CONTENTS

About this guide	01	Running your strategy	05
Creating your strategy	02	Managing your strategy	06
Testing your strategy	04		

ABOUT THIS GUIDE

This quick guide provides a brief overview of ProOrder and shows you how to create an automated trading strategy. We strongly recommend that you also read the ProOrder programming guide (provided by IT Finance) before activating any automated strategies on your account.

WHAT IS PROORDER?

ProOrder is an automated trading solution and a feature of the ProRealTime charting package.

With ProOrder you can:

- Create, test and modify your own trading strategies
- Activate those strategies to place real trades on your account
- Import and export strategies created by you and other users

Your strategies can include instructions to take positions based on specific technical indicators, programmed logic, risk management triggers and/or your latest orders and open positions.

WHAT ARE THE BENEFITS?

- Build strategies with ease using the assisted creation tool, or program them from scratch
- Thoroughly test and review your strategies before implementing them
- Your strategies will continue to execute trades even when your computer is turned off

HOW DO I GET IT?

ProOrder is a feature of ProRealTime, so you must first activate ProRealTime on your account:

- 1. Log in to your IG account
- 2. Go to My Account > Settings > Preferences
- 3. Scroll down and activate ProRealTime
- 4. Once ProRealTime is enabled, you can activate ProOrder from the same section
- 5. Close My Account, then click on the Tools tab
- 6. Select ProRealTime to launch the application

HOW MUCH DOES IT COST?

ProOrder is free as part of ProRealTime.

We charge ± 30 per calendar month for using ProRealTime, but we will rebate this in full if you make four or more transactions with us during that month.

CREATING YOUR STRATEGY

There are two ways to build an automated trading strategy with ProOrder:

- Using the assisted creation tool
- Coding your strategy from scratch

This guide will focus on the assisted creation tool which generates code automatically based on parameters you define. For information on coding your strategy from scratch, please refer to the ProOrder programming guide (provided by IT Finance).

HOW TO USE THE ASSISTED CREATION TOOL

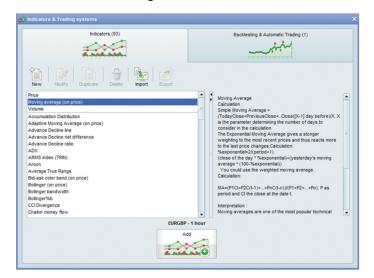
 In the ProRealTime platform, select your chosen market from the Lists window. Then click 2010 to open a chart.

	Forex	•	Set list	4	
ا مترکز	Name	I Last I	%Chg I Volu	me I Bid I	Ask
AUDCA		0.96133	+0.73%	0.96103	0.96163
🔀 AUDCH	F	0.85785	+1.12%	0.85755	0.85815
🔀 AUDEU		0.69499	+1.05%	0.69479	0.69519
🔁 AUDGE		0.58674	+0.80%	0.58654	0.58694
🔁 AUDJP		91.204	+1.02%	91.181	91.226
🔁 AUDNZ		1.16082	+0.03%	1.16042	1.16122
🔁 AUDSG		1.16767	+0.87%	1.16712	1.16822
🔁 AUDUS		0.91637	+1.17%	0.91629	0.91644
🔀 CADCH		0.89238	+0.39%	0.89203	0.89273
🔁 CADJP	Y	94.870	+0.29%	94.850	94.890
🔀 CHFJP	1	106.314	-0.11%	106.299	106.329
🔀 EURAU	D	1.43889	-1.04%	1.43854	1.43924
🔀 EURCA		1.38324	-0.32%	1.38289	1.38359
🔀 EURCH		1.23430	+0.07%	1.23415	1.23445
🔀 EURCZ	к	25.7617	-0.18%	25.7367	25.7867
🔀 EURDK	к	7.45795	-0.02%	7.45695	7.45895
📨 EURGB	P	0.84429	-0.24%	0.84419	0.84439
🔀 EURHU	F	301.400	-0.41%	301.250	301.550
🔀 EURJP)	1	131.230	-0.03%	131.221	131.238
🔀 EURMX	N	17.57300	-0.35%	17.55810	17.58810
🔀 EURNO	к	8.00232	+0.07%	8.00032	8.00432
7 EURNZ	D	1.67029	-1.01%	1.66959	1.67099
🔀 EURPLI	N	4.26097	-0.29%	4.25922	4.26272
🔀 EURSEI	ĸ	8.71621	-0.08%	8.71421	8.71821
7 EURSG	D	1.68011	-0.18%	1.67956	1.68066
🔁 EURUS	D	1.31855	+0.12%	1.31847	1.31862
🔁 EURZA	R	13.46800	-0.99%	13.46050	13.47550
🔀 GBPAU	D	1.70432	-0.80%	1.70392	1.70472
🔀 GBPCA	D	1.63841	-0.08%	1.63786	1.63896
🔀 GBPCH	F	1.46202	+0.31%	1.46182	1.46222
🔀 GBPCZ	к	30.5116	+0.06%	30.4866	30.5366
GBPDK	к	8.83361	+0.22%	8.83061	8.83661

2. Choose the timeframe you want to work to:



3. To add technical indicators to support your strategy, click the button in the chart window and select your chosen indicator from the **Indicators** tab. You can edit specific variables for each indicator from the **Settings** window.



4. Once you've set up your chart, click the *button again*. Then select the **Backtesting & Automated Trading** tab.



HOW TO USE THE ASSISTED CREATION TOOL (CONTINUED)

5. To create a new strategy, select **New**. The Trading System Creation box will then open:



- 6. Give your strategy a name, and ensure the Assisted Creation tab is selected.
- 7. Under the Assisted Creation tab you can specify the parameters of your strategy, based on triggers for the following strategy 'legs':

Long positions:

- Buy
- Sell to close

Short positions:

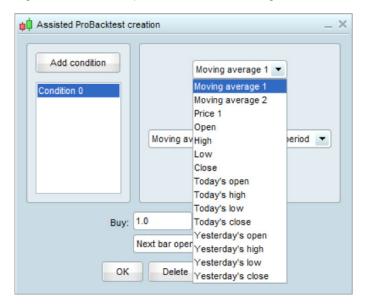
- Short
- Buy to close

Stops & Limits

8. Choose which leg you want to create a trigger for, then click the relevant button. The Assisted ProBacktest Creation window will appear:

Add condition	Click on the specific section of the chart window of your choice to set your condition on the price or an indicator displayed in that section.
Buy: 1.0 Next b	Contracts var open Delete Cancel

- 9. Choose **Add Condition** in the Assisted ProBacktest Creation window. Then click the relevant indicator on your chart.
- 10. Using the drop down menus on the Assisted ProBacktest Creation window, specify the trigger conditions for the selected leg. You can add multiple conditions for each leg.



You can also add more technical indicators at any point, by clicking the interval button in the chart window.

11. Once you have finished creating conditions for all relevant strategy legs, select Generate Code from the Trading System Creation window. You will then be able to view the code for your strategy.

Trading system name EURGBP Simple		
2 BLANDOT 2 CONTRACT AT RANKI 2 DATA OF A CONTRACT AT RANKI 3 DATA OF A CONTRACT AT RANKI 3 DATACASE A CONTRACT AT CONTRACT 3 DATACASE A CONTRACT AT CONTRACT AT CONTRACT AT CONTRACT AT CONTRACT 3 DATACASE A CONTRACT AT CON	Margin: 1 9 Margin: 1 9 Spread: 200 pt Risk management Max position size: Variable optimization	
ading system description au can enter a description of this brading system here accordings is eviter and capositions according and immediates a work beat with according and immediates and according	Ending date : Real-time	te displayed 2013 11:30 (2013) date 2013 11:30 (2013) w open

TESTING YOUR STRATEGY

After you've generated the code for your strategy, you can test it against historical data and theoretical values via the ProBacktest tab in the Trading System Creation window.

YOU CAN DEFINE:

- The initial capital you wish to invest
- The spread or commission charged
- The margin rate
- Any risk management details (eg maximum position or transaction size)
- The start and end date for the test (this will be affected by the chart timeframe, eg tick charts will not extend as far back in time as one-hour charts)

There is also a Variable Optimization function, which enables the system to repeatedly run a backtest with a range of different settings on a particular indicator. You can then establish which settings perform best.

ProBackte	st	Automatic Trading
Piper in the second sec	÷	for in
	EURGBP	- 1 hour
Initial	capital :	10000 £
Brokerage par	ameters	
Order fee :	0	£ / order
Min:	0	£ / order 🛫
Max:	0	£ / order
Margin:	1	%
Spread:	2	pips
Risk managem	ent	
Max position	size: 1	contracts 💌
Variable optim	ization	
		Add
		Modify
		Delete
Planting data :	0.5.5	
starting date :		st date displayed
Carling data :		
Ending date :	Real-t	04 2013 11:30
	O Seb	04 2013 11:30
	-	
	Keep wi	indow open
P	roBacktest	t my system

Once you've defined the test parameters, click **ProBacktest my system** to produce a detailed report on how the strategy performed over the specified time, complete with an Equity Curve, Orders List and Positions Histogram.

EURGBP	MyS 1	ystem 🍃			0 12 2013 00:00:0 0 04 2013 11:00:0		
Statistics of closed positions	Orders list	Closed positions	s list				
	1	All po	sitions	Long	positions	Shor	t position:
Gain:			0 GBP		-0 GBP		0 GB
% Gain:			0%		-0%		09
Gross profit:			0.01		0.01		
Gross loss:			-0.01		-0.01		
Profit/Loss ratio:	_			_	_		_
		1.05		0.83		1.72	
Nbr positions:			4		2		
% of winning positions:			50%		50%		509
Winning / Even / Losing:	_	_		_		_	
	2	0	2 1	0	1 1	0	1
Avg gain:			0		-0		
Avg gain of winning positions:			0		0.01		
Avg loss of losing positions:			-0		-0.01		-
Profit best position:			0.01		0.01		
Loss worst position:			-0.01		-0.01		-
Standard deviation on P&L :			0		0.01		
Max Drawdown:			0.02		0.01		0.0
% Max Drawdown:			0%		0%		09
Max consecutive losses:			1		1		
Max Runup:			0.04		0.02		0.0
% Max Runup:			0%		0%		09
Max consecutive wins:			1		1		
Avg orders exec/day:			0.44		0.44		0.4
Avg orders exec/month			n/a		n/a		n/
% Max risk exposure:			0.02%		0.02%		0.029
% Avg risk exposure:			0.02%		0.02%		0.029
Brokerage fees:			0		0		
% of time in the market:			75.06%		34.44%		40.629
Avg time in the market:			79 bars		72.5 bars		85.5 bar
Avg time between positions:			21 bars		92 bars		83.33 bar
Avg time in winning positions:		13	4.5 bars		111 bars		158 bar
Avg time in losing positions:		2	3.5 bars		34 bars		13 bar
Avg time on even trades:			n/a		n/a		n/



If you want to modify your strategy, select the **Spanner** icon \swarrow . This will take you back to the set-up screen.

RUNNING YOUR STRATEGY

Before you can run your strategy, you first need to prepare it for automated trading:

- 1. Click the button on the chart of your choice and select the **Backtesting & Automatic Trading** tab.
- 2. Choose your strategy, then click the **Prepare for Automatic Trading** button to launch the ProOrder Autotrading window:

pp ProOrder AutoTrading	_ 🗆 ×
Account : 80ED9907C8024B0C -	
Use this window to configure your automatic trading systems. Click on the wrench button on the right to set your automatic trading preferences.	t EN Q
Running	
You have no running trading systems. To start a system, first add it to the "not running" sec "Start" button.	tion below, then click the
To add a new system to the "Not running" section below: - Open a chart of a tradeable instrument and select the time frame of your choice - Click this button on the chart: - Choose the "Backtesting & Automatic Trading" tab - Pick a system and push the button "Prepare for automatic trading"	
Not Running	
Image: Status Status Not running Image: Status St	Position: - Latent Gain: - Gain: 0.00 €
Total running: - 🤬	Portfolio value: -
4 Connected	Learn more

Here you can see a summary of all of the different strategies you have prepared for trading, including which ones are currently running and which are not.

- 3. Click the Spanner icon is to open the Trading Preferences window, where you can:
 - Set the maximum number of trades that can be triggered in a 24 hour period
 - Place a time limit (in days) for the strategy duration
 - Determine the number of retries to perform if an order is rejected
 - Choose to keep positions open or close them automatically once a strategy ends

Trading preferences Manual trading Automatic trading Order rejection If an order is rejected. The of retries: The offer of the offer	Automatic stop of trading systems Prohivest may stop any trading system as soon as the sum of pending orders' of this system since market open (0:00 GMT for the forex market) on the other hand is greater than or equal to: 50 c) orders "Pending orders are orders that have been sent to the broker and not executed, rejected, or canceled. All automatic trading systems have a common validity date. If you do not click the "Extend" button before this date. Prolivest may automatically stop them. The number of days of each extension is: 2 c) days from the date of the click on the extension button.
Closed (default) Remain open	
Conditions of execution Click here to view the conditions of executon of your automatic tra Note: All parameters in this section apply only to automatic trading. OK	ding systems.

4. Find the version of the strategy you want to activate, and when you're ready, select **Run**. A confirmation window will appear where you can check your strategy's code one last time and review the risk warning.

	Account : 8DED9907C8024B0C	
	going to execute the automatic trading system below. e system has started, you can stop it at anytime from the "ProOrder" window. This trading system will automatically execute orders even if your workstation is turned off	
4	(server-side execution).	
utoma	tic trading system details	
	EURGBP - 1 hour - ERUGBP Simple Version: 04-Sep-2013 11:49:36	
Code:		
	//	1
	//	
	// Definition of code parameters	
	DEFPARAM CumulateOrders = False // Cumulating positions deactivated	
6		
	// Conditions to enter long positions	
	indicator1 = Average[20](close)	
9	indicator2 = Average[75](close)	•

5. If you're happy, click the **Execute trading system** button to run your strategy.

Please note that all running trading systems have a validity date. If you do not click **Extend** before this date, ProOrder will automatically stop the strategy.

this window to configure your a s on the wrench button on the rig				£
		Running		
EURGBP - 1	hour		Position:	
ERUGBP Simpl	e	Version: 04-Sep-2013 11	Latent Gain:	
Max position size: 2 lot	ts	Status: Running	Gain:	
		Not Running		
them for automatic trading. To a - Open a chart of a tradeable in	dd a new system to strument and selec	section of ProOrder. You can add o this section:	systems to this section to	prepare
them for automatic trading. To a	dd a new system ti strument and selec	section of ProOrder. You can add o this section: t the timeframe of your choice	systems to this section to	prepare

MANAGING YOUR STRATEGIES

To manage all the strategies you have prepared for trading, open the ProOrder AutoTrading window by going to **Trading** > **ProOrder AutoTrading** from the top menu bar.

Here you can:

- Stop individual strategies by using the relevant **Stop** button
- Stop all strategies with the **Stop All** button
- Activate a strategy by selecting the relevant **Start** button
- Check the code of a strategy by clicking the **Version** date

You can also click the Eta button next to an individual strategy to show its:

- Statistical history
- Orders list
- Closed positions list
- Positions histogram
- Equity curve

WAYS YOUR STRATEGY CAN STOP

Stopping a strategy manually from the ProOrder AutoTrading screen isn't the only way it can stop. Your strategy can also be stopped automatically in certain circumstances:

- If you have a strategy running, and you close one of the positions opened by that strategy
- If we close out one of your strategy positions because of insufficient funds on your account to cover margin for existing positions
- If your strategy attempts to place a trade, but the trade is rejected due to insufficient funds for that trade
- If your strategy attempts to place a trade, and that trade is repeatedly rejected more than the number of times specified in the **Trading Preferences** window

When a strategy is stopped automatically, any positions that have been placed by that strategy will either stay open or be closed depending on the settings you've chosen in the **Trading Preferences** window. Once a strategy is stopped, it will no longer place any new trades.

AUTOMATED TRADING CONSIDERATIONS

You should consider the following before running automated trading strategies on your account.

CODE QUALITY

The time required to calculate trading indicators and execute orders depends on the complexity of the indicators used and the way they are called by the program. Excessive use of programming loops can severely decrease performance.

MONEY MANAGEMENT

Backtest results will be heavily influenced by different money management strategies, particularly as calculation of profit/loss is based on the transaction costs involved in trading.

COMBINING MANUAL AND AUTOMATED TRADING

You can place manual trades on markets where you have an automatic strategy running and vice versa. Manual trades made on the same market via IG's other platforms may inadvertently close positions or force open new positions.

MULTIPLE TRADING SYSTEMS ON ONE MARKET

Multiple trading systems running on the same market may result in the creation of new force open positions.

For more information on the factors that can affect automated trading, please consult the ProOrder programming guide (provided by IT Finance).

None of the ideas or examples expressed in this guide should be construed as investment advice. We have provided it solely to help you program automated trading systems and test your own ideas. IG provides an execution-only service and does not provide investment advice of any kind.