

EE UNIVERSAL CLONE

User Manual



Version 1.04

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EE UNIVERSAL CLONE

Automated Day Trading Software

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**PLEASE READ THE FOLLOWING STATEMENT CAREFULLY BEFORE
PROCEEDING TO THE PRODUCTS PAGE:**

THE RISK OF LOSS IN TRADING COMMODITIES CAN BE SUBSTANTIAL. YOU SHOULD THEREFORE CAREFULLY CONSIDER WHETHER SUCH TRADING IS SUITABLE FOR YOU IN LIGHT OF YOUR FINANCIAL CONDITION. HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY 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 PROFITS OR LOSSES SIMILAR TO THOSE SHOWN.

Overview

The EE Universal Clone uses identical trading methodology as the other "Universal" system. Thus, our trading system produces the same results. The EE Universal Clone is a fully automated day trading program designed to trade stock index futures or currency futures markets. Tick or minute charts are the preferred charting interval for the System. While the futures markets (such as YM, ES and EC) are very popular this system is capable of trading stock or ETFs on an intraday basis. This system is not designed for holding trades beyond a 24-hour period.

The system is incredibly dynamic with 25 user inputs. You can program multiple targets, trailing stops and break-even stops. You can manage your account with daily profit goals, stop loss values, and maximum daily loss limits. Daily trading summaries are written to a file on your computer which can be easily imported into Microsoft Excel. In short, the system can be tailored to your trading style. Trade the 89 tick charts to scalp. Or, if you only want to capture the major trends of the day then trade on a 5-minute chart. It's all possible with EE Universal Clone.

The EE Universal Clone Signal Generation

The EE Universal Clone is a trend following system that enters trades on pullbacks within the direction of the prevailing trend. Trades can be liquidated based upon many different exit techniques including hard targets, trailing dollars stops, ATR trailing stops and trend reversal signals. The following sections discuss the primary buy and sell-short signals generated by the system.

DEFINING THE TREND

The EE Universal Clone utilizes a standard Momentum indicator to determine the trend of the market. A momentum value above zero is defined as an up-trend while a momentum value below zero is defined as a downtrend. The EE Universal Clone computes two momentum values. The first is the buy-side momentum (input value B1) for long positions. Second, the sell-side momentum (input value S1) which is used for short positions.

DEFINING A PULLBACK

The EE Universal Clone utilizes a standard Relative Strength Index (RSI) indicator to determine a pullback in the prevailing trend. An RSI value falling below 60 indicates a pull-back within an up trend has occurred and a long setup is imminent. Likewise an RSI value rising above 40 indicates a pull-back within a downtrend has occurred and a short setup is immanent. The EE Universal Clone computes two RSI values. The first is the buy-side RSI (input value B2) which is used for long positions. Second is the sell-side RSI (input value S2) which is used to for short positions.

THE SETUP AND TRIGGER

A setup is defined as a pullback within the trend. Once this occurs the EE Universal Clone places a limit order at the lowest low (if going long), or the highest high (if going short) of the last three bars. Limit orders are used to reduce slippage at the expense of missing some trades. Without any exits the system will reverse between being long and short based entirely upon the B1, B2, S1 and S2 input values.

System Inputs

All input times must be entered in 24-hour (military) format. Please note system inputs **Day_Loss**, **Stop_Loss**, and **Equity_Out** do not take into account slippage or commissions. For example, if you are trading a single contract with a stop loss of \$300, it is likely your loss will be greater than the \$300 because of commissions and/or slippage. To reduce this adverse effect you may want to lower your stop loss value. In this example, perhaps to \$290.

TRADING HOURS

Define what hours of the day the system will trade and when to close out all positions.

Start_Time	Time at which the system can start trading. Once this time is reached new positions can be taken by the system.
End_Time	Time at which the system is to stop opening new positions. No new positions will be opened after this time. Open positions are not affected by this time.
Close_Time	Time at which the system will close all open positions for the day.

If you want to "swing trade" over a period of several days then you want your *Start_Time* set to zero, and both your *End_Time* and *Close_Time* set to 2500. This will allow you to hold position beyond a single day. However, the EE Universal Clone was designed for day trading. Several key features (such as the day stop and daily profit targets) are reset upon every new day. This may interfere with trading that spans more than one day. Please be aware of this issue.

TRADING PARAMETERS

Contracts	The number of contracts or shares to open per position.
B1	Buy-Side Momentum. A number between 1-32 is recommended.
B2	Buy-Side RSI. A number between 1-32 is recommended.
S1	Sell-Side Momentum. A number between 1-32 is recommended.
S2	Sell-Side RSI. A number between 1-32 is recommended.

A T R - T R A I L I N G - S T O P S - A N D - T A R G E T S

Change your static targets and trailing stops to dynamic values based on Average True Range (ATR) by enabling the ATR-trailing-stops-and-targets feature. Traditionally the profit targets and trailing stops have all been fixed values. By enabling the ATR-trailing-stops-and-targets feature, trailing stops and targets will dynamically adjust based upon the current market conditions. For example, your targets and trailing stops will increase in size if volatility increases. Likewise, these values will shrink if volatility falls.

Enable_ATR	Enable(1)/Disable(0) ATR-trailing-stops-and-targets feature.
ATR_Length	Length of the ATR calculation. A value of 21, for example, will calculate the average true range for the past 21 bars.

If you enable the ATR-trailing-stops-and-targets feature, then the following input values must be adjusted:

- Target1 - Target 1 in multiples of ATR.
- Target2 - Target 2 in multiples of ATR.
- Target3 - Target 3 in multiples of ATR.
- Pos2_Trail - Trailing stop behind first target in multiples of ATR.
- DollarTrailingAmt - Trailing stop behind Equity_Floor in multiples of ATR.

S C A L I N G O U T

The system has the ability to scale out of a position with three profit target levels. A final contract (or lot) can remain as a runner.

Target1	First profit target in points. This is the number of points price must move from your entry price.
Tgt_1_contracts	The number of contracts/shares/lots to close at the first profit target.
Target2	Second profit target in points. This is the number of points price must move from your entry price.
Tgt_2_contracts	The number of contracts/shares/lots to close at the second profit target.

Target3	Third profit target in points. This is the number of points price must move from your entry price.
Tgt_3_contracts	The number of contracts/shares/lots to close at the third profit target.

MONEY MANAGEMENT & RISK

Manage your account by enforcing money management rules such as risk per trade and maximum daily loss.

Stop_Loss	The initial stop loss on a position expressed in dollars per contract or per share. If you trade two contracts and wish to risk \$300, enter \$150.
Toggle_Day_Loss	Enable(1)/Disable(0) the daily loss feature.
Day_Loss	The maximum dollar amount to lose per day. When the total loss of all trades (closed and open positions) for any given day reaches the dollar value all positions are closed and trading stops for the remainder of the day. This feature resets on a 24-hour clock. This means if the system has halted trading due to the Day_Loss being triggered the system will not open new trades until the next calendar day. Keep this in mind if you develop a system that trades during the overnight session.
Entries_Per_Day	Limit the number of entries your system will take per day. For example, if you place 5 in this input field your system will not open more than 5 positions per day. Please note, a position may have many exits if you trade more than one contract. For example, if your system opens a trade with 2 contracts and scales out at two different target levels then this is considered two trades.

TRADE MANAGEMENT

Manage your trades by using the trailing stops, break-even stops and equity-out features.

Toggle_Pos_Trail	Enable(1)/Disable(0) the trailing stop feature after the first target is hit.
Pos2_Trail	This is the dollar amount used to place a trailing stop behind your position after the first target is hit. This trailing stop takes the most recent price extreme (highest high or lowest low since the position has been opened) and trails a stop X dollars behind it.

Toggle_Tgt1_Stop	Enable(1)/Disable(0) the Target1 stop feature after the first target is hit.
Tgt1_Stop	This is used to adjust your initial Stop_Loss value after Target1 is hit. Enter your new Stop_Loss value in points.

Toggle_eq_out	Enable(1)/Disable(0) equity out feature.
Equity_Floor	This is the dollar amount total profit (closed and open position profit) at which the <i>DollarTrailingAmt</i> and <i>PctTrailAmt</i> (see below) trailing stops become active.
DollarTrailingAmt	Trailing stop expressed in dollars.
PctTrailAmt	Trailing stop expressed in percentage of profit.

For example, if `Toggle_eq_out = 1` and `Equity_Floor = 1250` and `DollarTrailingAmt = 250` then the following would occur. When the total gross profit (open positions + closed positions) for the system during the current 24-hour period reaches \$1250.00 a \$250.00 trailing stop is automatically placed and maintained below the highest equity achieved for the day. This effectively places the minimum profit for the day at \$1000.00. However, if you simply want to exit your trade when a specific daily profit goal is reached then set *DollarTrailingAmt* and *PctTrailAmt* to zero. When the system exits as a result of the equity out sequence detailed above there will be no more trades generated for the remainder of the session.

The system also offers the option of moving the Stop_Loss to break-even after Target1 has been reached. The next two inputs set the parameters for the break-even exit.

Toggle_be_exit	Enable(1)/Disable(0) break-even feature. When this is enabled after the first profit target is hit
Be_plus	The number of points to add to the break-even amount.

BACKTESTING

This feature is designed to improve the “realness” of backtesting and simulated trading. One of the problems with backtesting and simulated trading has to do with limit orders. The EE Universal System utilizes limit orders with signals generated from the B1, S1, B2 and S2 inputs. The problem with using limit orders has to do with how these orders get filled. For example, lets say you would like to purchase a single contract during a pullback to a price of 9750 in the mini DOW. So you place a limit order at 9750. As the market moves down closer and closer to your price a few different things may happen.

First, your price may never be reached. The market may come down to 9751 and move away from your price. In the end, you were never filled. This happens a lot and both backtesting and simulated trading handle this correctly.

Second, price may move cleanly right through your price and touch 9748. Once again during both backtesting and simulated trading these scenarios are handled properly.

However, the last case is where the trouble begins. If price touches your limit order of 9750 then starts to climb higher do you get filled? In the real world you may or may not get filled. Just because price touches your limit price does not guarantee a fill. Your order must be executed and it's possible only a few orders may be filled before price resumes its upward movement leaving your order unfilled. Price may have to linger at your limit price for seconds or touch your limit price several times before your order is executed. However, when it comes to simulations and backtesting your order is filled when price simply touches your limit price. This is unrealistic. This results in orders getting filled that may not actually fill in real life trading.

To help mimic a more realistic fill rate when using limit orders during backtesting and simulated trading you can enable the “Enable_Backtesting” feature. When this feature is enabled orders are not considered filled until they move 1 tick beyond the specified limit order. Using our example above of a 9750 limit price to go long in the mini-DOW, the price must actually reach 9749 before the order is considered filled. This mimics the real world much better and will result in more accurate backtesting and simulated trading. So, it is advised to keep this feature enabled when backtesting and simulated trading. The only time it should not be enabled is when you are trading live with real money.

Enable_Backtesting	Enable(True)/Disable(False) Backtesting feature. This should only be set to "False" when you are trading with real money.
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TRADE SUMMARY REPORT

At the end of each trade your results can be exported to a file on your hard drive. This file will contain the Trade Number, Date, Time, P&L, Risk, Volatility (as measured by a 13 period Average True Range calculation), Maximum Adverse Excursion (MAE), and Maximum Favorable Excursion (MFE). This data is stored as a .csv file which can be opened with a spreadsheet program such as Microsoft Excel. This feature is particularly useful for testing your trading system on live market data. Below is an example of what the Trade Summary Report looks like.

TRADE#	DATE	TIME	P&L	RISK	VOLAT	MAE	MFE
1	10/1/2009	20:30	-224.5	500	177.88	-800	712.5
2	10/2/2009	3:00	-149.5	500	276.92	-437.5	650
3	10/3/2009	1:00	1600.5	500	213.46	-2300	1600.5
4	10/6/2009	15:00	-3762	500	141.35	-3762	6000
5	10/7/2009	3:30	-512	500	920.19	-762.5	1087.5
6	10/7/2009	6:00	63	500	284.62	-900	762.5
7	10/7/2009	7:30	300.5	500	368.27	-300	300.5

WriteToFile	This feature will enable (set to TRUE) or disable (set to FALSE) the saving of your gross daily P&L to a .csv file.
FileName	This defines the hard drive location and the file name of the Trade Summary Report. The file name generated by the EE Universal Clone will look like this: "FileName_Symbol_BarInterval.csv" For example, if you are running the EE Universal Clone on a 233 tick chart of YM and you name your file "MyFirstTest" the complete file name will be, "MyFirstTest_YM_233.csv". The default location where this file will be written to is the root directory of your C: drive. You may change the path to any location you want.

Note: Anytime your chart is refreshed (which can happen if you lose connection with your Internet service provider, manually refresh the screen, close and reopen your workspace or restart TradeStation) the chart will recompute and send all daily P&L transactions to your Trade Summary Report file.

Developing A Trading System

This section discuss how to build a trading system from scratch. There are several steps required to build and tune your system to the market you are trading while at the same time, reducing the chances of curve-fitting your system. This is a time consuming process that requires several key steps, listed below. It is recommended that all steps are followed to completion. Properly developing and testing a system may take weeks or months of work. Only after successfully completing all steps should you consider trading with real money.

1. Determine the market and timeframes you wish to trade
2. Determine key risk management parameters
3. Optimize over in-sample data
4. System testing on out-of-sample data
5. System testing on live market data

DETERMINE MARKET AND TRADABLE HOURS

Determine which market and at what times you are going to trade. Don't just decide to trade the EC market, ask yourself what hours are you going to trade it. Market sessions can be broken down into different periods. We're all familiar with the notion of the lunch-time doldrums and how the opening bell on the NYSE can be a volatile time. The point of this step is to specialize by narrowing down your trading times. For most people other factors in your life will come into play when determining what market and times to trade. For example, if you work for a living during the day maybe trading the ES pre-market before going to work is a good idea. If you work in the afternoon perhaps the volatile morning session from 8:00am to 11:00am is your preference. Maybe you're a night owl and can trade the EC between 2:00am and 6:00am.

DEFINE KEY RISK MANAGEMENT PARAMETERS

Define your risk per trade. Before you can start building a trading system you must define how much you are willing to risk per trade. Professional traders do not simply pick this number out of thin air. They use rigid money management techniques to help ensure their survival in the market place. It is common practice to risk no more than 2% of your account value per trade. However, risking anywhere from 1.5% to 3% of your account value may be reasonable. For the sake of

example lets use the 2% risk value. This means if you have a \$20,000 trading account you can risk \$400 per trade. If you have a \$5,000 account you can only risk \$100 per trade.

Determine the chart interval for your system. Are you going to trade on a 5-minute chart or a 233-tick chart? Again, this is not simply a guessing game. Based upon the risk parameter determined above you must pick a chart that's within your risk tolerance. For example, if you can only risk \$100 per trade you cannot trade ES on a 5-minute bar simply because you are likely to get stopped out very quickly. You must give price room to wiggle. Experiment to determine what timeframe will work given your risk level.

Determine daily loss max. This is a personal preference but a good starting point is two times your risk per trade as your daily loss maximum. That is, if your risk per trade is \$300, then a \$600 loss is a good place to start for a daily loss max value. Once this value is hit your system will stop trading for the day.

A conservative alternative way to look at your daily loss max is to consider one of trading as one trade. That means setting your day loss max to your stop loss value. Keep this in mind when testing your system.

April 2009						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2	3	4
In Sample Data						
5	6	7	8	9	10	11
In Sample Data						
12	13	14	15	16	17	18
In Sample Data						
19	20	21	22	23	24	25
In Sample Data						
26	27	28	29	30	1	2
In Sample Data						

OPTIMIZE

First select a historical timeframe to optimize your trading system. This timeframe of historical data is called your "in-sample" data. Your in-sample data should contain enough data to generate at least 100 trades. If you are trading from an 89 tick chart this might only require six weeks of data while a longer term chart interval will require many more weeks of data. In general for most day trading scenarios between 6-16

weeks of historical data is recommended.

When selecting your in-sample data leave about two weeks of time to forward test your system. This is called "out-of-sample" data and will be explained more in the next section. For example, say you want to use eight weeks of historical data for your in-sample data and you want to use

May 2009						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	1	2
In Sample Data						
3	4	5	6	7	8	9
In Sample Data						
10	11	12	13	14	15	16
In Sample Data						
17	18	19	20	21	22	23
In Sample Data						
24	25	26	27	28	29	30
In Sample	Out of Sample Data					
31	1	2	3	4	5	6
Out of Sample Data						

two weeks of out-of-sample data to forward test. Let's also say today is Monday June 8, 2009. Then the in-sample data period would be from March 30 through May 24.

June 2009						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31	1	2	3	4	5	6
Out of Sample Data						
7	8	9	10	11	12	13
Out of	today					
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4

March 2009						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
In Sample Data						

The in-sample data is represented as the pink colored line on the calendars. During these days you optimize your system's parameters.

The green colored line on the calendar represents the two week out-of-sample data. This period is used as a simple “sanity” check for your trading system.

Once you have determined your in-sample data timeframe, it's time to optimize your system. Optimization is a complex and time consuming process. Use the optimization guidelines found in the Optimization section below to develop a trading system that fits your needs.

SYSTEM TESTING ON OUT-OF-SAMPLE DATA

Out-of-sample data is simply historical data you did not utilize during your optimization process. Select a timeframe that will generate about 20 trades or so - just to give you an idea of your system's performance. The theory behind this step is to give you a quick estimate of the robustness of your system. In other words, did you curve fit your system to the in-sample data? A system report spanning the out-of-sample-data should not contain a heavy drawdown. In fact, the equity curve should look much like the equity curve generated from the in-sample data. If the equity curve simply falls apart on the out-of-sample data it's time to return to the drawing board. You don't have to start from scratch but you will need to modify your chart.

SYSTEM TESTING ON LIVE MARKET DATA

Your last step is to test your system on live market data. This simply entails opening your chart during your designated trading hours and letting it process incoming market data and make trades. Don't use the simulator, simply let the chart trade. This should be done for at least two weeks. After this period you can make the decision if your system is tradable or more development and/or testing is necessary.

Optimization

Once you have a chart opened with your in-sample data you can now begin the optimization process.

Most of the features should be disabled except for your key risk management parameters. That is, your daily loss limit, entries per day and your initial hard stop. All other values such as trailing stops, targets values and equity out features should be disabled.

- Test Buy Side Input - Optimize the B1 and B2 input values together. When optimizing your buy-side inputs, do so in a range between 1-32 with increments of 2. This helps prevent curve fitting and speeds up the optimization process.
- Test Sell Side Inputs - Optimize the S1 and S2 input values together. When optimizing your sell-side inputs, do so in a range between 1-32 with increments of 2. This helps prevent curve fitting and speeds up the optimization process.
- Test Your Hard Stop - Your testing should only involve reducing your maximum risk per trade. For example, if your maximum risk per trade is \$300 and you are trading the YM (\$5 per tick) then you can optimize over the range \$50 - \$300 in increments of \$10 or even \$20.
- Test Hard Targets - If you want to test hard target do them one at a time independently.
- Test Position 2 Trailing stops
- Test Daily Equity Out
- Develop several chart variations

Optimization, like trading, is as much an art as it is a science. It will take you weeks of testing to become comfortable with the process as you experiment how each input influences the results. Don't rush this process. Take your time.

HINTS AND TIPS ON OPTIMIZATION

Tip #1

It is often recommended to test and trade with TradeStation's "Intra Bar Order Generation" (IOG) turned on. IOG determines when trade signals can be generated. This applies to both backtesting and live automated trading. With this feature enabled trade signals can be generated based off indicator calculations during the formation of a bar. Thus orders can trigger

during the formation of a bar. With this feature off, trade signals will only be generated at the close of the bar.

In short you can build trading systems with this feature either enabled or disabled. However, if you develop a system with this feature enabled, you should live trade with it enabled. Likewise, if you develop a system with this feature disabled then you should test and live trade with it disabled.

Tip #2

When live testing a chart or live trading a chart it is recommended to enable TradeStation's "Look Inside Bar Back Testing" (LIBBT) feature.

The LIBBT feature only affects backtesting and has no impact on live automated trading. When backtesting this feature allows the software to look at the actual tick or minute data and determine much more precisely where the trades would take place. For tick charts it is recommended to backtest down to the tick level. For minute charts, a down-to-the-minute resolution is recommended.

You would think this would make your back testing very realistic and thus, would want to have this feature enabled when developing your system on your in-sample data. While this is true in theory it has been demonstrated that this feature is unreliable beyond a couple of weeks worth of data. This is most likely a TradeStation data issue. Furthermore, when using this feature on weeks or even months of data it significantly increases the length of time required to optimize. Given these two factors it is recommended this feature is not used for backtesting on your in-sample-data. However, if you use two weeks of data or less for your out-of-sample data then it is recommended to enable this feature.

You can also enable this feature during live trading just in case your chart "refreshes" resulting in your chart re-calculating during live trading. This will help prevent your chart from becoming out of synch with your trading account.

Tip #3

It's recommended that given a trading system that trades "frequently", configure TradeStation to skip a trade if it is not filled at the limit price. Do not replace limit orders with market orders because it's better to miss a trade if you do not get a proper fill. However, a trading system that trades "infrequently" should always use market order if the entry limit order is not filled within 5 seconds. Because the system does not trade very often, it's important not to miss a trade. See "Settings for Live Trading."

Tip #4

In general, the fewer trades a system makes the better. Keep this in mind when optimizing. If two systems have similar results but one has significantly less trades then pick that system.

Tip #5

Don't optimize more than two input values at the same time. When you optimize several variables at the same time, such as B1, B2, S1, S2 and Stop_Loss, you increase the chances of curving fitting your system to the historical data. Instead, only optimize the buy-side inputs (B1, B2) first. Then the sell-side inputs (S1, S2). Finally, optimize your Stop_Loss. If you are testing two different exits such as the position two trailing stop and the break even stop, then test/optimize them independently. It's important to see how they affect the system alone. Then perform a third experiment where you combine them. But don't optimize both at the same time - optimize independently.

Tip #6

Choosing the "correct" optimization values is critical. Never pick the best performing values! Why? Those are most likely outliers and are not likely to reproduce in the future. It's vital to pick input values that will have a likely chance of repeating in the future. In the results panel sort your optimization results by deciding P&L. Skip the first few best parameter choices and look down the list for an area where P&L is off the high and are stabilizing. In other words, look for a profitable area where the settings and P&L are similar for neighboring parameter sets.

Tip #7

What should a good chart look like? Is it capturing the major trends? Is it making too many trades? What is the draw down? What is the average net profit per trade?

Because the EE Universal Clone is a trend following system, it's important your system is capturing the majority of the big trends. Small trends and/or choppy markets will result in losses. This is normal. You'll never capture all moves nor will you always have winning days. However, what is important is the major moves. When you look at your system's trades ask yourself if the system is capturing the major moves.

TradeStation Settings

Settings will be demonstrated on the TradeStation platform. However, they same principals also apply to the MultiCharts platform.

SETTINGS FOR BACK-TESTING IN-SAMPLE DATA

Under the **General** tab found under the **Strategy Properties for All Strategies on this Chart** section include your total commission and fees per trade under the “Commission” input field. You may also want to include slippage under the “Slippage” input field. It’s difficult to suggest a value for slippage because it’s heavily depended upon the market you are trading. Finally, you may also want to set the **Initial Capital** setting to your account value. This value will be used when generating performance statistics. Notice, the **Look-Inside-Bar Back-testing** feature is not enabled.

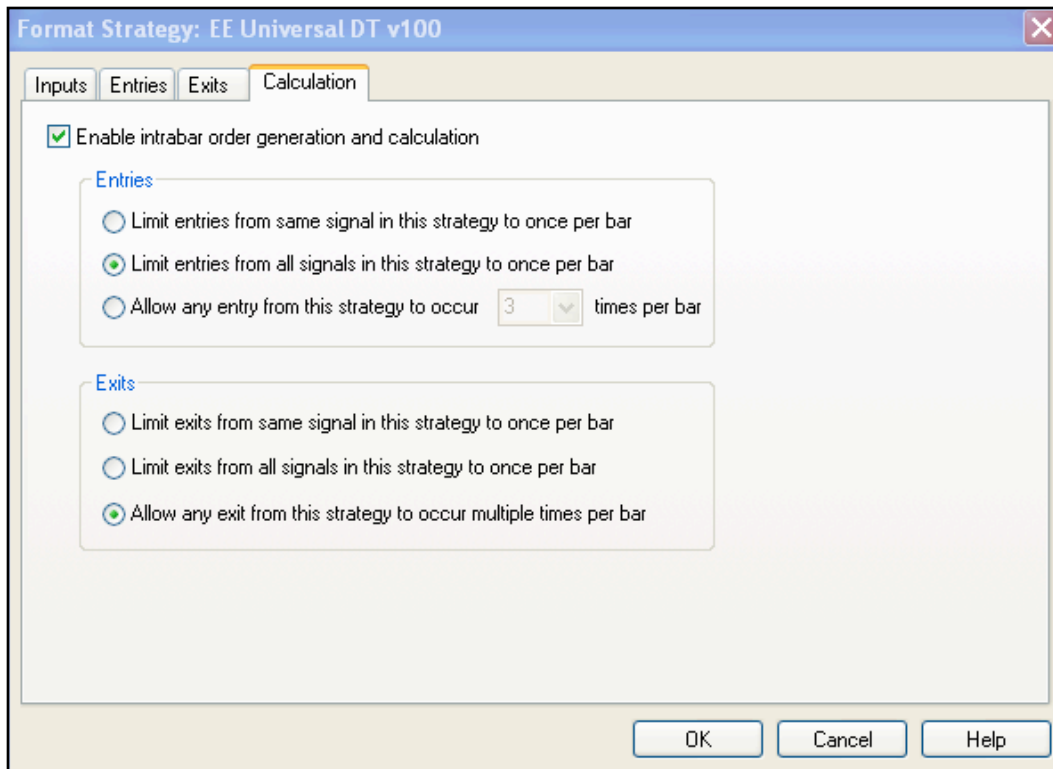
The screenshot shows the 'Strategy Properties for All Strategies on this Chart' dialog box with the 'General' tab selected. The settings are as follows:

- Currency:** Base currency of: Symbol (US Dollar)
- Costs/Capitalization:**
 - Commission: \$ 5.26 (per Trade selected)
 - Slippage: \$ 0 (per Trade selected)
 - Initial Capital: \$ 10000
 - Interest Rate: 2 %
- Back-testing resolution:**
 - Use Look-Inside-Bar Back-testing
 - Tick (1 ticks)
 - Intra-day (1 minute)
 - Daily
 - Maximum number of bars study will reference: 50
- Position limits (for pyramiding strategies only):**
 - Allow up to 50 entry orders in the same direction as the currently held position:
 - when the order is generated by a different entry order
 - regardless of the entry that generated the order
 - Maximum shares/contracts per position: 65000
- Trade size (if not specified by strategy):**
 - Fixed Shares/Contracts: 1
 - Dollar(s) per trade: \$ 10000
 - Round down to nearest: 100 shares/contracts
 - Minimum number shares/contracts: 100

Buttons at the bottom: OK, Cancel, Help.

Under the **Format Analysis Techniques & Strategies** section select the **Format** option then select the **Calculation** tab to reach the **intraday order generation and calculation** feature. In

the example this feature is enabled. This will allow orders to be generated before the close of a bar. When developing your trading system you may have this feature enabled or disabled. However, it will be important for you to be consistent when you begin to test your system with live data and/or trade live. That is, if you decide to design your system with this feature enabled, you must then enable this feature when testing and trading your system.



SETTINGS FOR BACK-TESTING OUT-OF-SAMPLE DATA

All the setting you configured for the in-sample data should be used when testing the the out-of-sample data with the inclusion of enabling the **Look Inside-Bar Back-testing** feature. If testing a tick chart you can test down to the single tick. On minute charts you can test down to the minute level.

Strategy Properties for All Strategies on this Chart

General **Backtesting** Automation

Currency
Base currency of: Symbol [US Dollar]

Costs/Capitalization
 Commission: \$ 5.26 per Trade per Share/Contract
 Slippage: \$ 0 per Trade per Share/Contract
 Initial Capital: \$ 10000
 Interest Rate: 2 %
 Note: Initial Capital and Interest Rate are used only in the Strategy Performance Report.

Back-testing resolution
 Use Look-Inside-Bar Back-testing
 Tick 1 ticks
 Intra-day 1 minute
 Daily
 Maximum number of bars study will reference: 50

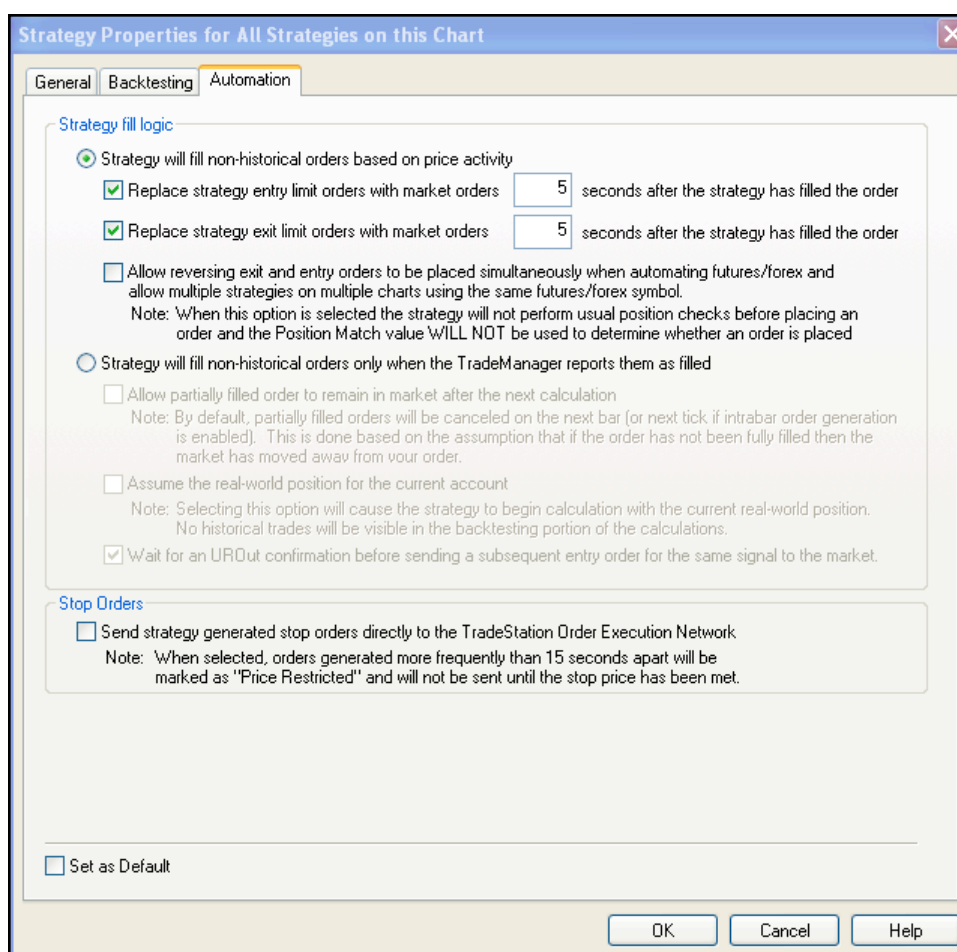
Position limits (for pyramiding strategies only)
 Allow up to 50 entry orders in the same direction as the currently held position:
 when the order is generated by a different entry order
 regardless of the entry that generated the order
 Maximum shares/contracts per position: 65000

Trade size (if not specified by strategy)
 Fixed Shares/Contracts 1
 Dollar(s) per trade \$ 10000
 Round down to nearest 100 shares/contracts
 Minimum number shares/contracts: 100

OK Cancel Help

SETTINGS FOR LIVE TRADING

When live testing you will use all the setting from the out-of-sample data testing in addition to the settings under the **Automation** tab. These settings will allow all limit order to convert to market orders if they are not filled within five seconds. This is important because your strategy will assume a limit order is filled once price reaches your specified price. However, in the real world your limit order may not be filled. Thus, your strategy and live trading account will be out of synch. By enabling this feature if your limit order is not filled within five seconds, your order will go-to-market ensuring you get filled. Notice, the “Stop Orders” check box is not enabled. Do not enable this feature because there is a known TradeStation bug which can cause problems.



Intra bar

Overall System Tips

- Don't let the system trade unattended. Just because you have an automated system does not mean you should let it trade without you being present. While an automated system will execute trades flawlessly 99% of the time many issues involving Internet connections and/or execution problems on your broker's servers can result in issues that will require your intervention to fix. Most issues are believed to be a result of poor Internet connections.
- You must adhere to proper risk and money management techniques. You should never trade a system that violates your risk parameters or that has not been thoroughly tested.
- Creating your own trading system by experimenting with different timeframes, parameters, and your personal risk parameters will most likely produce the best results for you.
- Don't be afraid to experiment. For example, look into trading pre-market, different timeframes or even optimize your system over different times throughout the day.
- One technique to improve trading is to "trade the equity curve." By creating a simple moving average of the equity curve you produce an indicator that helps you determine when to trade or when not to trade. Only trade the system when the equity curve is above the moving average. Don't trade the system when the equity curve falls below the simple moving average. A slight variation is to only trade the system when the equity curve is above the simple moving average and the simple moving average is rising. See the video section under the Universal Clone Support on our web page for more information on this technique.
- Be sure to visit the Universal Clone Video Page (http://eminiedges.com/wp/?page_id=316) for more tips on how to trade the Universal Clone.