



Excel Plug-In (for Pro-Mark) 1.6

User Guide

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Overview of Excel-Based Trading

Patsystems provides software enabling you to use a customised Excel spreadsheet as your trading screen for Pro-Mark. Using this special spreadsheet, you can submit orders to Pro-Mark, and view prices, positions and order statuses.

Any order updates in Excel are reflected in Pro-Mark, but not the other way round.

Setting Up Trading via Excel

The following sections explain how to set up Pro-Mark trading via Excel.

Hardware Requirements

The hardware must meet or exceed the specification required for Pro-Mark.

Microsoft Requirements

Before installing Pro-Mark Excel Plug-in, you must have installed:


- Microsoft Vista with SP1, or XP with SP3.
- .NET Framework 2.0 with SP1.
- Microsoft Office 2003 with SP3.

Excel versions other than 2003 (including 2007) are not supported.

- NET Programmability Support enabled.

If you do a full install of Microsoft Office 2003 with SP3 you will have this anyway. To check/install it later, follow the steps below.

To enable .NET Programmability Support:

- 1 Ensure you have a Microsoft Office CD or installation path.
- 2 Select  Control Panel > Add or Remove Programs > Microsoft Office 2003.
- 3 Click **Change**.
- 4 In the Setup Wizard, select ☒ Add or Remove Features.
- 5 Tick Excel and Choose advanced customization of applications. (It doesn't matter whether or not the other checkboxes are ticked.)
- 6 Click **Next**.
- 7 Expand Microsoft Office Excel and select .Net Programmability Support.



- 8 From the dropdown menu, select Run all from my computer.
- 9 Click **Update**.

Installing Pro-Mark Excel Plug-in

- 1 Download the Patsystems software for Pro-Mark Excel Plug-in, from the same webpage you use to download Pro-Mark.
- 2 Extract the files and run the .exe file.
- 3 Follow the instructions in the Setup Wizard.

The software is then installed on your computer. Assuming you accepted the defaults suggested by the Setup Wizard, the folder used is:



C:\Program Files\PATSystems\PATSAutomation

- 4 You should now have an icon on your desktop, like the following:



Connecting Pro-Mark and Excel

Once you have installed Pro-Mark Excel Plug-in:

- 1 In Pro-Mark (which must be version 3.3 or higher), click either  **Settings** or  **Menu** **S**ettings...
- 2 Click Trading Tools > Pro-Mark integration.

A 'Web Server Login' dialog box with three input fields: 'User Name' containing 'PROMARK', 'Port Number' containing '7777', and 'Maximum Order/Sec' containing '1'. There is a 'Change Password' button at the bottom right.

- 3 Fill in the fields, as follows:
 - User Name, Port Number: User name and any valid port number for logging on to the Integration Web Server.
 - Maximum Order/Sec: Maximum number of orders (per second) imported from Excel into Pro-Mark.

While you are testing your spreadsheets, it is wise to set the number to 1. After testing, you can set this to a higher number: particularly important if you are planning to use Bulk Order Input. A realistic maximum is 100 orders per second.

- 4 No initial password is set, so the first time you log on, click **Change Password** and enter a password.

This password is required only for logging onto the Excel side, not Pro-Mark.

- 5 Click **Apply** (save and keep window open), **OK** (save and close window) or **Cancel** (quit without saving changes).
- 6 Notice how the Pro-Mark toolbar button for Integration Web Server now shows that a client is attached (namely you):



clients currently attached



no clients currently attached



webserver isn't running

By clicking this button you can **Stop** and **Start** the webserver. If you change your Maximum Order/Sec setting (see step 3 above) while the webserver is running, you will need to stop and restart the webserver before the change takes effect.

Logging in to Excel

Now that you have installed Pro-Mark Excel Plug-in and created an Excel integration login, you can log in to Excel and set it up for Pro-Mark trading:

- 1 Log on to Pro-Mark, using your normal Pro-Mark login: not the one you created for connecting Pro-Mark and Excel (page 4).

- 2 Click:



PATS Excel

- 3 Assuming that Excel's macro security level is set to "medium" (which it should be) you will set a security warning about macros. Click **Enable Macros**. To change the macro security level in Excel:

- i. Select **T**ools > **M**acro > **S**ecurity...

- ii. Set the security level as either:

Medium (recommended): Excel will ask you whether you want to allow macros.

Low: Excel will open with macros automatically enabled.

- 4 Log in using your Excel Integration login (page 4).

- 5 Notice the icons to the right of the standard Excel toolbar, indicating:

- Connection to the webserver: (connected) or (disconnected)
- Order updates between Excel and Pro-Mark: (enabled) or (disabled)

If you are disconnected:



- Go to Pro-Mark and click **Excel**.
- **Start** the webserver.

- 6 The spreadsheet must not be in edit mode, as this prevents data updates and drag-and-dropping contracts and other information into Excel. So the first time you log in, ensure that **T**ools > **O**ptions, **E**dit tab, **E**dit directly in cell is unticked.

Using Excel for Trading

This chapter explains how to use Patsystems' custom Excel spreadsheet for trading.

Viewing Quotes and Positions

The Quotes and Positions worksheets are similar to Pro-Mark's Live Quotes and Order Book, showing you prices and positions in the contracts you drag-and-drop from Pro-Mark:

- 1 In Excel, select the **Quotes Example** or **Positions Example** worksheet.
- 2 In Pro-Mark, select the contracts whose prices/positions you want to view.
- 3 Drag the contracts into the worksheet's contract column.

Note the following:

- Adding a contract to a row that is already occupied by another contract will replace the old contract.
 - Rows 8-31 have hyphens (-), indicating that they have been pre-populated with the formulae needed for the data feed and calculations. If you want to add more contracts than will fit in these rows, make sure you first copy-and-paste a (-) row to provide any extra rows required.
- 4 (Positions worksheet only) In the Trader Account column, select the relevant trader accounts.

As you add contracts, your worksheet will look similar to the screenshot below:

	A	B	C	D	E	F	G	H
1								
2								
3								
4								
6	contract	Trader Account	netPosition	bought	sold	averagePrice	currency	openPnL
7	Mar07/EURIBOR/LIFFE	DEMO1	15	15	-	97	EUR	- 750.00
8	Jun08/EURIBOR/LIFFE	DEMO1	20	20	-	97	EUR	1,250.00
9	Sep08/EURIBOR/LIFFE	DEMO1	- 35	-	35	97	EUR	875.00
10	Dec08/EURIBOR/LIFFE	DEMO1	- 30	-	30	97	EUR	- 2,625.00
11	Mar09/EURIBOR/LIFFE	DEMO1	- 10	-	10	97	EUR	- 375.00
12	Jun09/EURIBOR/LIFFE	DEMO1	-	-	-	-	-	-
13	Sep09/EURIBOR/LIFFE	DEMO1	-	-	-	-	-	-
14	Dec09/EURIBOR/LIFFE	DEMO1	-	-	-	-	-	-
15	Mar10/EURIBOR/LIFFE	DEMO1	-	-	-	-	-	-

Excel will constantly poll Pro-Mark for new prices / positions information.

Don't change the column names, as Pro-Mark uses these to identify which information to return.

Submitting Orders

The worksheet described in this section has been replaced by the auto entry sheet (page 8), which offers more features, and simplified order submission via FALSE/TRUE values.

To submit orders via Excel:

- 1 Select either the **Order Entry Example** or **Auto Order Entry Example** worksheet.
- 2 Make sure that orders are disabled:



This protects you from accidentally submitting orders while setting them up.

Another safety measure is setting Maximum Order/Sec in Pro-Mark to 1. See Connecting Pro-Mark and Excel (page 4).

- 3 For each order you want to send, fill in the details in a blank row:

Order Enable: Keep this set to FALSE until you've set up the order.

User Reference: Any text you like, so long as it is unique. This provides a unique key for identifying the order between Excel and Pro-Mark, and is in addition to the Pats order ID.

Account: Trader account (case-sensitive, and must match the name in Pro-Mark).

Tradable: Type in the full instrument name (eg Liffe/SHSTIR/MAR09) or drag the instrument from Pro-Mark to supply the name.



Side: B for buy or S for sell.

Lots: Number of lots.

Entry price: Price at which to submit the order.

order type: Order type (case-sensitive, and must match the name in Pro-Mark).

Note: Don't change the column names, as Pro-Mark uses these to identify which information to return.

- 4 Check that Maximum Order/Sec in Pro-Mark is set to a suitably high number. See Connecting Pro-Mark and Excel (page 4).
- 5 Click  to enable orders. The icon changes to .
- 6 To send an order, set Order Enable (first column) to TRUE.

The Order Status columns on the right-hand side of the worksheet gives you the status of submitted orders (working, filled, rejected, etc).

Auto Order Entry Sheet

This sheet enables you to submit and cancel orders simply by using setting individual order rows to TRUE or FALSE. You can also amend an active order by changing the Lot Size or Price from the order row.

The format of this sheet is similar to that of the original Order Entry sheet, but it no longer uses a simple function to enter the order. New order information is placed in the Account, Tradable, Side, Lots, Entry Price and Order Type fields. The Reference and Result fields are reserved for the spreadsheet VBA code; they create and track order reference codes for the RTD functions to follow. The VBA code behind the spreadsheet scans any changes to the order rows and acts upon the changes in the market. For example, the Price cell could be changed from a hard value to a calculated value to vary the order price as the market moves.

Note the following:

Action	Column	Comment
Submit orders	Order Submit	<p>If an order is not in the market, and the Order Submit column changes to TRUE, the spreadsheet code allocates a reference to the order (shown in the Reference column) and submits the order with that reference.</p> <p>Resetting Order Submit to FALSE or any “non-true” value (such as a blank cell) will cancel the order.</p> <p>This means you can:</p> <ul style="list-style-type: none"> Place a formula yielding either TRUE or FALSE, enabling the order to be automatically submitted or pulled based on a market calculation or condition. If “Toggle TRUE/FALSE on click” is set to “y”, the Order Submit value will change from TRUE to FALSE or vice-versa when the cell is clicked on from another cell.
	Reference	<p>The spreadsheet code uses the Reference column to determine whether an order has already been submitted. Therefore:</p> <ul style="list-style-type: none"> An order column where the Reference column is set to TRUE, but where the Reference column is still populated, will not trigger a submission. If the Reference column contents are deleted while the order is still active, the spreadsheet code will repopulate the Reference field with the correct reference.
Amend orders	Lot Size	An order’s lot size can be varied while the order is active in the market. The amendment will be sent to market immediately.
	Price	<p>An order’s price can be varied while the order is active in the market. The amendment will be sent to market immediately.</p> <p>Zero prices and negative prices are permitted, to allow for markets where these types of prices are available for options or spreads.</p>
Cancel orders	Order Submit	If an order is active in the market, and the value in the Order Submit column changes to FALSE, the spreadsheet code removes the reference from the Reference column and cancels the order
	Lot Size	If an active order’s Lot Size is set to zero, or if the Lot Size cell is cleared of a value, the order will be cancelled.

Submitting Bulk Orders

The BOI and BOI (selective) worksheets enable you to submit a high volume of orders at the same time. They match the Bulk Order Input function Patsystems’s J-Trader application.

To submit bulk orders:

- 1 Set your maximum orders per second, as explained in Creating a User Name and Password.
- 2 Select the **BOI** worksheet.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N		
1	Bulk Order Input				Import BOI File		Submit orders as Local Inactive		Submit orders as Remote Inactive		Submit orders as Active		Cancel Orders			
2	Side	lots	order type	price	2nd price	rd Price	exchange	commodity	contract	date	trader account	Good Till Date	Reference field	ne (if applica	Priority	OC
3																

As for the Order Entry worksheet, additional columns exist on the right-hand side for tracking the orders you have already placed.

	R	S	T	U	V	W
		Order Entry: Enabled				
Application	result	orderId	status	workingLots	filledLots	
		0	0	0	0	
		0	0	0	0	
		0	0	0	0	
		0	0	0	0	

- To fill in the orders, either enter their details manually, or click **Import BOI** and select a CSV file to import.
- Submit or cancel your orders using the buttons across the top of the worksheet:
 - Submit orders as Active:** Submit all the orders defined in your BOI worksheet to Pro-Mark as “active” (they can be submitted to the exchange).
 - Submit orders as Local Inactive** and **Submit orders as Remote Inactive:** Submit all the orders defined in your BOI worksheet to Pro-Mark as “inactive” (they are not submitted to the exchange until you activate them in Pro-Mark).
 “Local inactive” orders are stored on your computer’s local drive (can be viewed only by you), whereas “remote inactive” orders are stored on a shared drive (can be viewed by other traders in your trader account group).
 - Reset:** Removes all data contained within the spreadsheet, ready for reuse.
- If you find that not all of your orders have been submitted, and the messages in the ‘results’ column indicate that the maximum number orders per second has been exceeded, adjust this setting as explained in Creating a User Name and Password.
- Once you have placed your orders via the BOI worksheet, the status of each of these orders can be viewed within the right-hand columns of the worksheet. These status columns are the same as those which appear in the corresponding part of the Order Entry worksheet.

To cancel orders, click **Cancel Orders**.

BOI (Selective) Sheet

This worksheet lets you import bulk orders into Pro-Mark, while restricting the number of those orders imported at any one time.

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Bulk Order Input				Import BOI File	Import Pro-Mark export file	<input type="checkbox"/> Preserve Submit column?	Update orders in market	Reset				
							<input type="checkbox"/> Import as Local Inactive?			<input type="checkbox"/> Import as Remote Inactive?			
1													
2	submit	Active	Side	lots	order type	price	2nd price	3rd Price	exchange	commodity	contract date	trader account	Good Till Date
3	TRUE	IR	B	10	Limit	98.95			Liffe	EURIBOR	DEC09	TRM-SH-TA	
4	FALSE	A	B	20	Limit	99			Liffe	EURIBOR	DEC09	TRM-SH-TA	
5	TRUE	I	B	30	Limit	98.9			Liffe	EURIBOR	DEC09	TRM-SH-TA	
6													

It uses a TRUE/FALSE submit column to determine whether an order should be submitted (or cancelled if already in the market). This could be a calculated column, and the formula can be optionally preserved on importing new orders. Orders can be submitted either as Active, or as Inactive for later triggering directly from Pro-Mark.

The sheet also features the ability to import, in text format, order files previously exported from Pro-Mark’s Order Book, with the same features available to BOI format files. Account information is not always contained in the Pro-Mark Export file, and may need to be completed manually for the submission to work. The order information from the file is imported into the relevant columns in the spreadsheet, and the values of the Submit and Active columns are determined by whether the checkboxes (Preserve Submit column? / Import As Local Inactive / Import as Remote Inactive?) are ticked.

The format of the BOI Selective Sheet is similar to the original BOI Sheet, but with the following enhancements:

Feature	Description
Submit column	Controls whether or not updates made in the Excel spreadsheet cause the orders in Pro-Mark to be updated as well, when you click Update : <ul style="list-style-type: none"> ▪ If Submit = TRUE and the order is not currently in Pro-Mark, the order will be submitted to Pro-Mark. ▪ If the order does already exist in Pro-Mark, the spreadsheet will not submit a new order, but will indicate in the result column that there is an existing order. ▪ If Submit = FALSE and the order is in Pro-Mark, the order will be cancelled in Pro-Mark. <p>The Submit column can be a formula; in this case new order files should be imported with Preserve Submit ticked.</p>
Active column	Controls whether the order goes to Pro-Mark as: <ul style="list-style-type: none"> ▪ A (Active) ▪ I (Local Inactive), meaning it needs to be triggered manually within Pro-Mark, and is stored on your computer's local drive where only you can view it. ▪ IR (Remote Inactive): Like Local Inactive, but stored remotely meaning that it can be viewed by other traders in your trader account group.
Import button	Click to import Pro-Mark Order Export files.
Update button	Replaces the separate Submit and Cancel buttons on the original sheet.
Preserve Submit checkbox	Tick if you want to keep the Submit column logic when importing data, eg if the Submit column contains a calculation or formula designed to yield a TRUE or FALSE value depending on other information, perhaps within the imported order.
Import As Active checkbox	Tick to force all imports to be active, or leave unticked to leave the Active column untouched.

RTD Calls to Maintain Order Status

As soon as an order is submitted, and a Patsystems Order ID is received, the status is monitored via RTD calls to Pro-Mark, similar to those used to track prices and positions in the other worksheets.

Calls to obtain order statuses are of the following format:

RTD ("PATS.ORDERS", ",", {ref to 'temporary order Id' cell}, {ref to 'information type' cell})

For example:

The screenshot shows an Excel spreadsheet with a formula bar at the top displaying `=RTD("PATS.ORDERS", ",", I14, K$13)`. Below the formula bar is a table titled "Order Status". The table has columns: order type, Function, orderId, status, workingLots, filledLots, price, and e. The data rows show various orders with their respective statuses (F, W, F, F, F, F, F, W).

	order type	Function	orderId	status	workingLots	filledLots	price	e
14	Market	DEMO1_Order1	39878	F	-	4	-	
15	Limit	DEMO1_Order2	39885	W	10	-	96.9650	
16	Limit	DEMO1_Order3	39879	F	-	40	95.4350	
17	Limit	DEMO1_Order4	39880	F	-	22	112.5500	
18	Limit	DEMO1_Order5	39881	F	-	5	96.9250	
19	Limit	DEMO1_Order6	39882	F	-	10	97.4400	
20	Limit	DEMO1_Order7	39883	F	-	12	96.9650	
21	Limit	DEMO1_Order8	39884	W	14	-	95.9650	

The parameters that can be retrieved via a “PATS.ORDER” RTD call are (in alphabetical order):

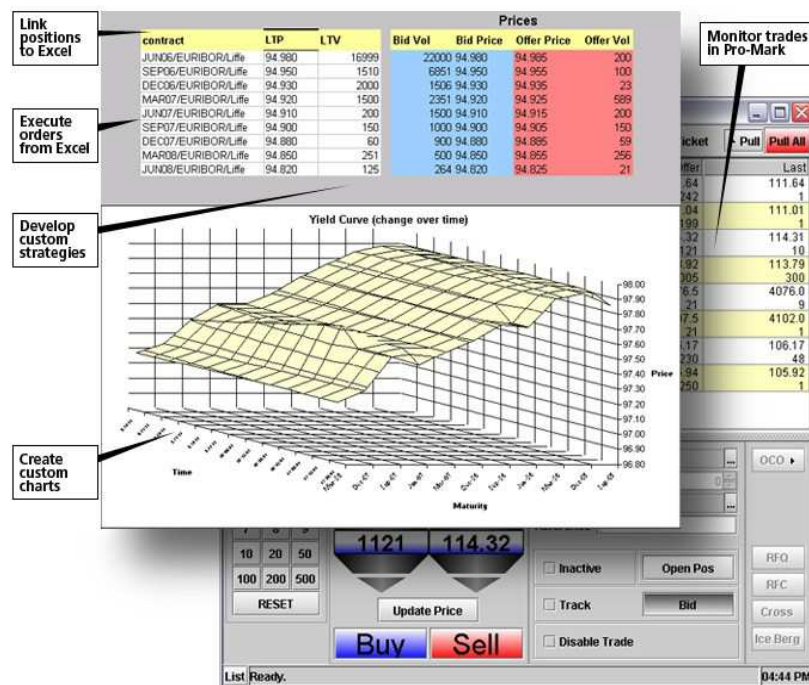
averagePrice; filledLots; goodTillDate; lots; numOfFills; orderId; orderType; price; price2; reference;
side; status; tempOrderId; timeOrderPlaced; tradableId; traderAccount; user; workingLots

Don't change the column names, as Pro-Mark uses these to identify which information to return.

Advanced Excel Trading

The methods described in the sections above represent just one of a number of ways that you can trade using Patsystems' custom Excel spreadsheet. If you are fluent with Excel and VBA you can set up other order triggers, such as the value of a cell breaching a limit, or amendments and cancellations of working orders.

Patsystems does not support any customisations. Therefore, before adapting the default Patsystems spreadsheet you should be a skilled Excel user, and understand macros and Visual Basic.



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1.3	10-Jul-09	J. Maynard-Smith	Correction to the introductory paragraph	RTD Calls to Maintain Order Status, on page 11.
1.4	01-Sep-09	J. Maynard-Smith	Updated product version number from 1.0 to 1.6 Changed product name from "Excel Plug-In for Pro-Mark 1.6" to "Excel Plug-In (for Pro-Mark) 1.6".	Cover

Document Approval / Review

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Related Documents

Title	Version	Author	Date