



# *iExpertAdvisor*<sup>TM</sup>



# EA-Indicator Plug-in

Requires VTS-Connect minimum version **4.0.0.60**

The EA-Indicator Plug-in allows you to create a Custom Indicator that draws Buy and Sell lines based on the logic of your Expert Advisor. The Custom Indicator can then be used by any Expert Advisor.

## ***What is a Plug-in?***

*VTS stands for Visual Traders Studio.*

*The VTS Expert Advisor Builder is a Windows graphical application that enables non-programmers to build complex Expert Advisors by dragging, dropping and connecting logical elements.*

*The VTS application contains basic functionality to build almost any Expert Advisor.*

***A VTS Plug-in allows traders to easily implement advanced trading techniques using an add-on user interface.***

## Contents

|                                       |    |
|---------------------------------------|----|
| Enable the EA-Indicator Plug-in ..... | 4  |
| Using the EA-Indicator Plug-in .....  | 5  |
| Custom Indicators in the Toolbox..... | 6  |
| Set the Indicator Prefix.....         | 7  |
| EA-Indicator Price Chart .....        | 8  |
| EA-Indicator Video .....              | 9  |
| Important Notes.....                  | 10 |

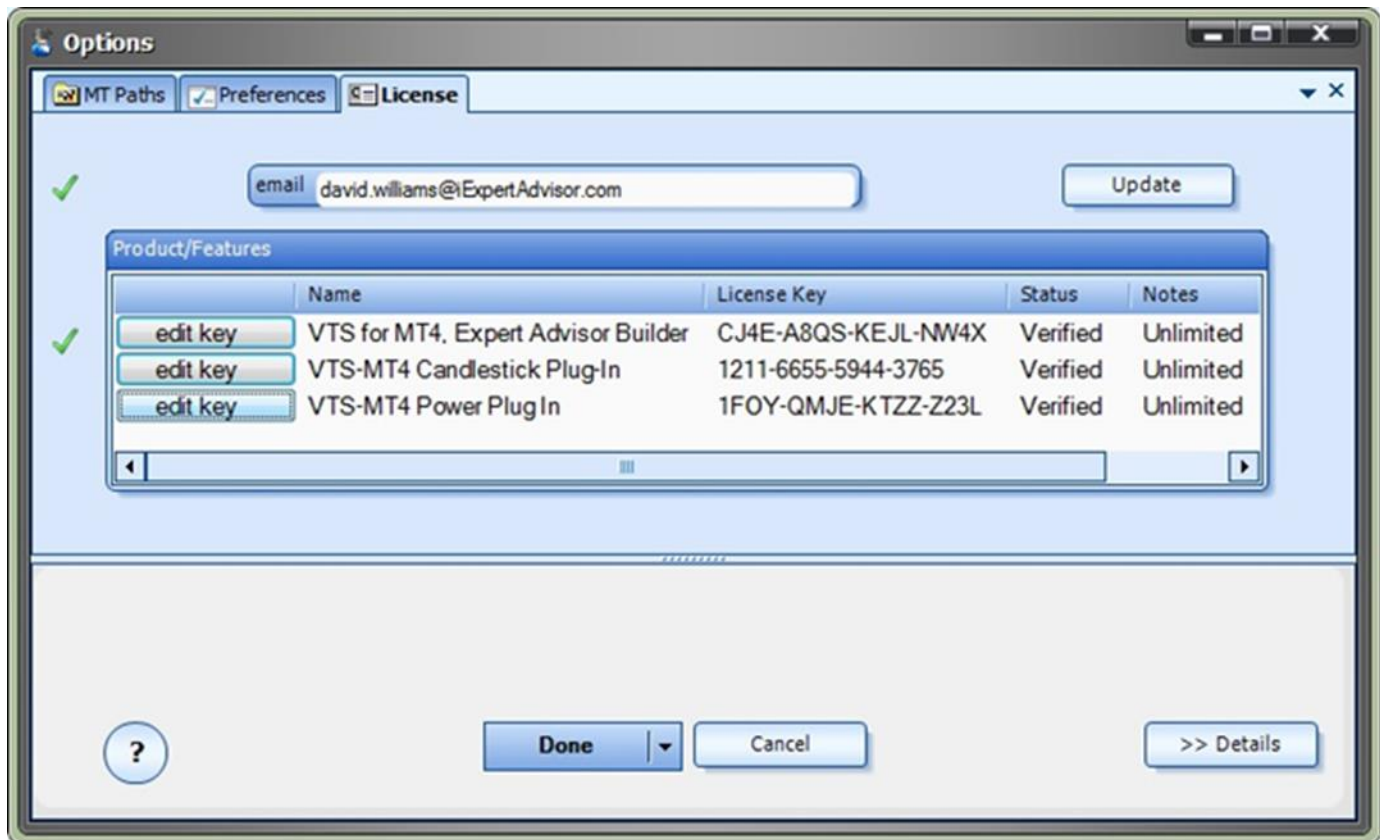
## Enable the EA-Indicator Plug-in

You must enter your License key to enable the **EA-Indicator Plug-in**. Your license key for all of your VTS products can be found in the [Members Area](#).

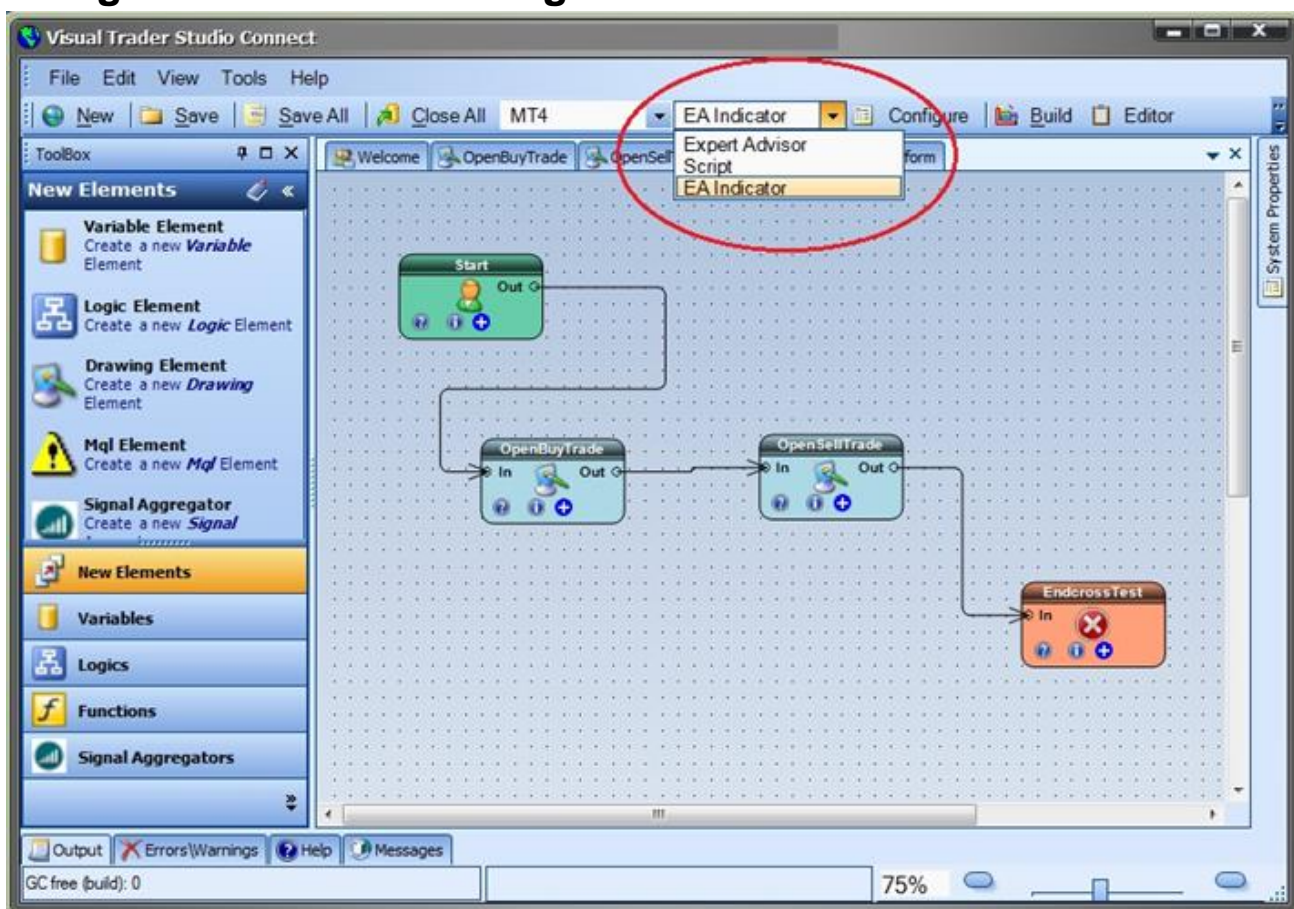
License keys are entered in Visual Traders Studio (VTS) from the License entry tab. □

The **email** address is the email address used to purchase [VTS](#).

- The **License Key** is the key listed in the Members Area.
- The **Update** button is used to verify the email address and license key.
- The **edit key** button is used edit the key value.



## Using the EA-Indicator Plug-in



The **EA-Indicator Plug-in** allows you to create a **Custom Indicator** that draws **Buy** and **Sell** lines based on the logic of your Expert Advisor.

The signals are generated from the following trading functions:

- **OpenBuyTrade**: when true, **Blue** line is greater than 0
- **CloseBuyTrade**: when true, **Blue** line is less than 0
- **OpenSellTrade**: when true, **Red** line is greater than 0
- **CloseSellTrade**: when true **Red** line is less than 0

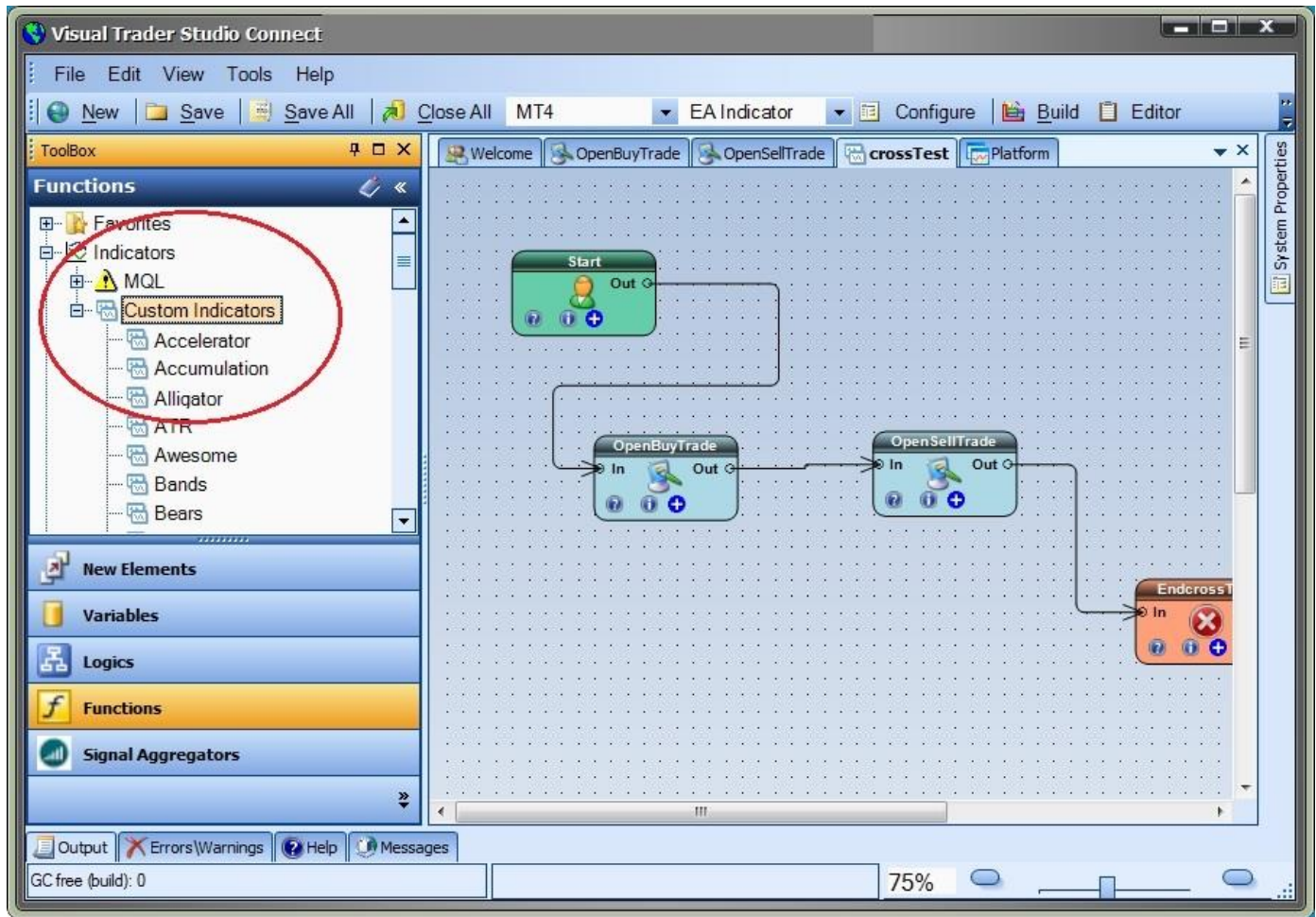
VTS generates MQL code to build a custom indicator based on the logic of the 4 functions above.

After creating an Expert Advisor in VTS that uses at least one of the functions OpenBuyTrade, CloseBuyTrade, OpenSellTrade, and/or CloseSellTrade:

- Set the VTS **target** to "EA Indicator"
- Press the **Build** button
- A Custom Indicator is created in the Platform folder's "custom indicator" folder (experts\indicators)



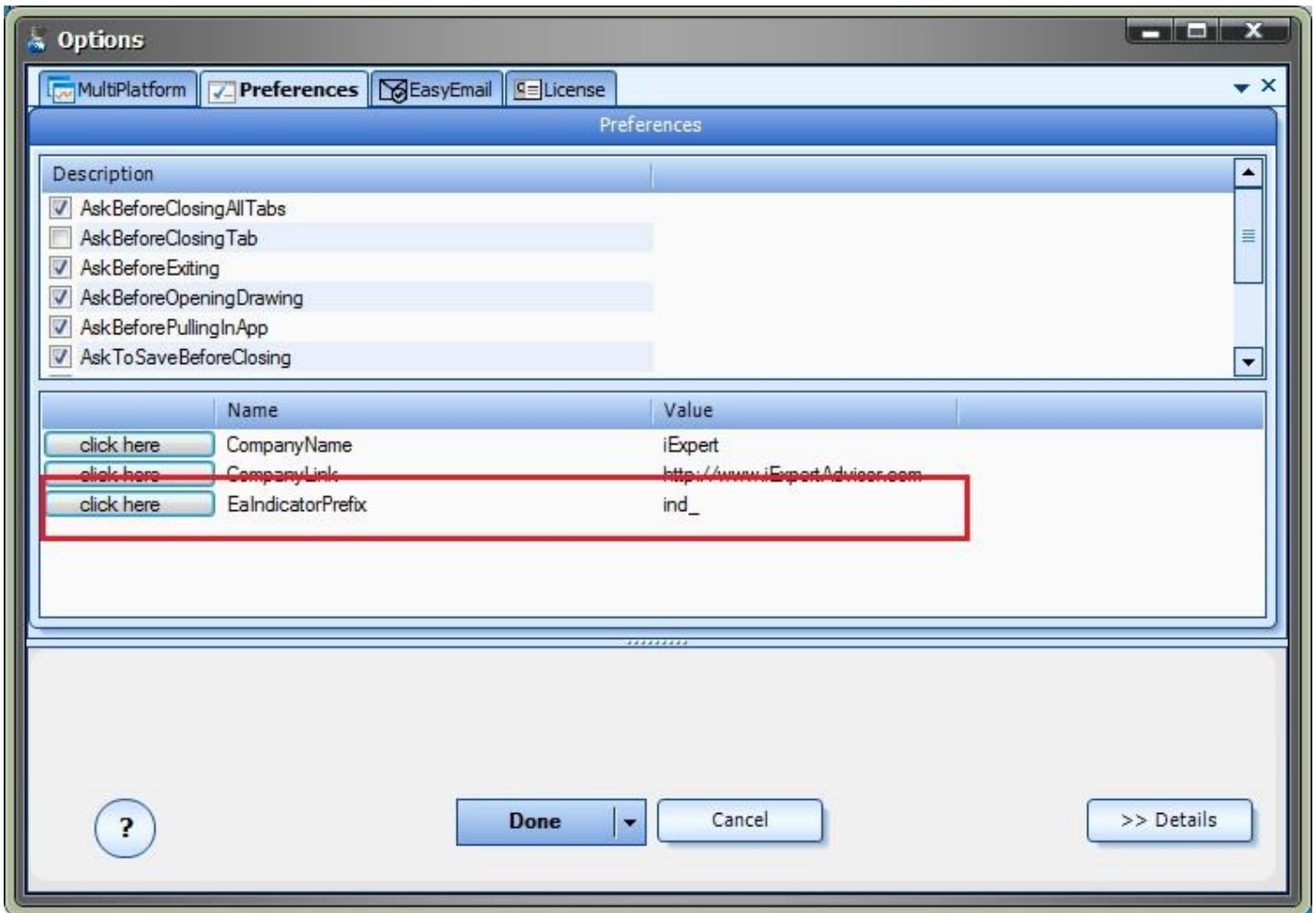
## Custom Indicators in the Toolbox



- After a custom indicator has been built using the **EA-Indicator plug-in**, it is available from the VTS [Toolbox](#) to be used by any Expert Advisor.
- The indicator's input and output values are automatically configured using the latest version of the drawings. **There is no need to configure a [custom indicator](#) that has been built using the EA-Indicator plug-in.**
- The "Custom Indicator" menu in the VTS [Toolbox](#) can be refreshed by right-clicking and selecting "refresh".

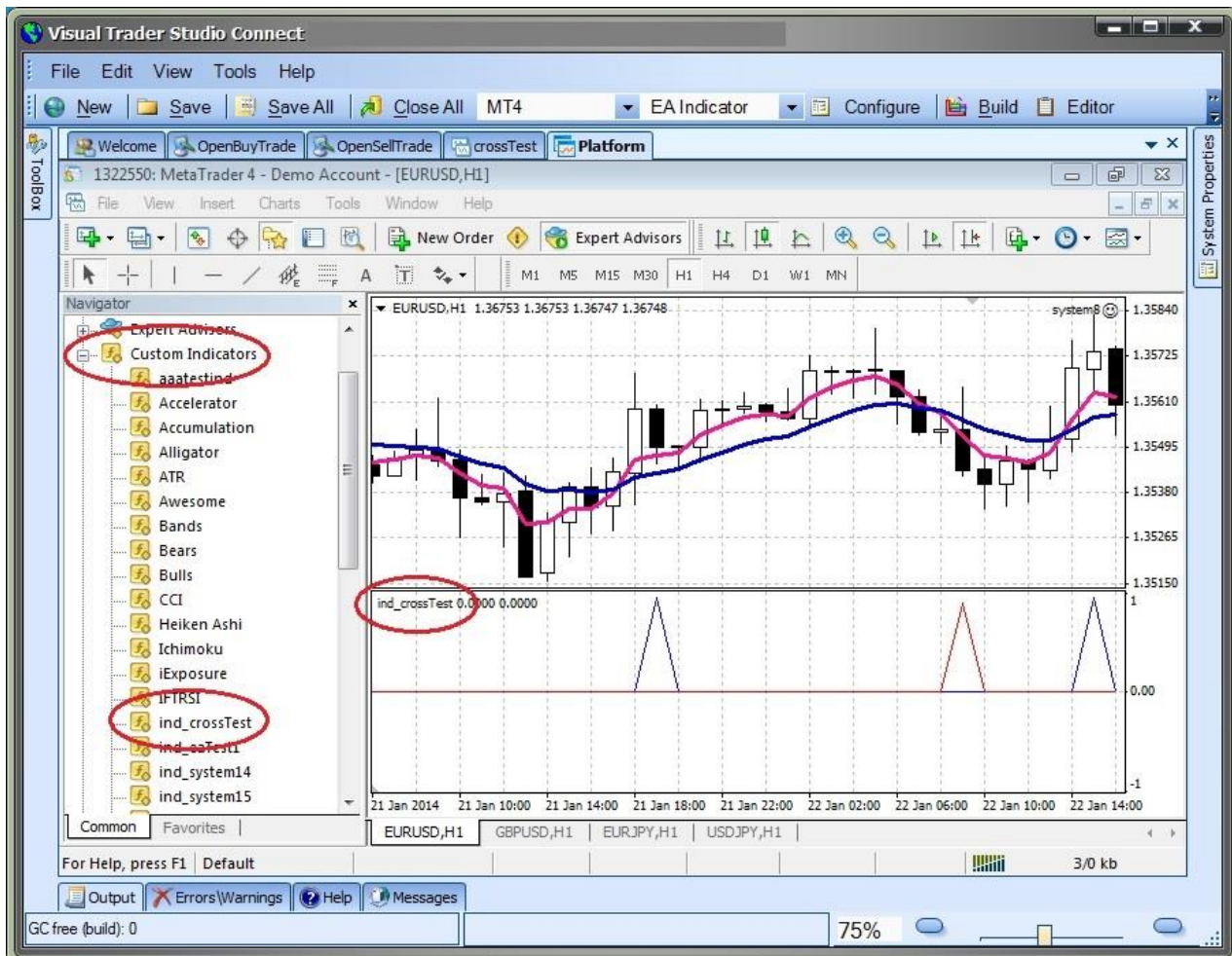
## Set the Indicator Prefix

- The name of the custom indicator is the name of the VTS system with a preceding prefix.
- The default prefix is "ind\_".
- For example, if the name of the VTS System is **system1**, the name of the custom indicator is **ind\_system1**.
- The prefix may be changed in VTS from the [Tools->Options->Preferences](#) window.
- The name of the value is "EaIndicatorPrefix".



## EA-Indicator Price Chart

- The price chart below shows a custom indicator built from the ***Moving Average Crossover System***.
- The **ind\_crossTest** indicator is shown in the window below the price chart.
- On the price chart, the thick **pink** line is a **fast** moving average, the thick **blue** line is a **slow** moving average.
- When the **fast** moving average crosses the **slow** moving average trade signals are generated.
- The trade signals are seen as spikes in the **red** and **blue** lines in the **lower** indicator window.
- Note: The MetaTrader Platform may need to be closed and restarted before a newly created custom indicator appears in "Custom Indicators" folder of the Navigator window. This is a limitation of MetaTrader.





## EA-Indicator Video

To view a video of the EA-Indicator plug-in, click here:

<http://expert-advisor-builder.com/how-to-build-a-metatrader-moving-average-crossover-custom-indicator-using-vts/>

## Important Notes:

- The **EA-Indicator Plug-in** uses the four trading function drawings to create the MQL logic for the custom indicator. The drawing functions **must be named**: OpenBuyTrade, CloseBuyTrade, OpenSellTrade, CloseSellTrade.
- In order to draw the back history for the indicator, the logic on the trading drawings must use "shift-able" expressions. The **EA-Indicator Plug-in** finds "shift-able" price and indicator functions and generates the correct MQL code to draw the history of the indicator on the chart.
- If "shift-able" expressions are not used, the indicator will still display correct values in real time, but will not generate signals for historical data. For example, if the expression "**Bid**" is used in the logic of a trading drawing, the platform can not evaluate the value of **Bid** for past bars - the **Bid** value simply is not saved. However, if the expression **iHigh** is used, the platform can accurately draw historical data because **High** values **are** saved for each bar.
  - In summary, any function that provides a [shift](#) parameter will draw the correct history. This includes all technical indicators, all price functions and various other MQL functions.
- All of the drawings used in the VTS Expert Advisor system are included in the custom indicator code because they may be needed to evaluate the logic of the drawing functions. For this reason, **there will be warnings for unreferenced functions. These warnings may safely be ignored.**
- This is an example of the warnings that can be safely ignored:

MetaQuotes Language 4 compiler build 509 (24 Jun 2013) Copyright 2001-2013,  
MetaQuotes Software Corp.

```
1;39;;;Function "fnComment6194" is not referenced and will be removed from exp-file
1;39;;;Function "OpenSellTrade" is not referenced and will be removed from exp-file
1;39;;;Function "OpenBuyTrade" is not referenced and will be removed from exp-file
1;39;;;Function "ea_start" is not referenced and will be removed from exp-file
1;39;;;Function "ea_init" is not referenced and will be removed from exp-file
1;39;;;Function "ea_deinit" is not referenced and will be removed from exp-file
```

Exp file "C:\Program Files (x86)\MetaTrader 4\experts\indicators\ind\_MaCrossOver.ex4" produced - 0 error(s), 6 warning(s)

C:\Program Files (x86)\MetaTrader 4\experts\indicators\ind\_MaCrossOver.mq4 built successfully!

Because all of the drawings used in the VTS Expert Advisor system are included in the custom indicator code, the custom indicator will have the same input parameters as the Expert Advisor. This may not be desired for the custom indicator. To inhibit the input parameters, used the [Input Manager](#) and uncheck the **show** button to hide any inputs not required.

