



Fibonacci Trader Plug-in

Requires VTS-Connect minimum version 4.0.0.51

The *Fibonacci Trader Plug-in* allows an Expert Advisor to detect if any levels of a manual or automatically drawn Fibonacci retracement have been broken.

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.

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Enable the Fibonacci Trader Plug-in

You must enter your License key to enable the *Fibonacci Trader Plug-in*. Your license key for all of your VTS products can be found in the <u>Members Area</u>.

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.

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Fibonacci Trader Functions in the Toolbox

Fibonacci Trader Functions in the Toolbox

Once enabled, the Fibonacci functions are available in the <u>Toolbox</u> Function tab under the *Fibonacci* menu.

These functions are dragged and dropped from the Toolbox onto the <u>Drawing Pad</u> like any other functions.



Fibonacci Trader Functions

Fibonacci Trader Functions

The Fibonacci function library include these functions:

- <u>fnDrawFibo</u>
 - Used to programatically draw a Fibonacci retracement on a price chart.
- fnlsFiboLevelBroken
 - Used to determine if a price value has broken through a Fibonacci retracement level.
- <u>fnGetFiboValue</u>
 - Used to get the value of a Fibonacci retracement level..
- <u>fnDeleteFibo</u>
 - Used to programatically delete a Fibonacci retracement from a price chart.

fnDrawFibo

The Fibonacci function *fnDrawFibo* is used to programatically draw a Fibonacci retracement on a price chart.

After the *fnDrawFibo* function has been added to a <u>Drawing</u>, it is configured by clicking the (+) button along the bottom of the Element.

The Function Configuration window allows you to select values for each parameter.

Parameter Name	Data type	Description
name	string	The name of the Fibonacci retracement. All Fibonacci retracements are identified by name. The name should be unique. The pull-down menu provides sample names, but the text can be overwritten to any allowable name. The name must be surrounded by double quotes, for example "myName". Avoid using blank spaces in the name: It may cause unpredictable behaviour.
high	Double	The highest point of a Fibonacci retracement.
low	Double	The lowest point of a Fibonacci retracement
barsback	Integer	The number of bars back to begin the drawing of the Fibonacci retracement

fnDrawFibo fnDrawFiboMql("MyFib",High[1],Low[12],12)	- - X
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FnDrawFiboMql Parameter 1 of 4	
name: "MyFib"	Choose
fnDrawFiboMql Parameter 2 of 4	
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fnDrawFiboMql Parameter 3 of 4	
≖ low: Low[12]	Choose
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⊐ barsback: 12	Choose
Name:	7
fnDrawFibo	
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fnDeleteFibo

The *fnDeleteFibo* function is used to programatically delete a Fibonacci retracement from a price chart.

After the *fnDeleteFibo* function has been added to a Drawing, it is configured by clicking the (+) button along the bottom of the Element.

The <u>Function Configuration</u> window allows you to select values for each parameter.

Parameter Name	Data type	Description
name	string	The name of the Fibonacci retracement. All Fibonacci retracements are identified by name. The name should be unique. The pull-down menu provides sample names, but the text can be overwritten to any allowable name. The name must be surrounded by double quotes, for example "myName". Avoid using blank spaces in the name: It may cause unpredictable behaviour.

Note: Any and all Fibonacci retracements that match the name are deleted from the price chart. This includes Fibonacci retracements created both manually and programatically.

f fnDeleteFibo1 fnDeleteFiboMql("MyFib")	
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fnDeleteFiboMql Parameter 1 of 1		
🖻 name:	"MyFib"	Choose
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fnGetFiboValue

The *fnGetFiboValue* function is used to get the value of a Level of a Fibonacci retracement.

After the **fnGetFiboValue** function has been added to a Drawing, it is configured by clicking the (+) button along the bottom of the Element.

The <u>Function Configuration</u> window allows you to select values for each parameter.

Parameter Name	Data type	Description	
name	string	The name of the Fibonacci retracement. All Fibonacci retracements are identified by name. The name should be unique. The pull-down menu provides sample names, but the text can be overwritten to any allowable name. The name must be surrounded by double quotes, for example "myName". Avoid using blank spaces in the name: It may cause unpredictable behaviour.	
level	LEVEL value (integer)	The Fibonacci retracement Level of which to to get the value. The available levels are: FIB_LEVEL_0 FIB_LEVEL_21.6 FIB_LEVEL_38.2 FIB_LEVEL_50.0 FIB_LEVEL_61.8 FIB_LEVEL_100.0 FIB_LEVEL_161.8 FIB_LEVEL_161.8 FIB_LEVEL_261.8 FIB_LEVEL_261.8 FIB_LEVEL_423.6	

fnGetFiboValue fnGetFiboValueMql("MyFib",FIB_LEVEL_0)
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E fnGetFiboValueMql Parameter 1 of 2
T name: "MyFib"
E fnGetFiboValueMql Parameter 2 of 2
Ievel: FIB_LEVEL_0
Name:
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fnIsFiboLevelBroken

The *fnlsFiboLevelBroken* function is used to determine if a price value has broken through a Fibonacci retracement level.

After the *fnlsFiboLevelBroken* function has been added to a Drawing, it is configured by clicking the (+) button along the bottom of the Element.

The <u>Function Configuration</u> window allows you to select values for each parameter.

Parameter Name	Data type	Description
name	string	The name of the trend line. All trend lines are identified by name. The name should be unique. The pull-down menu provides sample names, but the text can be overwritten to any allowable name. The name must be surrounded by double quotes, for example "myName". Avoid using blank spaces in the name: It may cause unpredictable behaviour.
level	LEVEL value (integer)	The Fibonacci retracement Level of which to to get the value. The available levels are: FIB_LEVEL_0 FIB_LEVEL_21.6 FIB_LEVEL_38.2 FIB_LEVEL_50.0 FIB_LEVEL_61.8 FIB_LEVEL_100.0 FIB_LEVEL_161.8 FIB_LEVEL_261.8 FIB_LEVEL_261.8 FIB_LEVEL_261.8 FIB_LEVEL_261.8
type	FROM value (integer)	The direction from which the price value was broken. The pull-down menu offers these choices: FROM_ABOVE : The price value broke the trend line from above the line. FROM_BELOW : The price value broke the trend line from below the line.
price		The price value that breaks through the Fibonacci retracement Level. The pull-down menu offers these choices: PRICE_CLOSE PRICE_OPEN PRICE_HIGH PRICE_LOW PRICE_LOW PRICE_MEDIAN PRICE_TYPICAL PRICE_WEIGHTED
shift	integer	The candle index on the price chart of where to test if the trend line has been broken. Zero is the currently

	forming candle, one is one candle to the left, etc.

fnIsFiboLevelBroken*	fnIsFiboLevelBrokenMql('	'MyFib",FIB_LEVEL_0,F	ROM_ABOV X
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Using Fibonacci Trader

Using the Fibonacci Trader

Objects on the MetaTrader Platform

Objects on the MetaTrader platform

Every line, label and arrow that you see on a MetaTrader price chart is referred to as an Object. The MetaTrader platform provides a set of MQL functions for programatically creating and deleting Objects. The Object functions are available from the VTS <u>Function Toolbox</u> under the Advanced->Object menu. The Object functions are on the Advanced menu because they require advanced MQL knowledge and can be difficult to use.

Objects can be manually created using the toolbar on the top of the MetaTrader platform. The objects that can be created from the MT tool bar are:

- Vertical line
- Horizontal line
- Trend line
- o Channels line
- o Fibonacci lines
- o Text
- o Arrows

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Manually Drawing a Fibonacci Retracement

To manually draw a Fibonacci retracement on a MetaTrader price chart, click the Fibonacci retracement button, then click the start location on the chart, hold the mouse down while moving to the end location and release the mouse.

When a Fibonacci retracement is manually created, it is given a generated name by the MetaTrader platform. For example, it may be named "Fibo 1003".

The *Fibonacci Trader Plug-in* identifies Fibonacci retracements by their name. To change the name of a manually drawn Fibonacci retracement, in the MetaTrader platform go to: Charts->Objects->Object List

C Objects on EURUSD,H1 (2) Object Name Description Window Show Edit Fibo MyFib 0 Fibo Fibo 2186 0 Delete

Find the Fibonacci retracement in the list, highlight it and select *Edit*.

This will allow changing the Fibonacci retracement properties including the name.

Note: The name of each Fibonacci retracement should be unique. Do not place more than one Fibonacci retracement on the same chart with the same name.

Close

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Removing a Fibonacci retracement (or any other Object)

To manually remove a single Fibonacci retracement from a MetaTrader price chart, in the MetaTrader platform go to:

Charts->Objects->Object List

select the Fibonacci retracement by name and click the **Delete** button.

Object	Name	Description	Window	Show
Trendline	TrendLineUpper		0	Edit
Label	lbl_TrendLineUpper	TrendLineUpper	0	
Vertical Line	ve_TrendLineUpper		0	Delete
Vertical Line	vs_TrendLineUpper		0	

Building an Expert Advisor to manage a manually drawn Fibonacci retracement

Building an Expert Advisor to manage a manually drawn Fibonacci retracement

The *Fibonacci Trader Plug-in* can monitor any Fibonacci retracement on a chart. It does this by searching for a Fibonacci retracement by name.

After you manually <u>draw your Fibonacci retracement</u> on your price chart, <u>record the exact name of the Fibonacci retracement</u>. This name will be referenced in your Expert Advisor by the <u>filsFiboLevelBroken</u>.

To build an Expert Advisor that opens a BUY trade when a Fibonacci retracement has been broken, drag and drop the Fibonacci function *fnlsFiboLevelBroken* on to the drawing pad and connect it before the <u>Logic</u> element.

Set the parameters of the *fnlsFiboLevelBroken* function:

- name: set the value of the name parameter to the exact name of the Fibonacci retracement. For example "myfib".
- *level*: set the value of the *level* parameter to the Fibonacci retracement level to test for the break.
- *type*: set the value of the *type* parameter to the direction to test for the Fibonacci retracement break, either FROM_ABOVE or FROM_BELOW.
- price: set the value of the price parameter to one of the price constants, or Bid or Ask.
- shift: set the value of the shift parameter to the index value of the candle (or bar) to test for the break.
 - Normally, the *shift* value is set to 0 and the price value is set to *Bid* or *Ask*. This will test the latest price against the trend line on the far right edge of the chart.
 - Alternatively, any candle on the chart can be tested for a break.

After connecting and configuring the *fnlsFiboLevelBroken* function, configure the Logic element to test for the break.

🖁 IsLevelBroken (Element type Logic)							
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IsLevelBroken Condition	n 1: _fnIsFiboLevelBroken1 EQUAL_	_TO true RETURN_TRUE					
Left operand		Right operand					
(fnlsFiboLevelBroken1	Select an operator:	true					
Choose	equal_to	E Choose					
Next: RETURN_TRUE -		Add					
Name:							
	IsLevelBroken						
?	Done 🔻 OK	>> Details					

The full drawing is shown below.



Building an Expert Advisor to draw and manage a Fibonacci retracement

Building an Expert Advisor to draw and manage a Fibonacci retracement

The *Fibonacci Trader Plug-in* can programatically draw a trend line on a price chart using the *fnDrawFibo* function.

To build an Expert Advisor that opens a BUY trade when a programatically drawn Fibonacci retracement level has been broken, refer to the drawing below:

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- Notice the two links coming from the <u>Start</u> Element. You can number any <u>link</u> by double-clicking it. The link number defines the order of execution.
- Following Link #1:
 - The <u>Function</u> Element "fnIsNewBar1" gets a true value if a new bar has just been formed. If this EA is attached to a 1-hour price chart, a new bar will be formed at the beginning of each hour.
 - The Logic Element "IsNewBar" compares the value of "fnIsNewBar1" to true.
 - If the "IsNewBar" Logic evaluates to true, then the Function "<u>fnDeleteFibo1</u>" deletes the Fibonacci retracement, and the Function "<u>fnDrawFibo</u>" draws a new Fibonacci retracement.
 - Note: The Fibonacci retracements are identified by their name (e.g. "MyFib")
- Following Link #2:
 - The <u>Function</u> Element "<u>fnlsFibLevelBroken</u>" get a true value if the specified level has been broken, from the specified direction.
 - The Logic Element "IsLineBroken" compares the value of "fnlsFibLevelBroken" to true.
 - If the "fnlsFibLevelBroken" Logic evaluates to true, then the function "fnOpenOrder1" opens a trade.
 - Note: The variable MaxTrades will prevent multiple trades from being opened if "<u>fnOpenOrder1</u>" executes more than once.



Four coordinates are required to draw a line in two dimensional space. For example, on a typical graph, using the <u>Cartesion</u> coordinate system, the coordinates are usually defined as (x1, y1) and (x2,y2).

The primary coordinates of the trend line are defined as the *StartBar*, the *StartPrice*, the *EndBar* and the *EndPrice*.

- StartBar: set the value of the StartBar parameter to the bar (or candle) where the trend line should begin.
 - NOTE: On a MetaTrader price chart, the currently forming candle is defined as candle 0 and the candle numbers increase to the left. Therefore, the StartBar is a larger number than the

EndBar!

- **StartPrice**: set the value of the **StartPrice** parameter to a <u>price value constant</u>. The price is the vertical location where the line begins. The **StartPrice** is the *price value of the* **StartBar**.
- **StartOffset**: set the value of the **StartOffset** parameter to a positive or negative integer value (for example:10, 20, ...). The **StartOffset** value moves the vertical start location up or down relative to the **StartPrice**.
 - *EndBar*: set the value of the *EndBar* parameter to the bar (or candle) where the trend line should end.
 - NOTE: A trend line is projected to the right *indefinitely* regardless of where the EndBar is located. The EndBar simply defines the angle of the line, not its actual end point.
- EndPrice: set the value of the EndPrice parameter to a price value constant. The price is the vertical location where the trend line ends. The EndPrice is the price value of the EndPrice.
 - NOTE: If the *EndPrice* is set as the Close, High, or Low of bar number 0, or to Ask or Bid, then the *EndPrice* may change value on each tick.
- EndOffset: set the value of the EndOffset parameter to a positive or negative integer value (for example:10, 20, ...). The EndOffset value moves the vertical end location up or down relative to the EndOffset.
- LineColor: optionally set the value of the LineColor parameter to a Color. The default is Black.
- DrawLabel: optionally set the value of the DrawLabel parameter to a true. (The default is false.) This will
 draw a label with the name of the trend line on the price chart. The label can be removed programatically
 using <u>fnDeleteAllLabels</u>, or manually from from the <u>MetaTrader tool bar</u>.
- DrawMarks: optionally set the value of the DrawMarks parameter to a true. (The default is false.) This will
 draw a vertical lines through the start and end bars. The vertical lines can be removed programatically using
 <u>fnDeleteAllVerticalLines</u>, or manually from from the <u>MetaTrader tool bar</u>.

