

EXPERT ADVISOR USERGUIDE

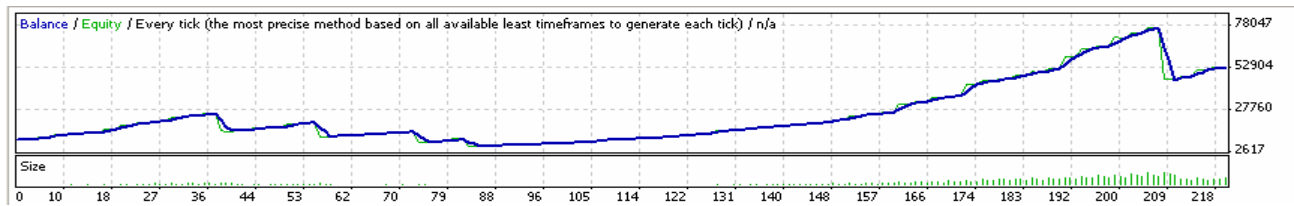




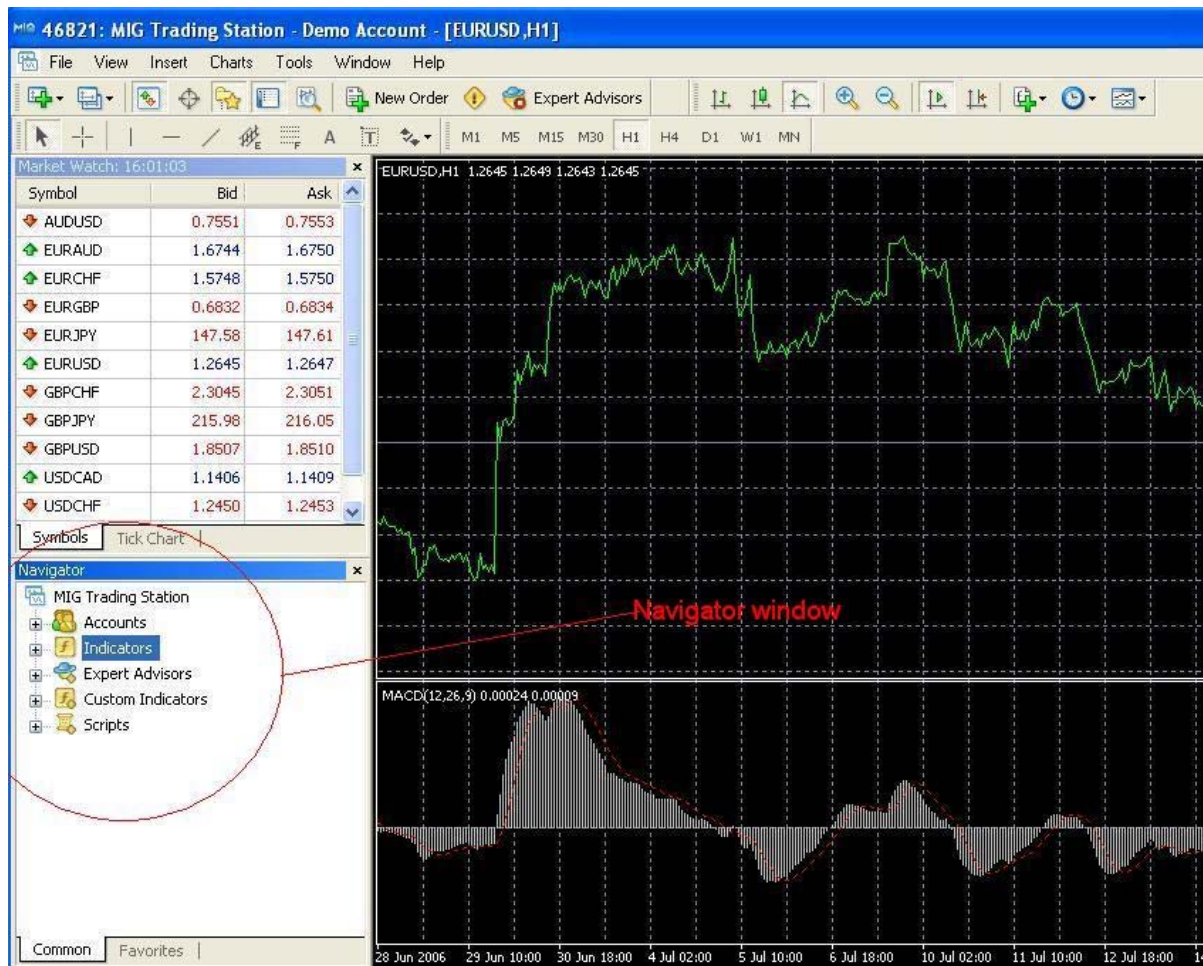
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1. Introduction to types of programs

There are three types of executable files you can program to facilitate and automate your trading, they are:

- Scripts
- Indicators
- Expert advisors



A **Script** is an executable module that can be launched from the Navigator window in the M I G Trading Station. Once executed, the script will become inactive. All scripts to be imported should be saved under the following folder:
C:\Program Files\MIG Trading Station\experts\scripts

An **Indicator** is a series of data points used to predict movements. All custom indicators to be imported should be saved to the following folder:
C:\Program Files\MIG Trading Station\experts\indicators

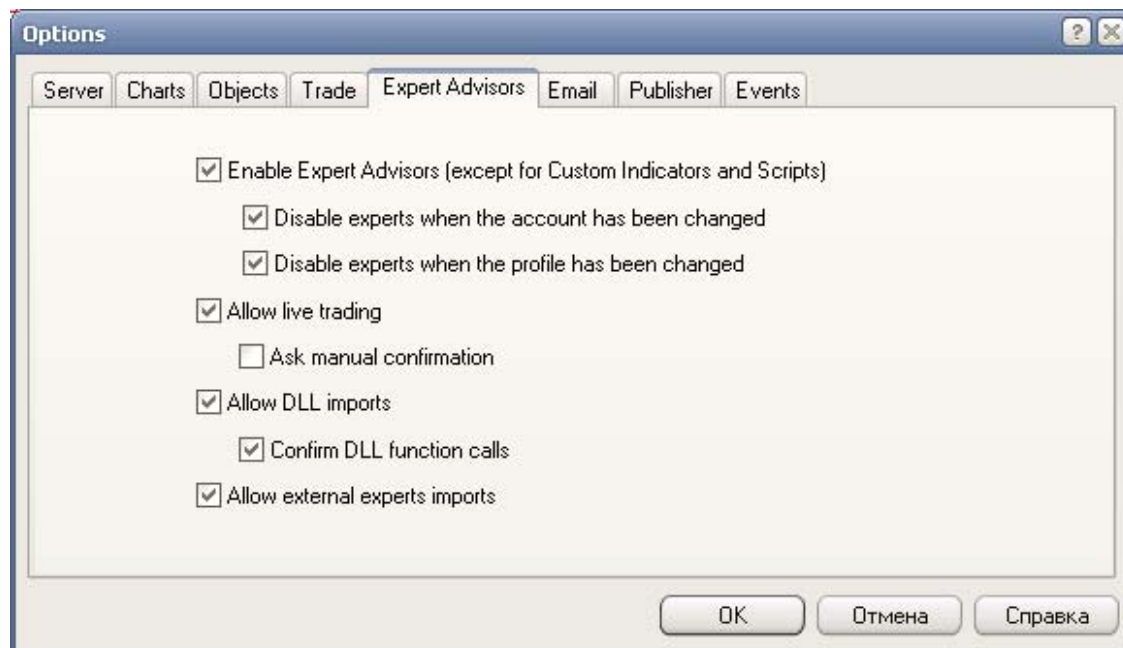
Expert advisor is a program that can register information or be set up to trade for you. All Expert Advisors to be imported should be saved to the following folder:
C:\Program Files\MIG Trading Station\experts

2. Expert Advisor Activation

There are two steps required to activate the Expert Advisor:

2.1 Platform Activation

To activate Expert Advisors in the trading platform, go to the **Tools** menu → select **Options**, then select the tab **Expert Advisors**. Click the boxes to: **Enable the Expert Advisors** and **Allow Live Trading**.



2.2 Server Activation

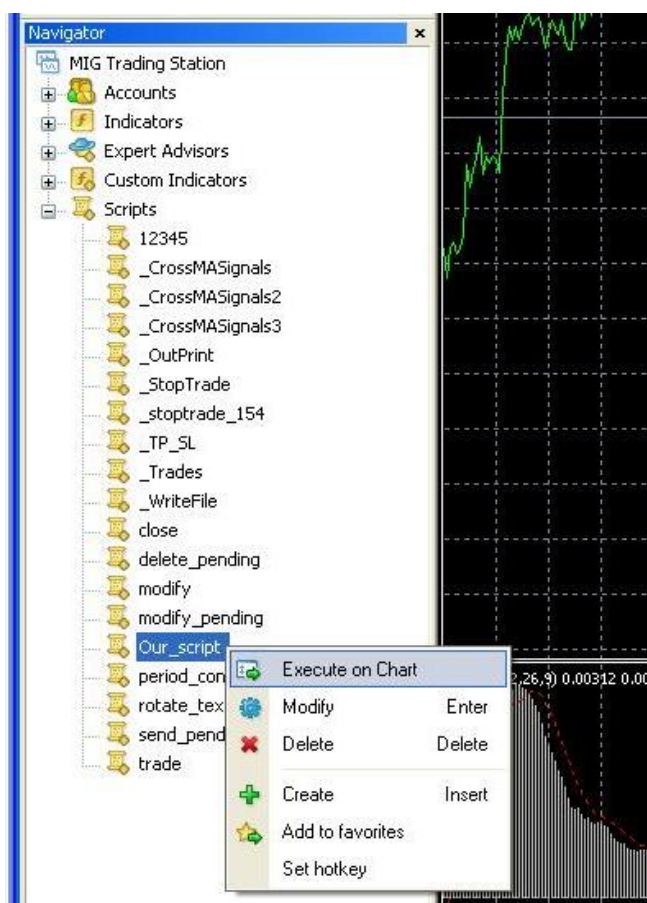
Before you can use Expert Advisors on a real trading account, you will need to make an activation request to M I G. Click on the link below to access the M I G Expert Advisor request form, fill it out, then email or fax it to :

http://www.migbank.ch/fileadmin/download/documents/expert_advisor_request_warning.pdf

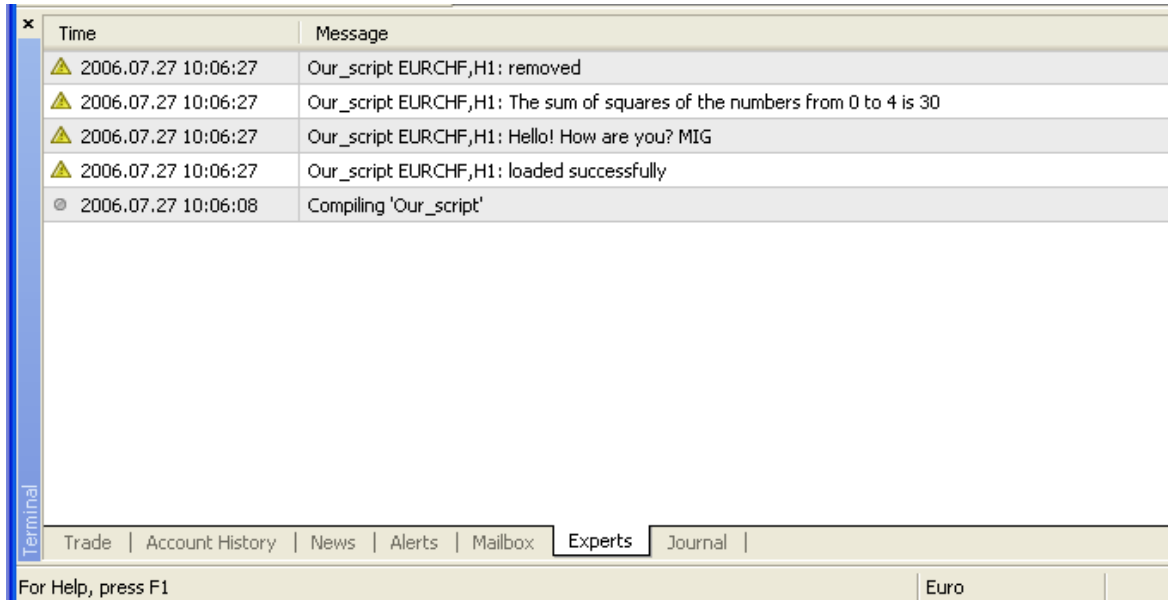
3. Attaching Scripts to Charts

In order to use a Script, an Indicator or an Expert Advisor, first select the desired script, then right mouse click on its name in the corresponding folder. Even if your program works on several currency pairs, it still need to be attached to one of the charts.

In the Navigator, select the script you require from the **Scripts** folder:



Then, right click your mouse and select **Execute on Chart**, as seen in the illustration above. By selecting the **Experts** Tab, you can view the results of all actions executed, as seen in the illustration below:



If the Expert Advisors are correctly activated on the platform, you should see the name of the **Expert Advisor script** and a **smiley face** at the top right hand corner of the chart you attached your Expert Advisor script to, as seen in the illustration below:



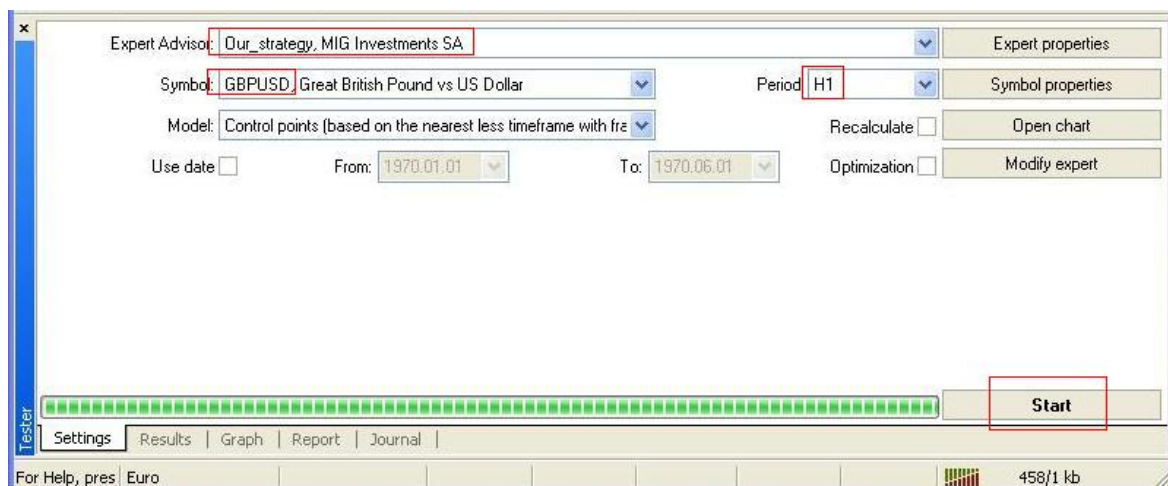
4. Using the Strategy Tester

The Strategy Tester is a function in the Expert Advisor that allows you to back test your strategy according to preset conditions.

In order to test your strategy, first select Menu View → Strategy Tester. Then select:

1. The Expert Advisor you would like to test (drop list Expert Advisor)
2. Parameters of the EA (Button Expert Properties)
3. The currency pair on which it will be tested (drop list Symbol)
4. The timeframe of the data to be used (drop list Period)
5. The Model, knowing the “Every tick” usually gives the best modelling quality, but the “Control points” is the fastest (drop list Model)
6. “Optimization” is used to select an optimal set of parameters for EA (tick)
7. “Visualization” is used to follow the positions taken by the Expert Advisor
8. You can preset the testing period through “Use Date”. If no period is specified, the Strategy tester takes all the available data.

If we run the Strategy Tester on the GBPUSD currency pair on the 1 hour timeframe:



The results of the test can be seen in the worksheet Results, Graph or Report, each presenting the information in a different way:



Or,

Bars in test	633	Ticks modelled	6189	Modelling quality	42.18%
Initial deposit	10000.00				
Total net profit	3904.00	Gross profit	11192.50	Gross loss	-7288.50
Profit factor	1.54	Expected payoff	48.80		
Absolute drawdown	796.00	Maximal drawdown	4273.00 (31.71%)	Relative drawdown	31.71% (4273.00)
Total trades	80	Short positions (won %)	0 (0.00%)	Long positions (won %)	80 (82.50%)
		Profit trades (% of total)	66 (82.50%)	Loss trades (% of total)	14 (17.50%)
		Largest profit trade	170.00	loss trade	-535.50
		Average profit trade	169.58	loss trade	-520.61
		Maximum consecutive wins (profit in money)	17 (2890.00)	consecutive losses (loss in money)	8 (-4273.00)
		Maximal consecutive profit (count of wins)	2890.00 (17)	consecutive loss (count of losses)	-4273.00 (8)
		Average consecutive wins	11	consecutive losses	3

5. Troubleshooting

If you encounter any execution errors with your Expert Advisor script, please check the Tab Experts for details:

Time	Message
2008.02.04 18:12:48	GFSignals Auto Trading EURUSD,M1: initialized
2008.02.04 18:12:48	GFSignals Auto Trading EURUSD,M1: The current version of the Expert Advisor has expired. Now you have to down
2008.02.04 18:12:48	GFSignals Auto Trading EURUSD,M1: Expiration date: February 1, 2008
2008.02.04 18:12:48	GFSignals Auto Trading EURUSD,M1: Version: 1.03 Beta Release (MT4 build 211)
2008.02.04 18:12:48	GFSignals Auto Trading EURUSD,M1: GFSIGNALS METATRADER ADVISOR STARTED
2008.02.04 18:12:46	GFSignals Auto Trading EURUSD,M1 inputs: POP3="pop.bluewin.ch"; EmailUsername="signauxgfs"; EmailPassword=
2008.02.04 18:12:46	GFSignals Auto Trading EURUSD,M1: loaded successfully



For any EA modifications, the log files of the EA will be required. You can find these files in C:/Program Files/MIG Trading Station/experts/logs.

If you receive any of these errors, please consult your programmer to know how to remove it

Error codes returned from trade server.

Constant	Value	Description
ERR_NO_ERROR	0	No error returned.
ERR_NO_RESULT	1	No error returned, but the result is unknown.
ERR_COMMON_ERROR	2	Common error.
ERR_INVALID_TRADE_PARAMETERS	3	Invalid trade parameters.
ERR_SERVER_BUSY	4	Trade server is busy.
ERR_OLD_VERSION	5	Old version of the client terminal.
ERR_NO_CONNECTION	6	No connection with trade server.
ERR_NOT_ENOUGH_RIGHTS	7	Not enough rights.
ERR_TOO_FREQUENT_REQUESTS	8	Too frequent requests.
ERR_MALFUNCTIONAL_TRADE	9	Malfunctional trade operation.
ERR_ACCOUNT_DISABLED	64	Account disabled.
ERR_INVALID_ACCOUNT	65	Invalid account.
ERR_TRADE_TIMEOUT	128	Trade timeout.
ERR_INVALID_PRICE	129	Invalid price.
ERR_INVALID_STOPS	130	Invalid stops.
ERR_INVALID_TRADE_VOLUME	131	Invalid trade volume.
ERR_MARKET_CLOSED	132	Market is closed.
ERR_TRADE_DISABLED	133	Trade is disabled.
ERR_NOT_ENOUGH_MONEY	134	Not enough money.
ERR_PRICE_CHANGED	135	Price changed.
ERR_OFF_QUOTES	136	Off quotes.
ERR_BROKER_BUSY	137	Broker is busy.
ERR_REQUOTE	138	Requote.
ERR_ORDER_LOCKED	139	Order is locked.
ERR_LONG_POSITIONS_ONLY_ALLOWED	140	Long positions only allowed.
ERR_TOO_MANY_REQUESTS	141	Too many requests.
ERR_TRADE_MODIFY_DENIED	145	Modification denied because order too close to market.



ERR_TRADE_CONTEXT_BUSY	146	Trade context is busy.
ERR_TRADE_EXPIRATION_DENIED	147	Expirations are denied by broker.
ERR_TRADE_TOO_MANY_ORDERS	148	The amount of open and pending orders has reached the limit set by the broker.

MQL4 run time error codes

Constant	Value	Description
ERR_NO_MQLERROR	4000	No error.
ERR_WRONG_FUNCTION_POINTER	4001	Wrong function pointer.
ERR_ARRAY_INDEX_OUT_OF_RANGE	4002	Array index is out of range.
ERR_NO_MEMORY_FOR_CALL_STACK	4003	No memory for function call stack.
ERR_RECURSIVE_STACK_OVERFLOW	4004	Recursive stack overflow.
ERR_NOT_ENOUGH_STACK_FOR_PARAM	4005	Not enough stack for parameter.
ERR_NO_MEMORY_FOR_PARAM_STRING	4006	No memory for parameter string.
ERR_NO_MEMORY_FOR_TEMP_STRING	4007	No memory for temp string.
ERR_NOT_INITIALIZED_STRING	4008	Not initialized string.
ERR_NOT_INITIALIZED_ARRAYSTRING	4009	Not initialized string in array.
ERR_NO_MEMORY_FOR_ARRAYSTRING	4010	No memory for array string.
ERR_TOO_LONG_STRING	4011	Too long string.
ERR_REMAINDER_FROM_ZERO_DIVIDE	4012	Remainder from zero divide.
ERR_ZERO_DIVIDE	4013	Zero divide.
ERR_UNKNOWN_COMMAND	4014	Unknown command.
ERR_WRONG_JUMP	4015	Wrong jump (never generated error).
ERR_NOT_INITIALIZED_ARRAY	4016	Not initialized array.
ERR_DLL_CALLS_NOT_ALLOWED	4017	DLL calls are not allowed.
ERR_CANNOT_LOAD_LIBRARY	4018	Cannot load library.
ERR_CANNOT_CALL_FUNCTION	4019	Cannot call function.
ERR_EXTERNAL_CALLS_NOT_ALLOWED	4020	Expert function calls are not allowed.
ERR_NO_MEMORY_FOR_RETURNED_STR	4021	Not enough memory for temp string returned from function.
ERR_SYSTEM_BUSY	4022	System is busy (never generated error).
ERR_INVALID_FUNCTION_PARAMSCNT	4050	Invalid function parameters count.
ERR_INVALID_FUNCTION_PARAMVALUE	4051	Invalid function parameter value.
ERR_STRING_FUNCTION_INTERNAL	4052	String function internal error.
ERR_SOME_ARRAY_ERROR	4053	Some array error.
ERR_INCORRECT_SERIESARRAY_USING	4054	Incorrect series array using.



ERR_CUSTOM_INDICATOR_ERROR	4055	Custom indicator error.
ERR_INCOMPATIBLE_ARRAYS	4056	Arrays are incompatible.
ERR_GLOBAL_VARIABLES_PROCESSING	4057	Global variables processing error.
ERR_GLOBAL_VARIABLE_NOT_FOUND	4058	Global variable not found.
ERR_FUNC_NOT_ALLOWED_IN_TESTING	4059	Function is not allowed in testing mode.
ERR_FUNCTION_NOT_CONFIRMED	4060	Function is not confirmed.
ERR_SEND_MAIL_ERROR	4061	Send mail error.
ERR_STRING_PARAMETER_EXPECTED	4062	String parameter expected.
ERR_INTEGER_PARAMETER_EXPECTED	4063	Integer parameter expected.
ERR_DOUBLE_PARAMETER_EXPECTED	4064	Double parameter expected.
ERR_ARRAY_AS_PARAMETER_EXPECTED	4065	Array as parameter expected.
ERR_HISTORY_WILL_UPDATED	4066	Requested history data in updating state.
ERR_TRADE_ERROR	4067	Some error in trading function.
ERR_END_OF_FILE	4099	End of file.
ERR_SOME_FILE_ERROR	4100	Some file error.
ERR_WRONG_FILE_NAME	4101	Wrong file name.
ERR_TOO_MANY_OPENED_FILES	4102	Too many opened files.
ERR_CANNOT_OPEN_FILE	4103	Cannot open file.
ERR_INCOMPATIBLE_FILEACCESS	4104	Incompatible access to a file.
ERR_NO_ORDER_SELECTED	4105	No order selected.
ERR_UNKNOWN_SYMBOL	4106	Unknown symbol.
ERR_INVALID_PRICE_PARAM	4107	Invalid price.
ERR_INVALID_TICKET	4108	Invalid ticket.
ERR_TRADE_NOT_ALLOWED	4109	Trade is not allowed. Enable checkbox "Allow live trading" in the expert properties.
ERR_LONGS_NOT_ALLOWED	4110	Longs are not allowed. Check the expert properties.
ERR_SHORTS_NOT_ALLOWED	4111	Shorts are not allowed. Check the expert properties.
ERR_OBJECT_ALREADY_EXISTS	4200	Object exists already.
ERR_UNKNOWN_OBJECT_PROPERTY	4201	Unknown object property.
ERR_OBJECT_DOES_NOT_EXIST	4202	Object does not exist.
ERR_UNKNOWN_OBJECT_TYPE	4203	Unknown object type.
ERR_NO_OBJECT_NAME	4204	No object name.
ERR_OBJECT_COORDINATES_ERROR	4205	Object coordinates error.
ERR_NO_SPECIFIED_SUBWINDOW	4206	No specified subwindow.
ERR_SOME_OBJECT_ERROR	4207	Some error in object function.

For any questions or support, contact info@migbank.com or call +41 32 722 81 00