Universal Trend Detection System (UNITRDES)



"Never miss a trend again"

Burkhard Eichberger Professional Software Solutions http://www.ProfSoftware.com/trend

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(UNITRDES Version 1.3b)

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Universal Trend Detection System (UNITRDES) - Overview

Welcome to the powerful new "Universal Trend Detection system (UNITRDES)",

- which can assist you in detecting a trend and improve your trading in the following ways:
 - Instant intuitive paint bar coloring showing the current market conditions and trend in real-time - using a proprietary continuous coloring scheme (UT Bars)
 - Automated Trading System (UT_TRD)
 - Evaluating the trend strength and duration with additional available indicators (UT_Trend)

UNITRDES is truly universal and can be used and applied to:

- Stocks (AAPL, GOOG, INTC etc)
- ETF's (USO, SPY, DIA etc)
- Futures (E-Mini ES, NQ etc)
- FOREX (EURUSD etc)
- Any timeframe (Daily and Intraday Minutes, ticks, volume)

All parameters are easily adjustable for best performance in your market – details below. Here is an example of the power of the UNITRDES trading system – using the Oil ETF(USO) over the last 2.5 years – it gained 178% in 2 long and 2 short trades:



UNITRDES is using advanced proprietary statistical models and has been developed by "Professional Software Solutions (PSS)" which extensive 30+ years software development experience.

Check for updates and new versions at <u>http://www.ProfSoftware.com/trend</u> Copyright © 2009 – B. Eichberger <u>www.ProfSoftware.com/trend</u>

Installation

The installation is easily completed within a few mionutes.

Trial Period

You can try the "Universal Trend Detection (UNITRDES)" for free for 14 days!

Download

Download and install from: www.profsoftware.com/trend/dl.htm

Close tradestation before you start the installation, so the files are not "occupied" and the install fails. The internet browser will show the download box- click on the RUN button:

File Download - Security Warning
Do you want to run or save this file?
Name: utrs13a.exe Type: Application, 3.24MB From: www.profsoftware.com <u>B</u> un Save
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. <u>What's the risk?</u>
You will see the progress of the download
25% of utrs13a.exe from www.profsoftware.com Com I
utrs13a.exe from www.profsoftware.com
Estimated time left: 27 sec (823KB of 3.24MB copied) Download to: Temporary Folder Transfer rate: 90.2KB/Sec
Close this dalog box when download completes
Open <u>Open Folder</u> Cancel

When the download has completed - confirm the installation: Click on the RUN button



Setup

After a few seconds the actual installation will start - click on the NEXT button



Confirm the location - click the NEXT button:

Choose Destination I	ocation		×
	Setup will install Unive in the following folder.	rsal Trend Detection Sys	tem (UNITRDES)
	To install to this folder	click Next.	
	To install to a different folder.	folder, click Browse and	select another
	You can choose not to (UNITRDES) by clickin	o install Universal Trend I ng Cancel to exit Setup.	Detection System
	C:\Program Files\Univ	versal Trend Detection S	ystem (UNITRDES
	Space Required: Space Available:	10.00 MB 10.47 GB	Browse
		< <u>B</u> ack	Cancel

Confirm the Program Folder name - click the NEXT button:



Confirm the settings - click again the NEXT button

Start Copying Files		×
	Setup has enough information to start copying the progra you want to review or change any settings, click Back. I satisfied with the settings, click Next to begin copying file Current Settings Installation Directory: C:\Program Files\Universal Trend Detection System (UNITRDES) Program Manager Menu Name: Universal Trend Detection System (UNITRDES)	am files. If f you are es.
	< <u>B</u> ack <u>N</u> ext >	Cancel
and UNITRDES will be	finally installed showing you the progress	
Copying Files	×	
🖄 🎽	\triangleright	
UTC.pdf To C:\PBOGBA~1\UNIVE	B~1	
	Cancel	

When the installation is completed - click on the FINISH button - to start the TradeStation logic import



Tradestation Import

Login to TradeStation (unless already open) and confirm the UNITRDES logic import - click on NEXT

Import Wizard			x
Ispats AP(-02); If Plot1: P	The specified file contains techniques. Please select that you want to import into Analysis <u>Types</u> : ♥Indicator ♥PaintBar ♥Strategy	the following type(s) the types(s) of analy o TradeStation.	of analysis sis techniques
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	< <u>B</u> ack <u>N</u> ext >	Cancel	Help

Confirm the import module list – click on FINISH:

Import Wizard	Select the Analysis Tec TradeStation. Available Analysis <u>T</u> ech	Anique(s) that you want to import into niques:
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Commentary:	UT TRD	Strategy
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In South of Parts of the South of South	(Paale Einigh	Select All Clear All

Opening your first Trend Sample

Now you can open the first UNITRDES Sample file.

Click on Start/Programs and find the new "Universal Trend Detection (UNITRDES)" entry then select your sample - for example the "USO Oil Daily Sample1":

(If you do not have the appropriate datafeed – then select a different sample)



as soon as the data has loaded - you should see the one time trial confirmation - click OK:

Calculating Analysis Techniques and/or Strategies...



And the USO Daily Sample1 chart should appear:



Now you are ready to use the "Universal Trend Detection (UNITRDES)" system.

What is a Trend?

Here is the definition from Wikipedia - <u>http://en.wikipedia.org/wiki/Market_trends</u> "Market trends are described as <u>sustained movements</u> in market prices over a <u>period of time</u>."

The "Universal Trend Detection (UNITRDES)" allows you to detect a trend in real-time. You can customize the "<u>period of time</u>" with the UTScope parameter - as the number of bars to be used. You can customize also the detection of the "<u>sustained movement</u>" with the UTStep parameter – see below.

A trend movement is rarely completely smooth and unchallenged.

Usually the trend will experience a secondary counter trend, before it resumes again. Finally the trend will have exhausted itself and either transition into a neutral sideways period

or a new counter trend will start. As you can see a "trend" is not a very precise mathematical formula,

that's why we give you several parameters to adjust the trend detection to your preverences - see below!

Here is an example (USO Oil July to Oct 2007):



The "period of time" used here is 40 bars (UTScope=40) and strong sensitivity (UTStep=80)

Universal Trend Detection - Sample Charts

We have provides several chart samples for the different markets and timeframes to demonstrate the power and versatility of the "Universal Trend Detection System".

Each sample can be accessed from the menu: Start/Programs/Universal Trend Detection:



Or downloaded from: http://profsoftware.com/trend/home.htm#Samples

Downloading sample workspaces

Click on the links below (after you install UNITRDES) to open the sample workspces: <u>GOOG Stock 30Minute Intraday Sample</u> <u>AAPL Stock 30Minute Intraday Sample (AAPL 130)</u> <u>USO ETF Daily Sample1 (USO D1)</u> <u>SPY ETF Daily Sample (SPY D)</u> <u>XLF ETF 15Minute Intraday Sample (XLF 115)</u> <u>FOREX EURUSD 30Min Intraday Sample (EUR 130)</u> <u>ES SP500 eMini Futures 5Minute Intraday Sample (ES 15)</u> <u>Euro Futures 3Minute Intraday Sample (EC 15)</u> <u>EC Futures 15Minute Intraday Sample (EC 15)</u> <u>Crude3 Oil Mini Futures 5Minute Intraday Sample (QM 15)</u> <u>10Year Treasury Futures 5Minute Intraday Sample (TY 15)</u> <u>USO ETF Daily Sample2 (USO D2)</u>

DISCLAIMER:

Futures, stocks, and spot currency trading have large potential rewards, but also large potential risk. You must be aware of the risks and be willing to accept them in order to invest in the futures, stocks, and forex markets. Don't trade with money you can't afford to lose. This system is neither a solicitation nor an offer to Buy/Sell futures, stocks or forex. No representation is being made that any account will or is likely to achieve profits or losses similar to those presented here. Past performance of indicators or methodology are not necessarily indicative of future results. CFTC RULE 4.41 - HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING. ALSO, SINCE THE TRADES HAVE NOT BEEN EXECUTED, THE RESULTS MAY HAVE UNDER-OR-OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFIT OR LOSSES SIMILAR TO THOSE SHOWN.

GOOG Stock 30Minute Intraday Sample (GOOG_I30)

Equity Curve Line - GOOG 30 min(08/09/06 14:30 - 07/31/09 16:00)



AAPL Stock 30Minute Intraday Sample (AAPL_I30)

Loads 12,001 bars from July 31st, 2009:



Equity Curve Line - AAPL 30 min(11/22/05 10:30 - 07/31/09 16:00)



USO ETF Daily Sample1 (USO_D1)

Loads 4 years from July, 2009 and trades more frequently: Parameter: Scope=40, Smooth=1, Recent=2, Step=80, CloseFac=100, Entry=2, Exit=3, Tar=0



Equity Curve Line - USO Daily(04/10/06 16:00 - 08/07/09 16:00)



SPY ETF Daily Sample (SPY_D)

Loads Oct 2003 to July, 2009 and trades on major trend changes: Parameter: Scope=200, Smooth=1, Recent=10, Step=115, CloseFac=100, Entry=2, Exit=2, Tar=0



Performance:

Equity Curve Line - SPY Daily(10/01/03 16:00 - 08/07/09 16:00)



XLF ETF 15Minute Intraday Sample (XLF_I15)



FOREX EURUSD 30Min Intraday Sample (EUR_I30)

Loads Oct 2008 to June 6th, 2009:

Parameter: Scope=100, Smooth=1, Recent=-10, Step=120, CloseFac=100, Entry=3, Exit=8, Tar=220



Performance:

Equity Curve Line - EURUSD 30 min(09/30/08 17:30 - 06/05/09 16:59)



ES SP500 eMini Futures 5Minute Intraday Sample (ES_I5)

Loads 10,000 bars from July 18th, 2009:

Parameter: Scope=100, Smooth=3, Recent=-10, Step=80, CloseFac=200, Entry=2, Exit=6, Tar=400



Equity Curve Line - @ES.D 5 min(01/21/09 12:10 - 07/17/09 15:15)



Euro Futures 5Minute Intraday Sample (EC_15)

Loads 12,001 bars from July 31st, 2009:

Parameter: Scope=60, Smooth=1, Recent=-10, Step=140, CloseFac=100, Entry=2, Exit=3, Tar=500



Performance:





EC Futures 15Minute Intraday Sample (EC_I15)

Loads 10,001 bars from July 31st, 2009:

Parameter: Scope=60, Smooth=3, Recent=-6, Step=24, CloseFac=100, Entry=2, Exit=3, Tar=400



Equity Curve Line - @EC 15 min(02/27/09 11:15 - 07/31/09 16:00)



Crude Oil Mini Futures 5Minute Intraday Sample (QM_15)

Loads 12,001 bars from Aug 2nd, 2009: Parameter: Scope=40, Smooth=1, Recent=-9, Step=160, CloseFac=100, Entry=3, Exit=4, Tar=350





10Year Treasury Futures 5Minute Intraday Sample (TY_15)

Loads 12,001 bars from July 31st, 2009:

Parameter: Scope=100, Smooth=1, Recent=-11, Step=140, CloseFac=100, Entry=3, Exit=3, Tar=350







USO ETF Daily Sample2 (USO_D2)

Loads 4 years from July, 2009 and trades on major trend changes: Parameter: Scope=120, Smooth=2, Recent=9, Step=40, CloseFac=100, Entry=2, Exit=2, Tar=0



Performance:

Equity Curve Line - USO Daily(10/02/06 16:00 - 08/07/09 16:00)



Trend Scope Parameter (UTScope)

In order to detect a trend the system has to "look back" a certain period of time (number of bars)! UNITRDES allows you to adjust this period with the "UTScope" parameter.

The range of the scope is usually between 20 and 200 bars.

Short periods (less than 40 bars) react very quickly, but can give a few "false alarms", while long periods (more than 80 bars) take some time to respond, but than the trend is usually "more solid".

Trend Strength Detection (Trend Stages)

The system can detect not only the trend direction, but also the STRENGTH of the trend! It will "grade" the strength of the trend between 1(weak) and 5(very strong); just like the speed in a car relates to the gear you are driving:



Up trends are indicated with the positive stages (+1 to +5) - down trends with the negative stages (-1 to -5):

Grade	Trend	Strength
+5	Up	Very strong up trend (max up strength grade limited to +5)
+3, +4	Up	Strong up trend
+2, +1	Up	Slight – possible start of an up trend
0	Neutral	No trend yet detected
-2, -1	Down	Slight – possible start of a down trend
-4, -3	Down	Strong down trend
-5	Down	Very strong down trend (max down strength grade limited to -5)

Giving you a total of 11 stages (5 + 1 + 5).

You can adjust the sensitivity - how easy or hesitant - it notches up and down

the 11 trend grades shown above - with the UTStep parameter.

You can see the strength in the "Trend Indicator" and with the depth of the color in the painted bar color.

Trend Sensitivity Parameter (UTStep)

This sensitivity parameter allows you to adjust how quick the system will transition

from neutral to the up (or down) trend stages.

The range of the sensitivity is usually between 20 and 200, which 20 being VERY sensitive and 200 needing a lot of confirmation.

Core Trend Parameters

The following parameters are identical to all three UNITRDES modules:

- paint bar coloring showing the current market conditions and trend in real-time - using a proprietary continuous coloring scheme (UT_Bars)
- Automated Trading System (UT_TRD)
- Evaluating the trend strength and duration with additional available indicators (UT_Trend)

They can easily be adjusted for best performance in your specific market and timeframe. UNITRDES is using advanced proprietary statistical models to detect trends, but keeps the implementation as simple as possible, since usually in trading "simple is better". UNITRDES will apply its calculations and statistics to the "lookback" period you define. For example period of 50 (UTScope=50) would use the last 50 bars back from the current bar.

Name	Default	Descript	ion		Range
UTScope	40	Defines	the "scope" of the lookback range:		3999
		how ma	ny bars back is UNITR	y bars back is UNITRDES considering in the calculations	
UTSmooth	1	Defines	the how much smooth	ing should be applied:	199
		Value	Effect	Description	
		1	no smoothing	fast response, but maybe signals too early	
		2,3	slight smoothing	good response	
		4+	stronger smoothing	best signals with some delay	
UTRecent	2	Defines	how much emphasis is	s on the most recent data	-20+20
		within th	e lookback range defir	ned in UTScope:	
		Value	Description		
		+10	strong emphasis on t	the most recent bars in the lookback range	
		+4	Slight emphasis on the	he most recent bars in the lookback range	
		-10	strong emphasis on the earlier bars in the lookback range		
UTStep	80	Defines	he sensitivity to notch up and down the trend grades:		20999
		Value	Description	Description	
		20	Very sensitive – very	"trigger happy" to notch up and down the scale	
		40	Fairly sensitive to tre	Fairly sensitive to trend changes	
		60	Medium sensitive to	Medium sensitive to trend changes	
		80	Needs some significant strength to notch up and down the grades		
		200	Needs a lot of strength to notch up and down		
UTCloseFac	100	Defines	how much emphasis is given to the closing price of the last bar: 0		0999
		Value	Description		
		0	Closing price is not considered		
		50	Closing price is considered 50%		
		100	Closing price is considered with equally measure		
		200	Closing price is considered with double measure		
		900	Almost exclusively th	Almost exclusively the closing price is considered	

The general UNITRDES parameter are:

Trend Coloring in real-time

The "Universal Trend Detection (UNITRDES)" responds in real-time instantly to trend changes! We are using an intuitive and continuous coloring scheme to show you the trend. You can customize the colors to your preference:

- Green (trend up)
- Red (trend down)
- Yellow (no trend neutral, sideway)

Here is an example of the smooth continuous color transitions between the color "corner stones":



Of cause you can change the color preferences! In the example below -we changed the color for the neutral trend from yellow to blue:



How to add trend coloring to your chart (PaintBar)

To add the "Universal Trend Detection (UNITRDES)" color module to your chart:

- Open your chart
- Select Insert/PaintBar:



• A list of available PaintBar studies will come up - select UT_Bar and click OK:

Name		Verified A	Alert 🖉
Fundamntl T	TM Mom PB	✓	
Heikin Ashi		✓	
HeikinAshi		✓	
MACD Gradi	ent	~	
Momentum E	ecreasing	✓	
Momentum I	ncreasing	~	
Mov Avg Cro	ossover	✓	
Price < Avg		✓.	
Price > Avg		×.	
SG_P_ZZ		× .	
Stochastic S	lowK	1	
TC		√	
UI_Bar	P	×	
Volume Grad	lient	V	
<u>D</u> efinition	Edit EasyLanguage	🔽 Prom	ot for <u>F</u> orma
itles and defi pol. No partic opproach, stra by TradeStatio of the trading	initions are intended to give a genera ular security, group of securities, indi ategy or setting is being recommende on Securities or any of its affiliates. S approach or strategy that you design	al idea of a trading concep ustry segment, analysis inte ed to you or in any manner olely you are responsible fo olely you are.	t or analysis arval, idea, endorsed or the result:

• To customize the trend and color settings; right click on the prices and select Format "UT_Bars":



• Now you can change the trend calculation parameter and color parameter:

BarWidth	2
ColorUp	Green
ColorNeutral	Yellow
ColorDown	Red

The "BarWidth" defines the thickness of the bar and can be between 0 and 6: 0=very thin, 6=very thick and all grades in between.

You can define any color in any of the three color settings – see below.

Trend Color Parameters

You can use any of the predefined colors available:

Name	RGB Value	Number
Black	0	1
Blue	16711680	2
Cyan	16776960	3
Green	65280	4
Magenta	16711935	5
Red	255	6
Yellow	65535	7
White	16777215	8
DarkBlue	8388608	9
DarkCyan	8421376	10
DarkGreen	32768	11
DarkMagenta	8388736	12
DarkRed	128	13
DarkBrown	32896	14
DarkGray	8421504	15
LightGray	12632256	16

You can also define your own custom color using the Red/Green/Blue components:

ColorUp	RGB(0,255,0)
ColorNeutral	RGB(255,255,0)
ColorDown	RGB(255.0.0)

____RGB(0,255,0) means 0=Red, 255=Green, 0=Blue

To find the RGB values for your colors open "Paint: - Start/Run enter "mspaint" and click on ENTER Then click on Colors/Edit Colors and the color editing tool appears – click on "Define Custom Color":



In this example:

Red=64, green=128, blue=128 - Enter RGB(64,128,128) in the value column: RGB(64,128,128)

How to add the automated Trend Strategy to your chart

The "Universal Trend Detection system (UNITRDES)" also contains an automated trading system You can customize to your objectives, trading style, market and timeframe. To add the "Universal Trend Detection system (UNITRDES)" strategy to your chart: Open your chart or create a new chart (USO – Daily – 4 Years back) Select Insert/Strategy

Insert	Format	Drawing	WIR
Sym	bol	Alt+S	8
Indic	ator	Alt+C	ŝ
Shov	vMe		
Paint	tBar		
Activ	/ityBar		
Prob	abilityMap	o	
Strat	tegy		

Analysis Group...

Scroll down – click on UT_TRD – and click on OK. (check the "Prompt for Format" box)



0K

Cancel



Help

Enter the appropriate commission per trade or share etc – then click OK: (For stocks/ETF's set the trading amount o \$10000 and the rounding to 1 share)

neral Automation		
Currency		
Base currency of: Symbol (US)	Dollar)	×
Costs/Capitalization		Position limits (for pyramiding strategies only)
Commission: \$ 5	 O per Irade O per Share/Contract O per Irade 	Allow up to 50 entry orders in the same direction as the currently held position:
Slippage: \$ 0	O per Share/Contract	O when the order is generated by a different entry order
Initial Cagital: \$ 100000		 regardless of the entry that generated the order
Interest <u>R</u> ate: 2	%	
Note: Initial Capital and Interest f the Strategy Performance Repor	Rate are used only in t.	Maximum shares/contracts per position 65000
Back-testing resolution		Trade size (if not specified by strategy)
🔲 Use Look-Inside-Bar <u>B</u> ack-te	esting	
C Tick	ticks	
🖲 Intra-day 🛛 1	minute	Dollar(s) per trade \$ 10000
C Daily		Round down to nearest 1 shares/contrac
Maximum number of bars study will reference	50	Minimum number shares/contracts: 1
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Maximum number of bars study will reference	e strategy parame ation Value 40 1 2 80	Minimum number shares/contracts: 1
Maximum number of bars study will reference	e strategy parame ation Value 40 1 2 80 100	Minimum number shares/contracts: 1
Maximum number of bars study will reference	50 e strategy parame ation Value 40 1 2 80 100 2	Minimum number shares/contracts: 1
Maximum number of bars study will reference	50 e strategy parame ation Value 40 1 2 80 100 2 3	Minimum number shares/contracts: 1
Maximum number of bars study will reference	50 e strategy parame ation Value 40 1 2 80 100 2 3 0	Minimum number shares/contracts: 1
Maximum number of bars study will reference	50 e strategy parame ation 40 1 2 80 100 2 3 0 0 0	Minimum number shares/contracts: 1
Maximum number of bars study will reference	50 e strategy parame ation Value 40 1 2 80 100 2 3 0 0 0 0 0	Minimum number shares/contracts: 1

Dictionary...

Optimize...

0K

Set Default

Help

Cancel

To activate the strategy finally click CLOSE – and you should see the signals in the chart:



You can customize the way the trades signals are shown: Just right click on the chart and select "Format Strategies":



Then click on FORMAT and click on the Entries or Exit TAB and customize the settings how to show the entries and exits etc:



Trend Strategy specific Parameters

The "Universal Trend Detection system (UNITRDES)" strategy contains the of caue the core parameter – see above – plus the additional trading related parameter shown below:

Name	Default	Description							Range	
EntryGrade	2	Defines how	Defines how quickly the entry is triggered:							
		Here you ha	Here you have a trade-off between being early and getting too many signals							
		and being la	ate, but catcl	ning a strong trend.						
		The UTStep	o is closely re	elated, since it define	es how fa	ast/slo	N			
		we reach th	ne higher tre	nd grades.						
		Value De	escription							
		1 fa	st response,	but maybe signals to	oo early					
		2,3 go	od medium	response						
		4,5 Sl	ow response	e - when the trend is	stronges	st				
ExitAge	3	Defines the	how many b	pars to wait of the op	posite tre	end:				199
		Value De	escription							
		1 fa	st response,	but maybe exits too	early					
		2,3 go	od response	e, some confirmation	i but not	too ea	rly			
		4+ Av	/oids too ear	ly exits, but might giv	ve back	some	orofit			
TargetAmount	0	Defines the	(optional) a	mount to exit with a g	gain – pe	er trade	: :			0, 1
		this can be	very helpful	to capture a good pro	ofit befor	re the	trend	fades	out!	-
		Value De	escription							
		0 No	o target exit	- disabled						
		200 Ex	kit when \$20	0 profit is reached						-
		400 Ex	kit when \$40	0 profit is reached et	C					
StopAmount	0	Defines the	(optional) a	mount to exit with a l	oss– pei	r trade				0, 1
		Value De	escription							41
		0 No	stop out ex	kit – disabled						41
		200 Ex	kit when \$20	0 loss is reached						41
T	0	400 Ex	kit when \$40	U loss is reached etc	;					
TrailAmount	0	Defines the	(optional) tr	alling stop amount to		n a los	s– pe	r trade):	0, 1
		Value De	escription							
			trailing stor	0 out exit – disabled	had					
		200 EX	dt when \$20	0 trailing stop is read	hed ato					
EvitDovEnd	0	AUU EX	(optional) o	viteb if to ovit at the	neu elc	o dov/	ooooi			
EXILDAYENU	0	Value D	(upliurial) s			ie uay/	562210	JII.		U, I
			escription	and of the day/cossic	an dias	blod				
			vit at the one	of the day/session -	- onablo					
	"דםס"		ator for the	on the day/session -		u al inata	0000			
TXUD	טחו	I ext parameter for the case if you want to run several instances								
		or the OT_TRD strategy in the same chart/symbol/timetrame.								
		For the "long only strategy – turn OFE the Short/Cover option and set tytD("I ")								
		For the "short only strategy – turn OFF the Buy/Sell option and set txtID(L)								
		Format Analysis Techniques & Strategies								
		romac Analysis Techniques & Strategies								
		Analysis Lechn	iques strategies							
			Name	Input Values	Status	Buv	Sell	Sell	Buy to	
							-	Short	Lover	
			D	40,1,2,80,100,2,3,0,0,0,0,"L"	Un	Un 🔻	Un V	Ult 🔻	On 🔻	
		tytID is use	- internally to	heing able to create	different	e ote	90	on s	1.0810-23	
		in case vou	"duplicate" s	strategies in the SAM	1E marke	et./time	efram	e.		
TxtID	"TRD"	Value Description 0 No exit at the end of the day/session – disabled 1 Exit at the end of the day/session – enabled Text parameter for the case if you want to run several instances of the UT_TRD strategy in the same chart/symbol/timeframe. For example if you want to use different parameters for Longs/Shorts: For the "long only strategy – turn OFF the Short/Cover option and set txtID("L") For the "short only strategy – turn OFF the Buy/Sell option and set txtID("S"): Format Analysis Techniques Strategies Name Input Values Status Buy Sell Sur to Short Cover On Values Status Buy to Short Cover On Input Values Status Buy to Short Cover On Values Status Buy to Short Cover On Values Status Buy to Short Cover On Input Values Status Buy to Short Cover On <								

Backtesting the Universal Trend Detection System

You can easily identify the best UNITRDES trend and trading parameters, this is called "backtesting" or "optimizing" your automated trading strategy.

Entering your test range(s)

Click on the FORMAT button in the strategy window. Then click on the value you would like to "test"/optimize – for example TargetAmount. Then click on the OPTIMIZE button and enter the testing range - \$0 to \$600 in \$50 increments:

Name	Value
UTScope	40 Ontimize
UTSmooth	1
UTRecent	2 Start: 0 Stop: 600 Increment: 50
UTStep	80
UTCloseFac	100
EntryGrade	2 OK Cancel <u>H</u> elp
ExitAge	3
TargetAmount	0
StopAmount	0
TrailAmount	0
ExitDayEnd	0
txtID	"TBD"

TargetAmount

You can repeat this process for as many parameter you like - watch that you don't get too many tests!

Start Optimization

Then click on the "Optimize" button in the main strategy box, which will start the calculations:

Status	In progress	Chart Sett	ings
Tests		Chart	'USO Daily [ARCX] United States Oil Fund L
Current test	12	Strategy	'Strategy'
Total tests	13		
Time		Report Set	ttings
Total elapsed time	0 sec	Show	Highest 200 tests
Estimated time to completion	0 sec	Based on	All: Net Profit
Current Best Values			
All: Net Profit	17772.78		
UTC_TRD (TargetAmount)	0		

This process can take a few seconds or several hours,

depending on the a) number of tests, b) number of bars in the chart and c) UTScope parameter.

When the backtest has completed - the chart will refresh with the best result.

0..600:50

Backtesting is an excellent tool to "what if" test your strategy and settings,

but watch out not to "curve fit" and "over optimize" and expect that same performance in the future. There are many books and approaches available on this complex topic.

To see the results and equity graph (and many other statistics) click on the button in the toolbar: (or click on View/Strategy Performance Report)



Click on the "Performance Graph" and you should see the equity curve:



You can also see the result for each test – click on the report button in thetoolbar:

🛐 📰 🛐 🙁 🖈 Insert an Ana

.36 @Strategy Optimization Report

Which will display the result spreadsheet:

	🖬 🖨 🖆 🔛 🔟 🔟 🖿 🧶 🤣 👯 😵											
	TargetAmount (UT_TRD)	Test 🖌	All: Net Profit	All: Gross Profit	All: Gross Loss	All: Total Trades	All: % Profitable	All: Winning Trades	All: Losing Trades	All: Max a Winning si Trade a		
1	0	1	17,772.78	17,772.78	0.00	4	100.00	4	0	8,666.48 0		
2	50		2,378.34	4,045.54	-1,667.20	81	98.77	80	1	163.68 0		
3	100	×	6,088.05	7,755.25	-1,667.20	78	98.72	77	1	212.16 0		
4	150	,	9,223.43	10,890.63	-1,667.20	71	98.59	70	1	441.81 🕽		
5	200	ę	11,933.38	13,600.58	-1,667.20	65	98.46	64	1	599.90 0		
6	250	ť	13,725.09	15,392.29	-1,667.20	59	98.31	58	1	599.90 <mark>D</mark>		
7	300		10,510.38	14,997.82	-4,487.44	49	95.92	47	2	677.60 4		
8	350	{	11,651.15	16,236.19	-4,585.04	46	95.65	44	2	608.36 4		
9	400	Ş	12,227.00	16,714.44	-4,487.44	42	95.24	40	2	790.97 4		
10	450	10	14,679.90	19,167.34	-4,487.44	43	95.35	41	2	790.97 4		
11	500	11	16,581.64	20,836.88	-4,255.24	42	95.24	40	2	790.97 4		
12	550	12	14,315.48	18,668.32	-4,352.84	35	94.29	33	2	790.97 4		
13	600	1:	15,214.07	19,566.91	-4,352.84	34	94.12	32	2	743.04 4		

showing that no target (TargetAmpount=0) is indeed the best result for this particular chart.

Syncronizing new Parameter with PaintBar and Indicator

After you have backtested and possibly changed some the core UNITRDES parameter, Remember to "synchronize" these parameter in the UT_Bars paintbar study (if used). Just right click on the bars and select "Format UT_Bars":

I.L			
Form	nat 'U1	[_Bar	.

Also "synchronize" the UT_Trend indicator (if used in chart). Just right click anywhere on the chart background and select "Format Analysis Techniques"

Format Symbol					
Format Analysis Techniques.					
n click on the UT_Trend	Indicator and click on FORMAT and	d adjust th	e param	leters	
mat Analysis Techniques & 9	itrategies				
rialysis recriniques Strategies					
Name	Input Values	Data #	Status	Alert	<u>F</u> ormat
UT_Bar	40,1,2,80,100,3,2,Green,White,Red	Data1	On	No	-
UIT Trend	40.1.2.80.100.3.1 Green Yellow Bed	Data1	On	No	Status

Suggested Core Parameter Ranges

Each change of a strategy parameter usually has an effect on the result. Below we are listing each "Universal Trend Detection system (UNITRDES)" strategy trading parameter with their suggested backtesting range:

	<u> </u>		U	<u> </u>	
Name	Range	Increment	Tests	Impact	Description
UTScope	20200	20	10	Strong	Lookback period to calculate
UTSmooth	14	1	4	Medium	Smoothing trend changes
UTStep	40200	40	5	Strong	Sensitivity to price changes
UTRecent	-10+10	2	11	Strong	Emphasis on last prices
UTCloseFac	0300	100	4	Slight	Emphasis on last closing price
			8.800		Total test

We suggest first backtesting these UT parameter with EntryGrade=2, ExitAge=3 and the rest 0: Format Strategy: UTC_TRD

Name	Value
UTScope	20200:20
UTSmooth	14:1
UTRecent	-1010:2
UTStep	40200:40
UTCloseFac	0300:100
EntryGrade	2
ExitAge	3
TargetAmount	0
StopAmount	0
TrailAmount	0
ExitDayEnd	0
txtID	"TRD"

This results in 8,800 tests.

Suggested secondary trading Parameter Ranges

Then backber the remaining etrategy parametere:								
Name	Range	Increment	Tests	Impact	Description			
EntryGrade	24	1	3	Strong	Required trend strength to enter			
ExitAge	14	1	4	Strong	Required opposing trend duration for exit			
TargetAmount	0600	200	4	Strong	When/if to take a profit			
StopAmount	0600	200	4	Strong	When/if to use a fixed stop loss			
TrailAmount	0600	200	4	Strong	When/if to use a trailing stop loss			
ExitDayEnd	0,1	1	2	Medium	When/if to exit at the end of day/session			
			1,536		Total tests			
	A CONTRACTOR OF	And in case of the second s	and the second se					

Then backtest the remaining strategy parameters:

Format Strategy: UTC_TRD

Name	Value
UTScope	40
UTSmooth	1
UTRecent	2
UTStep	80
UTCloseFac	100
EntryGrade	24:1
ExitAge	14:1
TargetAmount	0600:200
StopAmount	0600:200
TrailAmount	0.,600:200
ExitDayEnd	01:1
txtID	"TRD"

This results in 1,536 tests.

Genetic Backtesting

Tradestation offers a new powerful backtesting method using a "genetic algorithm" (Version 8.5 and later). For more details go to: <u>https://www.tradestation.com/support/whats_new/build2274.aspx</u>

And click on "New Optimization Method Using Genetic Algorithm"

This new "genetic algorithm" allows you to test a much larger number of parameters and ranges then the usual exhaustive backest!

Then you could test all the main parameter together:

Name	Range	Increment	Tests	Impact	Description
UTScope	20200	20	10	Strong	Lookback period to calculate
UTSmooth	14	1	4	Medium	Smoothing trend changes
UTStep	40200	40	5	Strong	Sensitivity to price changes
UTRecent	-10+10	2	11	Strong	Emphasis on last prices
EntryGrade	24	1	3	Strong	Required trend strength to enter
ExitAge	14	1	4	Strong	Required opposing trend duration for exit
TargetAmount	0600	200	4	Strong	When/if to take a profit
			105,600		Total exhaustive tests

This would result in 105,600 test runs:

Optimization Details:

Method: Exhaustive Test Count: 105,600

Switch to the smart "Genetic backtesting":

Optimization Details				
Method:	Genetic	Number of tests: app	roximately 8,000	
Generations:	400	Mutation rate:	0.1	
Population size:	100	Crossover rate:	0.9	Suggest

You can either enter the genetic parameters shown above – or click on the SUGGEST button, to have TradeStation provide some reasonable genetic parameter.

Trend Indicators

The "Universal Trend Detection (UNITRDES)" offers also several indicators,

so that beside the bar coloring you can see also more exactly the trend changes.

Let's open the "USO Oil Daily Sample1"

Click on Start/Programs and "Universal Trend Detection (UNITRDES)" then select the ""USO Oil Daily Sample1"

Programs Documents Documents Settings Search Help and Support Run Shut Down	Universal Trend Det	ection System (UNITRD	ES)	ES_Future_5Min_ FOREX_EURO_Ir FOREX_EURO_Ir Install_Logic_into License_Manager SP500_Index_Da Trend_Manual USO_0il_Daily_5 USO_0il_Daily_5	Intraday_Sample htraday_Sample o_Tradestation hily_Sample ample1 ample2
Start	1		*	XLF ETF 15Min	Intraday Sample
The USO Oil chart will ope	n with the additional in	ndicator track at the	e bottom:		
2008					
					80.00
- 1					-70.00
					-60.00
		100			-50.00
			2009		
			711		40.00
			· V More	wht www	
UTC_Trend (40,1,2,80,100,3,1,Green,	,Yellow,Red) 0.50 0.00				
					2
				and a surger of	
					-2
					-4
'08 Apr	Jul	Oct	'09	Apr	Jul

By default UT_Trend with the trend strength/grade, oscillating between +5(strong up) 0=neutral and -5(strong down). You can see the neutral(yellow) zones and the extreme -5 zone on Oct 2008.

Now we switch to show instead the age of the trend - right click on the indicator bars and select Format UTD_Trend:



Which will show you the age of the trend - which is used in the automated strategy to avoid a tiny countermove to exit:



Trend Indicator Styles

The following Indicator styles (UTStyle) are available:

Value	Description
1	Show the trend grades (between -5, 0 and +5)
2	Show the unclipped trend grades
3	Show the trend age in number of bars
4	Show the basic trend direction -1=down, 0=neutral, +1=up

Requirements

The "Universal Trend Detection (UNITRDES)" is compatible with TradeStation version 8.3 and above. Since it is an add-on to tradestation, its (minimum) requirements are identical to TradeStation's requirements: Processor: Single-core Intel[®] or AMD[®] processor at 1.5 GHz or faster, Memory (RAM): 2 GB, Hard Drive: 300 MB free space 5400 RPM drive, Video Card(s): 16-bit graphics support 64 MB for a single monitor, Screen Resolution 1024x768 pixels, Operating Systems: Windows[®] XP, Windows Vista[®] Internet Connection: Broadband Connection 1.5 Mbps or better

Uninstalling UNITRDES

Close Tradestation, so UNITRDES are not "occupied". Then go to Start/Settings/Control Panel/Programs and Features. Then scroll down to "Universal Trend Detection System (UNITRDES)" Right click and select "Uninstall" After a few seconds the "Universal Trend Detection System (UNITRDES)" will be unistalled.

Viewing internal Values – Commentary Box

You can easily view all the internal values for any bar in your chart using the commentary feature: Click on View/Analysis Commentary in Tradestation – then click on the bar you want to view. Example: In the "USO Sample1" click on the 10/17/2008 bar and you should see the details for that bar: Grade=-4(-4.90) Dir=-1 TrendAge=15

USO Daily [ARCX] United States Oil Fund LP-10/17/2008

<u>Strategy (Strategy):</u> Bar#587 Close=59.37000 High=61.10000 Low=57.66000 Pos=-1 PosAge=58 Left=100 Entry=99.80000 ExitAge=61 Grade=-4(-4.90) Dir=-1 TrendAge=15 Scope=40 Smooth=1 Recent=2.0 Step=80 CloseFac=100 1.3a <u>UT Trend (Indicator):</u> Grade=-4(-4.90) Dir=-1 TrendAge=15 Scope=40 Smooth=1 Recent=2.0 Step=80 CloseFac=100 1.3a

Registration & Licensing

The "Universal Trend Detection (UNITRDES)" license is attached to each unique Tradestation customer ID. You can use the SAME UNITRDES license on several machines, if you use the same Tradestation login/CustomerID. Each different Tradestation customer ID requires a new license.

To see your current license status:

Click on Start/Programs/Universal Trend Detection(UNITRDES)/License Manager:



The current license status is shown at the top of the License Manager:

Universal Trend Detection !	5ystem (UNITRDES	i) Registration	×
Acct=-19, DEMO: 14 Days left Universal Trend Detection Sys	until 8/12/2009 stem (UNITRDES)		Exit
Registration Step1: Enter yo	ur Tradestation Custor	ner ID	1
123456	Open Trade: Under "Licer	station, Click on Help and About Trac need to:'' you will find your Customer	destation, ID Number
 Registration Step2: Submit y Click here to orde http://www.ProfSoftware.c 	our online Order r online at: om/tsadd/order.htm	Always submit your Customer ID w Allow up to 2 business days to rec	vith your order! eive your key!
Registration Step3: Enter yo	ur Registration Key Paste the rey with Ctrl+V a copy the key	gistration you received via email from fter you highlight and y from the email text with Ctrl+C	us here
Incomplete Key			
		Version 1.8c (S7567,V0,B=1,0)

While the trial is running it shows: DEMO: XX Days left until MM/DD/YYYY. When the trial has expired it shows: DEMO: -N Days left until MM/DD/YYYY.

After you have successfully placed your order you will receive a registration key - enter it at the bottom:

iversal Trend Detection	System (UNITRDES) Registration	
Acct=-19, DEMO: 14 Days le Jniversal Trend Detection Sy	ft until 8/12/2009 stem (UNITRDES)	Exit
Registration Step1: Enter yo	our Tradestation Customer ID	
123456	Open Tradestation, Click on H Under "Licenced to:" you will	felp and About Tradestation, find your Customer ID Number
Registration Step2: Submit Click here to ord http://www.ProfSoftware.	your online Order er online at: com/tsadd/order.htm Allow up to 2 t	your Customer ID with your order! pusiness days to receive your key!
Registration Step3: Enter y	pur Registration Key Paste the registration you rec with Ctrl+V after you highlight copy the key from the email te	sived via email from us here and xt with Ctrl+C
Assessed ID subsected	copy and noy normal to official to	
Account ID mismatch		

The License Manager will confirm your registration – click on OK:

TSReg	<u>2</u>	×
1	Registration completed for ID 610298	
	OK]

Open the License Manager again - and you will see the new extended expiration date in the status message: DEMO: XX Days left until MM/DD/YYYY.

Make a note of the new expiration date and submit your subscription extension in time, so you have no lapse!

versal Trend Detection	System (UNITRDES)		C <u>A</u> K
legistration Step1: Enter	r your Tradestation Custom	er ID	
123456	Upen Trades Under "Licen	tation, Ulick on Help and About ced to:'' you will find your Custor	radestation, ner ID Number
egistration Step2: Subr	nit your online Order		
Click here to o http://www.ProfSoftwar	order online at: re.com/tsadd/order.htm	Always submit your Customer I Allow up to 2 business days to	D with your order! receive your key!
	r your Registration Key		
Registration Step3: Enter		1. L. P	and the later of
Registration Step3: Enter	Paste the reg	istration you received via email h	om us here
Registration Step3: Enter	Paste the reg with Ctrl+V aft copy the key	istration you received via email h ter you highlight and from the email text with Ctrl+C	om us nere
Registration Step3: Enter	Paste the reg with Ctrl+V aft copy the key	istration you received via email h ter you highlight and from the email text with Ctrl+C	om us nere

EasyLanguage Code

The code to program the "Universal Trend Detection (UNITRDES)" in TradeStation is available and can easily modified to fit your needs. All UNITRDES modules always call the core calculation module (PSS_UTC.DLL) With it's proprietary statistical trend detection logic.

PaintBar Study (UT_Bars)

Below is the code for the PaintBar Study (UT Bars): Inputs: UTScope(50). UTSmooth(1). UTRecent(2), UTStep(40). UTCloseFac(100). UTColorMax(3), BarWidth(2), ColorUp(Green), ColorNeutral(Yellow), ColorDown(Red): Var: txtID(Symbol + "_BARS"), ret(0); double arrVal[100](0); Array: DefineDLLFunc: "PSS_UTC.DLL", float, "PSS_UTC", LPSTR, LPDOUBLE, LPSTR; arrVal[0] = Date data1: arrVal[1] = Time data1; arrVal[2] = Open data1; arrVal[3] = High data1; arrVal[4] = Low data1; arrVal[5] = Close data1; arrVal[6] = Ticks data1; arrVal[7] = BarNumber data1; arrVal[8] = BarInterval data1; arrVal[9] = BarType data1; arrVal[10] = CustomerID; arrVal[11] = UTScope; arrVal[12] = UTSmooth; arrVal[14] = UTRecent; arrVal[15] = UTStep; arrVal[16] = GetBackgroundColor; arrVal[17] = ColorUp; arrVal[18] = ColorNeutral; arrVal[19] = ColorDown; arrVal[20] = UTCloseFac; arrVal[21] = UTColorMax; ret = PSS UTC(txtID,&arrVal[0],txtDiag); IF ret > 0 THEN PlotPaintBar(High,Low,Open,Close,"Trend",arrVal[58],Default,BarWidth); IF ret < -100 THEN RaiseRunTimeError(txtDiag):

After the input and variable section the array with the current values is filled (arrVal[]).

Then the UNITRDES calculation module is called "*ret = PSS_UTC(txtID,&arrVal[0],txtDiag);*" and the result is processed – in this case a simple "*PlotPaintBar()*" call with the calculated color in arrVal[58].

The UNITRDES "ret" is always positive (the bar number) unless an error occurs.

Automated Trading Strategy (UT_TRD)

The strategy has essential the same code – just the following section is added for the actual strategy:

```
nGrade = arrVal[57];
nTrendAge = arrVal[60];
IF ret > 0 THEN BEGIN
      IF nGrade >= Pos(EntryGrade) AND nGrade[1] < Pos(EntryGrade) then BEGIN
            Buy("LE") next bar Market:
      END:
      IF nGrade <= Neg(EntryGrade) AND nGrade[1] >= Neg(EntryGrade) then BEGIN
            SellShort("SE") next bar Market;
      END;
end;
IF MarketPosition > 0 AND nGrade <= -1 AND nTrendAge > ExitAge THEN
      Sell("LX") Next bar Market;
IF MarketPosition < 0 AND nGrade >= 1 AND nTrendAge > ExitAge THEN
      BuyToCover("SX") Next bar Market;
IF ExitDayEnd > 0 THEN
      SetExitOnClose:
                                            // exit at end of day/session
SetStopPosition:
IF TargetAmount > 0 THEN
      SetProfitTarget(TargetAmount);
                               // target/gain reached
IF StopAmount > 0 then
      SetStopLoss(StopAmount);
                                      // fixed stop out protection
IF TrailAmount > 0 THEN
      SetDollarTrailing(TrailAmount);
                               // trailing stop
```

As you can see the logic checks if the "EntryGrade" has been reached/crossed, Then enters long or short a new position at the open of the next bar as a market order. If the trend has reversed for at least the "ExitAge" number of bars the logic will exit. If specified the strategy will also exit when the target, stop, trailing or end of day condition is hit.

Trend Indicators (UT_Trend)

The indicator has essential the same code – just the following section is added to display the various indicator styles:

```
IF ret > 0 THEN BEGIN
       nColor = ColorNeutral;
       IF arrVal[61] < 0 THEN
               nColor = ColorDown;
       IF arrVal[61] > 0 THEN
               nColor = ColorUp;
       IF UTStyle = 1 THEN BEGIN
                                       // Show clipped Trend Grades -5 to +5
               IF arrVal[57] = 0 AND arrVal[59] >= 0 THEN
                       arrVal[57] = 0.5;
               IF arrVal[57] = 0 AND arrVal[59] < 0 THEN
                       arrVal[57] = -0.5;
               Plot1(arrVal[57],"Trend",nColor);
               Plot2(0,"Zero");
       END;
       IF UTStyle = 2 THEN BEGIN
                                      // Show unclipped Trend Strength
               Plot1(arrVal[59],"Trend",nColor);
               Plot2(0,"Zero");
               Plot3(5,"TrendMax",ColorUp);
               Plot4(-5,"TrendMax",ColorDown);
       END;
       IF UTStyle = 3 THEN BEGIN
                                       // Show Trend Age
               Plot1(arrVal[60],"Trend",nColor);
               Plot2(0,"Zero");
       END;
       IF UTStyle = 4 THEN BEGIN
                                       // Show Direction
               Plot1(arrVal[61],"Trend",nColor);
               Plot2(0,"Zero");
       END;
END;
```

Other Professional Software Solutions (PSS) Products

"Professional Software Solutions (PSS)" has developed over the last 10 years several powerful software. Each software comes with a free trial, so you can always test the software on your computer before you place your order.

Diamond Backtesting and Walk-Forward-Backtesting Manager (BTWFMgr)

http://www.profsoftware.com/bt - BTWFMgr offers the following major functions:

• Fully automated advanced Walk Forward Algorithm (click for details),

providing you with realistic backtesting results, instead of the usual curve fitting unrealistic results saving you hours and days of hard manual labor, displays results ar 3D View or spreadsheet Matrix.

- <u>Advanced visual Strategy Input Parameter Analysis</u> providing you with a detailed visual analysis of the effect of EACH strategy input parameter variations on the overall result
- <u>3D + 2D visual Strategy Input Parameter Analysis</u> providing you with a 3D visual analysis of the effect of two strategy input parameters variations on the overall result



- Powerful & innovative Trading Strategy Potential Analysis and Optimization allows you to detect the maximum trading opportunities and parameter optimums - using ONLY ENTRY POINTS
 - before you develop the exit logic in your strategy.
- <u>New Trading Probability Map</u> allows you to detect the maximum probability areas - using 3 profit levels and ONLY ENTRY POINTS
- <u>Identify the best Weekdays and Intraday entry times</u> allows you detect the best (and worst) intraday entry times and weekdays for long, short and overall performance
- <u>Strategy Position Exit Algorithm Optimization (using advanced integrated Position Exit</u> <u>Manager)</u>

providing you with the best Position Exit Definition - an advanced algorithm combining several position exit function like:

exponential/linear Target, StopOut, Trailing, breakeven etc.

All operating at a lightning speed of around 100,000 tests per second (which would take TradeStation days)

- <u>Time and Weekday Analysis</u> track which weekdays and intraday times are the best for long/short or overall trading
- <u>Trading Frequency Analysis</u> track how many trades occur on a monthly, weekly, daily or based on any of the parameters
- <u>Visual Multi Timeframe/Symbol Analysis Result Overview Module</u> Detect the best performance from your symbol/timeframes backtest's sorted by Probability%, Yearly, PerTrdAvg or PeakAvg\$
- <u>Visual Profit/Loss Distribution Analysis</u> showing average, best and worst positions profit/loss
- <u>Visual Permutation Results Distribution Analysis</u> showing how equity, drawdown, probability etc is distruibuted across all trading permutations, detecting outliers easily.
- <u>Detect the lowest Volatility</u> Find least nerve-wraking performance but with similar ending equity runs, usingthe integrated volatility analysis and smart ranking.
- Export the results to a Microsoft Access Database (MDB) allowing you any advanced SQL queries and reports - to detect the best results - <u>click here for an</u> <u>MDB example</u>
- <u>Correlate Context Values with best Potential</u> You can add any variable in Potential Mode to the backtesting, so you can detect any correlation between context variable range(s) and favorable potential results.
- Instant Position Viewing + Excursions
 View the actual charts of each Position Entry, Exit and Risk/Reward excursion instantly
- <u>Advanced Strategy Performance Ranking</u> providing you with the a customizable powerful hybrid of Strategy result elements: 4x Equity AND 2xDownDraw AND 2xProfitFactor etc
- <u>Advanced Strategy Context Variables Analysis</u> detects potential connections between best results and certain value ranges of any variable
- Instant Position Viewing
 provides you with a mouse click with the actual charts of each Position Entry, Exit and
 Risk/Reward excursion instantly,
 so you can evaluate also visually all entries and their performance instead of using the
 - so you can evaluate also visually all entries and their performance instead of using the cumbersome scrolling in the charts
- You can merge results from different markets/symbols into one new comprehensive result/graph
- Even **Optimize the your Walk Forward Filter and Sort Parameter**, selecting the best result for the out-of-sample test
- Accumulate automatically all the Walk Forward out of sample results into one comprehensive continuous result spreadsheet
- **Export any result** to the <u>advanced Performance Analyzer</u> for in depth analysis by TimeOfDay, Weekday etc.
- <u>Automated modification of your EasyLanguage Strategy Code</u>, so you don't have to be familiar with EasyLanguge
- Export permutation statistics to a spreadsheet, for your custom analysis and sorting <u>click here</u> <u>Statistic example</u>
- Multi Symbol/Basket testing with the new <u>Backtesting Sequence Manager (BTSeqMgr</u>) module
- BTWFMgr can also handle partial exits for more details see here

Backtesting Sequence and Automation Manager

http://www.profsoftware.com/tsadd/btseq

- Save hours by running automatically a customizable series of backtests with BTSegMgr for any list of symbols and timeframes (overnight or over a weekend) in TradeStation® Example: Test your startegy on SP100 symbols for Daily and 30 minute charts
- BTSeqMgr saves automatically the workspace, spreadsheet and archive file for each symbol+time frame (with the **Diamond Backtesting Module** you can even save ALL optimization details and optimize your strategy)
- **Convenient Progress Monitor** shows you the current optimization progress and status at any time:

Definition:	RSISample1		Show Definition New License Mgr 3
Symbol:	MSFT	(1 of 4)	
Timeframe:	Intra/30	(2 of 6)	
Optimization:	OptSet/624	00:02:58	
Sequence: (2	? of 24) 00:07:21		Current Strategy Parameter
RSISample1	ntimization to com	plete (00:02:58) (14	 RSILength[630:2] OverSold[3050:4] OverBought[5080:4]

- Shows you the current symbol (MSFT the first of 4)

- (click the button and see the list of pending symbols)
- Shows you the current timeframe (Intraday 30 Minute charts, 2 of 6 frames) (click the button and see the list of pending timeframes)
- Shows you the current Optimization Parameter Set (OptSet with 624 permutations) (click the button and see the list of all startegy parameters - as shown here)
- Shows overall sequence state (2 of 24 = 4 symbols x 6 timeframes)
- Shows time the current Optimization is running (00:02:58)
- Shows the overall running time: 7 minutes 21 seconds (00:07:21)
- Customize any of the details of the backtesting sequence using the inbuilt script editor interface which allows you also MULTI DATA STREAM CHARTS (just check Multiple Datastreams)

Backtesting Sequence:	DJ30	X
Symbols:	Timeframes:	Strategy Parameter:
List:DJ30	Dailyl2 Years Intra/60 6 Months	1/RSILength 6 30 2 2/OverSold 30 50 4 3/OverBought 50 80 4 5/LossAmt 300 6/GainAmt 300 8/BTWFExport 0
Add <u>View</u> <u>D</u> elete	Add Edit Delete	Add <u>E</u> dit Delete
Add Symbol List	Add Frame List	Add Parameter from Startegy
Save Symbol List	Save Frame List	End Date: 2/1/2008
C:\Program Files\Backto (BTSeqMgr)\RSISample	Workspace: RSISamp esting Automation Sequenc stsw Itiple Datastreams Show	e Manager Browse

or edit the script directly using the advanced definition language - here is an example

 <u>Smart Abort Manager</u> allows you to easily abort of the optimization (to free up your computer); but keeping track, were you stopped, so you can restart at the step you left off:



- Can optimize tick charts based on daily volume you just specify tick bars per day
- The easy interface helps you define all backtesting sequence details
- Detailed log file of each sequence

Trading Performance Analyzer

http://www.profsoftware.com/tsadd/perfana

The "Trading Performance Analyzer" module assists you in

analyzing in depth your trading performance of:

- Your actual trading records (Instructions how to import from TradeStation)
- Strategy backtesting results (Instructions how to import your strategy backtesting results).
- Manually add/modify/delete your positions (Instructions how use the Position Manager)
- Custom Trading Records import (Instructions how to import from custom Trading Records)
- Click here for an Equity Screen Sample and Performance Comparison Screen Sample



Other Indicators and Products

Pivot Pattern Recognition Engine http://www.profsoftware.com/tsadd/prod.htm#PPRE

Advanced ZigZag Line Indicator http://www.profsoftware.com/tsadd/prod.htm#ZZ

Buy/Sell Pressure Indicator http://www.profsoftware.com/tsadd/prod.htm#BSP

Rapid Response Smooth Average http://www.profsoftware.com/tsadd/prod.htm#RareAvg

Trend Reversal and Strength Indicator http://www.profsoftware.com/tsadd/prod.htm#TrendRev

Robust Regression System http://www.profsoftware.com/tsadd/prod.htm#RRS

Advanced Normalized Momentum Indicator http://www.profsoftware.com/tsadd/prod.htm#Mom

Identify best Trading Opportunities-TradingGems http://www.profsoftware.com/tsadd/prod.htm#FindGem

Bar Countdown Utility http://www.profsoftware.com/tsadd/prod.htm#Countdown

Export any Tradestation Data to your Spreadsheet http://www.profsoftware.com/tsadd/prod.htm#Export

TradeStation Consulting and Products http://www.profsoftware.com/tsadd

Powerfull set of UNIX and other utilities http://www.profsoftware.com/unixdos

Database and XML Toolkit <u>http://www.profsoftware.com/dbtkxml</u>

Internet Connection Monitor http://www.profsoftware.com/intcomon

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