrader platform to meet your requirements.
Indicators, automated strategies, free tools & more.

Explore now at ninjatraderecosystem.com

Futures, foreign currency and options trading contains substantial risk and is not for every investor. Only risk capital should be used for trading and only those with sufficient risk capital should consider trading.



by Sunny Harris

I have been trading for more than 30 years. I have been designing and testing trading systems for 30 years as well. In this article and the ones that follow, I will cover system design and testing. We will go through the entire process in detail, so you can see what it takes to become a proficient trader. You cannot simply get up one morning and decide that you are a trader; you must do the homework, the study, the grueling process of testing, and confirming your ideas before putting real money after those ideas. Otherwise, you are liable to lose everything.

Through these articles, I will use several different software products for my charts, figures, and illustrations. Rather than make the articles all about one program, I will be using several. The concepts apply equally well to them all.

Design and testing of systems is tedious at best and grueling at worst. In fact, maybe the worst would be never finding a system that works the way you want it to.

Testing used to be even worse. When I first began researching and testing trading systems, I had to do it with pencil and paper and a calculator. Then came Excel and spreadsheet math, which was much easier. Eventually, SystemWriter, the predecessor to TradeStation, was invented, and then it was off to the races. What used to take me months now only takes days to find out if my system works. So what does “works” mean in this case?

An Introduction

First, You Design The System

To become a proficient trader you need to test and confirm your ideas before placing a trade. But how do you go about doing that? Here are the first steps you need to take when you're designing a trading system.

WHAT DOES IT MEAN?

As far as a system is concerned, for these articles, a system “works” when it makes a profit. It could mean that the system places buy & sell arrows on a chart. But as far as I am concerned, “works” means that a system is profitable. Figure 1 works as far as arrows go. But as you will see from Figure 2, it doesn't work as far as profit goes.

The very first line in the strategy

TRADING SYSTEMS

performance report, under the “All trades” heading and across from “Net profit,” shows a loss of \$92.42. So while the system draws nice arrows and connecting lines and it looks pretty on the chart, it does not work as far as my definition goes.

WHAT IS A SYSTEM AND WHY DO WE NEED ONE?

Simply put, a system is a collection of signals that tell you (or the computer) when to buy and when to sell. A system is a recipe, a map, or a guideline that tells you when to get in and when to get out. Systems can be simple or complex. They can have two lines of code or two hundred, or many, many more.

Your system might be as simple as trading on the long side on sunny days and on the short side on rainy days. That’s a system! And if you follow that plan day after day, keeping track of the results, you are a systematic trader. “System” has become synonymous with the fear of math and for many of the same reasons. Usually, people who didn’t like math in school simply didn’t have a good teacher. Likewise, if you hesitate at the word “system,” it’s probably for lack of a good teacher.

In this article we will look at the elements necessary to create a successful trading system and how you can apply them to your own trading.

POSSIBILITIES

It is physically and emotionally impossible to catch all the highs and lows. If someone tells you they can, run for the hills. The best you can do in the market is like the best you can do in golf: yes, you might make a hole-in-one once, or maybe even twice in a lifetime. But no more than that. The golf pros still make a good living at it. And if you set your sights right, you can make a good living at trading, too.



FIGURE 1: DOES THE SYSTEM WORK? On this daily chart of the Russell 2000 (August 2011–March 2012) you see the buy & sell arrows of an MACD trading system. Just by looking at the buy & sell arrows, it appears as if the system works well.

A system is a recipe, a map, or a guideline that tells you when to get in and when to get out.



^RUT : MACD LE; MACD SE Back-Testing Strategy Performance Report

Strategy Performance Summary			
	All Trades	Long Trades	Short Trades
Net Profit	(\$92.42)	(\$41.21)	(\$51.21)
Gross Profit	\$308.77	\$152.17	\$156.6
Gross Loss	(\$401.19)	(\$193.38)	(\$207.81)
Adjusted Net Profit	(\$313.04)	(\$185.67)	(\$227.66)
Adjusted Gross Profit	\$182.72	\$76.09	\$45.87
Adjusted Gross Loss	(\$495.75)	(\$261.75)	(\$273.53)
Select Net Profit	\$148.06	\$8.87	(\$156.93)
Select Gross Profit	\$169.87	\$152.17	\$17.7
Select Gross Loss	(\$317.93)	(\$143.3)	(\$174.63)
Account Size Required	\$200.1	\$140.8	\$99.96
Return on Account	(46.19%)	(29.27%)	(51.23%)
Return on Initial Capital	(0.09%)	(0.04%)	(0.05%)
Max Strategy Drawdown	(\$219.78)	(\$178.46)	(\$142.87)
Max Strategy Drawdown (%)	(0.22%)	(0.18%)	(0.14%)
Max Close To Close Drawdown	(\$200.1)	(\$140.8)	(\$99.96)
Max Close To Close Drawdown (%)	(0.2%)	(0.14%)	(0.1%)
Return on Max Strategy Drawdown	(0.42)	(0.23)	(0.36)
Profit Factor	(0.77)	(0.79)	(0.75)
Adjusted Profit Factor	(0.37)	(0.29)	(0.17)
Select Profit Factor	(0.53)	1.06	(0.1)
Max # Contracts Held	1	1	1
Slippage Paid	\$0	\$0	\$0
Commission Paid	\$0	\$0	\$0
Open Position P/L	(\$2.04)	(\$2.04)	n/a
Annual Rate of Return	(0.08%)	(0.04%)	(0.05%)
Monthly Rate of Return	(0.01%)	0%	0%
Buy Hold Return	\$968.11	\$968.11	\$3816.62
Avg Monthly Return	(\$6.75)		
Monthly Return StdDev	\$59.26		

FIGURE 2: IS THE SYSTEM PROFITABLE? The strategy performance system report of the MACD strategy tells a different story. The net profit of all trades shows a loss of \$92.42.

TRADING SYSTEMS



FIGURE 3: MARKING IDEAL ENTRIES AND EXITS. Here you see the ideal entries and exits marked as yellow circles.



FIGURE 4: IS IT WORTH YOUR TIME TO TRADE THIS INSTRUMENT? This chart shows that you can make 572,280 points in 12 months, trading one share of the emini if you caught 40% of every swing in the market. The ideal number of trades is 3,812. Next, you divide the PHW number by the “big point value” for the entity you are trading, which in this case is 50. That gives you \$11,446 for the total available PHW profit.



“In this previous life of yours, did you have a good credit rating?”

Before you strike out on your own and blindly leap into trading, however, you need a plan. Later in this series, I will address the process of creating and following a system. Most important, remember: without a plan, you won’t get there. *You must have a system.* Even if it is just your notes written on a piece of paper, you must have it. Otherwise, you are just guessing.

You need to look at every entity (stock, commodity, future, forex, mutual fund, bond — whatever you are trading) and ask, “Where’s the money?” There is no use trading something that doesn’t have profit potential. You might as well work at a fast-food joint for minimum wage.

HOW MUCH MONEY CAN YOU MAKE?

Another question to ask when you are analyzing your trading potential is: How long will it take? I don’t mean how many years or how many months, I mean more like how many

minutes. For instance, if you (like me) are trading the emini S&P, a point is worth \$50. How long will it take to make that \$50 on your chart? How many minutes or hours does it take for a swing to move that far?

Let’s look again at a chart. But this time we will analyze time instead of dollars.



PHW ANALYSIS

For my own analysis I’ve come up with a rule of thumb to determine which markets are tradable. I take a look at all markets on the same scale over a one-year period and mark the ideal entries and exits. If 40% of the ideal gives me an annual wage I would be happy with, then I consider the market to be tradable. I initially

TRADING SYSTEMS



FIGURE 5: WOULD A DIFFERENT TIME FRAME BE MORE BENEFICIAL? The ideal number of trades is 1,380, with a total ideal profit of 899,725 points. The PHW profit is 40% of that, or 359,890 points. Again, we divide that by 50 (the value of a one-point move) to get \$7,198. The number of trades is a lot less than in the five-minute chart so you have to factor in the savings from commissions.

called that “potential hourly wage” (PHW) analysis, and though the concept grew well beyond hourly computations, the name stuck.

The first thing I do is mark all the ideal entries and exits, trading from both the long and short sides. Although you and I will see different ideals, the concept is the same. In Figure 3 you see the chart as I would mark it. I used to draw yellow circles on the chart with a highlighter tool; nowadays, however, I have an indicator that does it for me. Plus, the indicator calculates total ideal, total PHW, number of ideal trades, and buy & hold total.

Why didn’t I mark every zig and zag on the entire chart? Because we had to leave room for error. You can’t catch every up and down move in any market. Over the years, I have found that I can realistically catch only about 40% of a move. Thus, if a move is small and I miss 60% of it, it will probably be a losing trade.

Figure 4 shows how my PHW indicator looks on the same data. Note the words it has placed on the last bar on the chart. There is a lot of information there. It tells me the span of the data, how many trades could be made, what the total PHW is for the time span (40% of the ideal), the dollars available, and how much money would be made from a buy & hold position.

Next, we must analyze the ideal trades we’ve marked to see how much our annual wage would be from this effort. Will it be worth our time to trade this instrument? This you can do by hand or with a spreadsheet, or like me you can have the indicator do it for you automatically.

To do it by hand, you would measure the difference between each successive dot’s price and subtract to get the profit (had you been able to catch the low and the high). Then multiply by the dollars per point for the entity you are looking at. For stocks it would be just \$1; for the emini it is \$50 per point.

The five-minute chart in Figure 4 shows that you could

make 572,280 points in 12 months, trading one share of the emini, if we caught 40% of every swing in the market. The total number of ideal trades was 3,812. Next, and this is important, you have to divide the PHW number by the “big point value,” the dollar amount of one full point move, for the entity you are trading. For the emini S&P, you divide by 50. That gives you \$11,446 for the total available PHW profit. Did you think there was a lot more profit available

on the emini or a lot less? That answer is important. How many traders just jump right in and start trading the emini without knowing how much money is available? Most!

Next, I am going to put this same indicator on the emini, but this time I will use a 15-minute chart over the same 12-month time period. This should tell us whether a different time frame would be more beneficial. Take a look at Figure 5.

In the text at the right side we can see that the ideal number of trades is 1,380, with a total ideal profit of 899,725 points. The PHW profit is 40% of that, or 359,890 points. Again, we divide that by 50 (the value of a one-point move) to get \$7,198. Is this actually worse than on the five-minute chart? Well, let’s consider the commission.

On one share, my commission is \$1.20 per side, for a total round-turn of \$2.40. On the five-minute chart there were 3,812 trades, or \$9,149 in commission. On the 15-minute chart there were 1,380 trades, for \$3,312 in commission. The difference is \$5,837. Add that into the 15-minute profit and the \$7,198 becomes \$13,035, while the five-minute chart was \$11,446.

If we accounted for slippage, we would see the 15-minute chart is quite a bit more profitable than the five-minute chart due to slippage and commission costs, which are real-life inevitabilities.

It is easy to see that the next step would be to test several different time frames to find the ideal (which would be suited to our psychological makeup) and add contracts to increase the revenue. Only your pocketbook dictates how many contracts you can trade. Note on both charts that buy & hold was significantly less profitable than trading.

HOW TO MAKE A MILLION DOLLARS

Do you know how to make a million dollars in the stock market? The answer is “Start with two million.” That old joke is not so far off from the truth. Trading is a difficult proposition. Most

TRADING SYSTEMS



FIGURE 6: CAN YOU PROFIT FROM A STOCK THAT GOES UP AND DOWN (MOSTLY DOWN)? A buy & hold strategy on a tradable such as what you see on this chart would be negative, but from a trading standpoint, such a stock can be profitable.

year comes out to be \$384.91 per day. Now *that's* possible. Since the charts showed us a potential profit of \$20,000 per year, if we want to make \$100,000 per year we would need to trade five contracts of the emini, or one S&P "big boy."

TO TRADE OR NOT TO TRADE

Maybe we shouldn't be trading at all. Let's take a look at the buy & hold strategy. What would we net if we simply bought one share at the beginning of the S&P emini contracts in September 1997? By buying on the first day at 1,179.80 and holding until now, at 1,404, we would net 224.20 points. At \$50 each, we would have a potential of \$11,210 through the buy & hold method, with no trading in and out at all. If we add back all the commission we would have paid by trading (1,380 trades x \$2.40/

Instrument	Resolution	Trend	Last	ADX	Average Tr...	sjh_PHWIndicator_R_MC		
						HighDot	LowDot	PHW Total
AMD	1 Week		21.03439	0.54286	9.17000	4.82000	6.89600	
AA	1 Week		18.73818	0.57357	18.47000	8.50000	13.08800	
DELL	1 Week		15.76128	0.73857	17.60000	13.29000	13.77200	
CSCO	1 Week		19.50914	0.66429	22.34000	13.30000	16.81600	
INTC	1 Week		25.32674	0.87429	23.96000	19.16000	20.40000	
MSFT	1 Week		33.15442	1.10571	29.46000	23.65000	22.72000	
NVDA	1 Week		11.93087	0.90214	16.05000	13.11000	24.16000	
IBM	1 Week		22.38816	5.01286	185.63000	157.13000	141.79600	
AAPL	1 Week		38.27490	25.09429	364.90000	310.50000	274.18400	
^RUT	1 Week		16.45537	28.60714	868.57000	601.71000	649.99600	
^XAX	1 Week		12.95295	61.92071	2,464.63000	1,941.99000	2,025.22800	
^DXIC	1 Week		21.47794	77.50500	2,887.75000	2,298.89000	2,381.29200	
^DJT	1 Week		40.94093	215.51429	5,086.83000	861.75000	6,203.44800	
^NYA	1 Week		16.78003	205.46929	8,718.25000	6,414.89000	7,105.50800	
^DJI	1 Week		16.46644	334.71429	12,928.45000	10,362.26000	9,724.21600	

FIGURE 7: AN EXAMPLE OF SORTING STOCKS BY PROFITABILITY IN THE MULTICHARTS SCANNER WINDOW

people lose money doing it. Very few traders are successful. And even fewer are successful year after year.

Nevertheless, if you are going to make money, you must have a goal. If you want to make a million dollars in a year, you need to break this down into achievable milestones.

To make sense of just how much money a million dollars is, let's divide it by 12 months. So \$1,000,000/12 = \$83,333.33 per month. How much is that per week? Let's divide that by 4.33 weeks in a month. Thus, \$83,333.33/4.33 = \$19,245.57 per week. How about days? Let's divide that by five days in a week — \$19,245.57/5 = \$3,849.11 per day. So to make a million dollars a year, we must make \$3,849.11 every day.

Since we only found about \$20,000 on the first two emini charts, let us regroup, and set our goal at \$100,000 for the first year. Let's not go out on a limb and start out by trading 50 contracts of the emini. Let's begin by trading a reasonable number of contracts.

Using the same mathematical process, \$100,000 per

RT = \$3,312), we would effectively have \$14,522.

That's all fine for this particular entity, which happened to go up during this period in question. But what about a stock that has gone up and down, but mostly down, resulting in a stock that is net negative from a buy & hold standpoint?

The good news is that such a stock can be profitable from a trading standpoint, as long as its PHW shows that it moves in waves that are large enough to be caught. In Figure 6, you can see a foreign exchange chart that moves both directions. The PHW for this chart would show that the entity is tradable, while the buy & hold strategy would be negative. I use the PHW in a RadarScreen or MarketScanner to isolate entities that have high PHWs. I like to find stocks and commodities that are in a wide channel and oscillate back and forth. It's predictable trading, and if the PHW is high, there's a lot of profit to be made.

In Figure 7, you can see what the PHW indicator looks like in a MarketScanner window. I have the window sorted by PHW

total, so I can readily pick out the largest PHW candidates.

On TradeStation, the PHW looks different in the RadarScreen window. Figure 8 shows the TradeStation version of the same indicator. Independent of the software product, the essential information is the same. The important column is “PHW total,” which shows the entities that are the most tradable.

I use my PHW both in cellular format like Figures 7 and 8 as well as on charts, to tell me what is tradable, and what is a waste of my time. If you don’t know where the money is, you sure won’t catch any of it.



CONCLUSION

The concepts covered here are elementary. Before you trade anything, know that you can and will have losses. Losses are part of the cost of doing business when it comes to trading. You need to analyze what is possible before you jump in. Draw pictures. Create charts. Mark highs and lows. See if there is a sensible way you can catch some of them. In the second part of this series, I will focus on understanding the process of system design. Until then, happy trading.

Symbol	Interval	Last	Net Chg	Net %Chg	High	Low	Volume Today	sjh_PHWIndicator\$\$_R_11										
								FirstClose	FirstDate	LastClose	LastDate	BH	Ideal	PHW Total	N#Trades			
1 S&P 500 Index (501)																		
2 AAPL	Daily	605.99	4.89	0.81%	606.90	582.00	29,107,462	207.72	1100112.00	605.96	1120320.00	396.24	1243.59	497.44	28.00			
3 WYNN	Daily	129.29	0.00	0.00%	128.68	126.04	1,817,911	54.98	1100112.00	128.01	1120320.00	73.03	600.98	240.39	35.00			
4 X	Daily	31.36	-0.28	-0.88%	31.42	30.35	13,085,813	62.93	1100112.00	31.37	1120320.00	-31.56	297.89	119.16	32.00			
5 XOM	Daily	86.60	-0.39	-0.45%	87.10	86.32	13,613,442	70.30	1100111.00	86.60	1120320.00	16.30	259.39	103.76	32.00			
6 DV	Daily	36.04	-0.22	-0.61%	36.21	35.91	413,310	56.11	1100112.00	36.03	1120320.00	-20.08	241.86	96.74	33.00			
7 AIG	Daily	28.32	0.52	1.87%	28.47	27.60	15,772,006	20.18	1100112.00	28.32	1120320.00	8.14	217.70	87.08	31.00			
8 A	Daily	44.90	-0.46	-1.02%	45.15	44.50	1,728,651	30.45	1100112.00	44.83	1120320.00	14.38	201.45	80.58	30.00			
9 ACE	Daily	73.57	0.33	0.45%	74.03	72.66	1,949,781	48.11	1100112.00	73.94	1120320.00	25.83	191.87	76.75	41.00			
10 ZIMH	Daily	63.92	-0.40	-0.62%	64.14	63.71	993,549	62.14	1100112.00	63.85	1120320.00	1.71	171.16	68.46	35.00			
11 WYNN	Daily	45.30	-0.09	-0.20%	45.27	44.69	1,441,036	20.44	1100112.00	45.03	1120320.00	24.59	162.50	65.00	38.00			
12 XLNX	Daily	36.35	-0.77	-2.06%	36.95	36.01	6,067,213	24.05	1100112.00	36.03	1120320.00	11.98	140.45	56.18	35.00			
13 ACN	Daily	63.00	-0.41	-0.65%	63.24	62.67	3,239,696	42.26	1100112.00	63.08	1120320.00	20.82	134.01	53.60	29.00			
14 YUM	Daily	70.20	1.14	1.65%	70.41	68.77	3,767,224	35.99	1100112.00	70.21	1120320.00	34.22	132.94	53.18	31.00			
15 IVZ	Daily	26.06	-0.24	-0.91%	26.22	25.80	2,429,858	23.29	1100112.00	26.06	1120320.00	2.77	126.84	50.74	38.00			
16 ZION	Daily	22.20	-0.44	-1.94%	22.40	21.76	4,703,214	16.05	1100112.00	22.20	1120320.00	6.15	121.39	48.56	35.00			
17 CCE	Daily	28.17	0.22	0.78%	28.47	27.64	3,054,269	20.98	1100112.00	28.32	1120320.00	7.34	115.50	46.20	36.00			
18 ABC	Daily	38.73	0.17	0.44%	38.85	38.30	3,602,714	26.52	1100112.00	38.81	1120320.00	12.29	108.92	43.57	33.00			
19 XRAY	Daily	39.49	0.00	-0.00%	39.38	39.09	430,360	35.80	1100112.00	39.15	1120320.00	3.35	107.08	42.83	37.00			
20 WY	Daily	22.20	-0.08	-0.35%	22.29	21.96	3,198,325	17.41	1100112.00	22.28	1120320.00	4.87	104.95	41.98	26.00			
21 XL	Daily	21.52	-0.05	-0.23%	21.76	21.38	3,093,410	17.36	1100112.00	21.52	1120320.00	4.16	95.31	38.12	32.00			
22 BBT	Daily	31.46	0.08	0.25%	31.59	31.05	4,269,792	27.42	1100112.00	31.37	1120320.00	3.95	91.84	36.74	29.00			
23 YHOO	Daily	15.45	0.30	1.98%	15.61	14.92	22,184,208	16.68	1100112.00	15.41	1120320.00	-1.27	87.24	34.90	42.00			
24 XEL	Daily	26.20	-0.03	-0.12%	26.31	25.92	2,559,255	21.24	1100112.00	26.31	1120320.00	5.07	52.94	21.18	38.00			
25 FHN	Daily	10.72	-0.09	-0.85%	10.88	10.57	3,998,226	13.01	1100112.00	10.78	1120320.00	-2.23	51.74	20.70	32.00			

FIGURE 8: AN EXAMPLE OF SORTING STOCKS BY PROFITABILITY IN THE TRADESTATION SCANNER WINDOW

Sunny Harris is an author, trader, computer programmer, and mathematician, who has been trading since 1981. The first printing of her first book, Trading 101, sold out in two weeks and continues to be a financial best-seller; her second book, Trading 102, also achieved record sales. In early 2000, Harris released Electronic Day Trading 101, followed by Getting Started In Trading in 2001. Her latest book is TradeStation Made Easy. She may be contacted at MoneyMentor.com.

RELATED READING

- www.MoneyMentor.com/Articles.html
- ‡MultiCharts ‡TradeStation ‡MetaTrader

Find similar articles online at Traders.com

Powerful Signals for **Stocks & Commodities**

Long Term

&

Short Term



Works with stocks, commodities, futures, options, FOREX, bonds for intra-day or position trading



Triple Confirmed **Buy/Sell Signals**



Built-in **Dynamic Risk Control Signals**



Traders Rave Over AbleTrend

1997-2019 Award Winning Trading Systems for Stocks, Futures and Options



ABLESYS SINCE 1994

ABLETREND 7.0

COLLECTED BY



Trustpilot



- “I have used it for 10+ years and have tried many other trading software systems. This is by far the very best system that can adjust to any market condition.”-Joe S
- “I have been using AbleTrend for 13 years! Primarily for day trading stocks...I could not do without it!” -Ricardo DaSilva
- “I have been using Ablesys since 2009. In my humble opinion, Ablesys offers the best trend software available on the market today.”-Frank

- “I never make a trade without checking with Ablesys. The program is my important guiding light and has been for over 10 years. I highly recommend this program.” -Harvey Saff
- “Have been using Able Trend for 20 years and it is just as effective and accurate as it was in 1999.” -Dan Sayer
- “I've used AbleTrend for many years, and I never buy a stock without checking the signals first.”-Sam

Test-drive it to See All the Signals!
www.ablesys.com/SCM

Risk FREE AbleTrend 30-Day Trial
\$40 Discount code: SCMF20

©2020 Ablesys Corp. • 8407 Central Ave, Ste 1882, Newark, CA, 94560



1-888-ASC-1688



sales@ablesys.com

THESE RESULTS ARE BASED ON SIMULATED OR HYPOTHETICAL PERFORMANCE RESULTS THAT HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE THE RESULTS SHOWN IN AN ACTUAL PERFORMANCE RECORD, THESE RESULTS DO NOT REPRESENT ACTUAL TRADING. ALSO, BECAUSE THESE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THESE RESULTS MAY HAVE UNDER-OR OVER-COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED OR HYPOTHETICAL 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 PROFITS OR LOSSES SIMILAR TO THESE BEING SHOWN. THE TESTIMONIAL MAY NOT BE REPRESENTATIVE OF THE EXPERIENCE OF OTHER CLIENTS AND THE TESTIMONIAL IS NO GUARANTEE OF FUTURE PERFORMANCE OR SUCCESS. TECHNICAL ANALYSIS OF STOCKS & COMMODITIES LOGO AND AWARD ARE TRADEMARKS OF TECHNICAL ANALYSIS, INC.



Take the Bond Challenge!

Use the IBKR **Bond Scanner** to compare available yields against those of your broker.

 **InteractiveBrokers**

Interactive Brokers **Rated #1**
Best Online Broker 2019 by Barron's*

Start Trading Today!

ibkr.com/comparechallenge

Member - NYSE, FINRA, SIPC - Supporting documentation for any claims and statistical information will be provided upon request. *Interactive Brokers rated #1, Best Online Broker according to Barron's Best Online Brokers Survey of 2019: February 25, 2019. For more information see, ibkr.com/info
Barron's is a registered trademark of Dow Jones & Co. Inc.

03-IB20-1280CH1278

SUBSCRIBE OR RENEW TODAY!

Every Stocks & Commodities subscription (regular and digital) includes:

- Full access to our Digital Edition
The complete magazine as a PDF you can download.
- Full access to our Digital Archives
That's 35 years' worth of content!
- Complete access to WorkingMoney.com
The information you need to invest smartly and successfully.
- Access to Traders.com Advantage
Insights, tips and techniques that can help you trade smarter.

1 year **\$89⁹⁹**

2 years **\$149⁹⁹**

3 years **\$199⁹⁹**



PROFESSIONAL TRADERS' STARTER KIT

A 5-year subscription to S&C magazine that includes everything above PLUS a free* book, *Charting The Stock Market: The Wyckoff Method*, all for a price that saves you \$150 off the year-by-year price! *Shipping & handling charges apply for foreign orders.

5 years **\$299⁹⁹**

That's around \$5 a month!



Visit www.Traders.com to find out more!