

FlexiChart 2.0

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Installation

There are three files to be installed as follows

The *FlexiCharts.ex4* file is to be copied to [your MetaTrader folder name]\experts

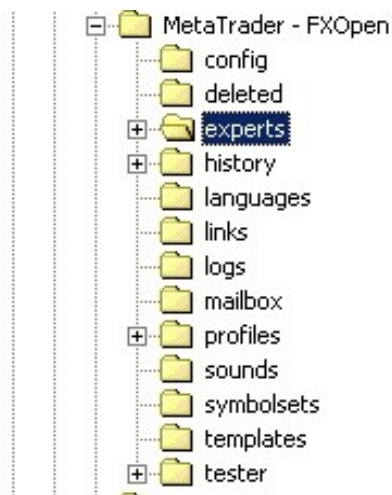


fig 1.1

In fig 1.1 the Metatrader folder name is “MetaTrader - FXOpen” and the experts folder has been selected.

The OffLine.ex4 and IOUtils.ex4 files are to be copied to [your MetaTrader folder name]\experts\libraries

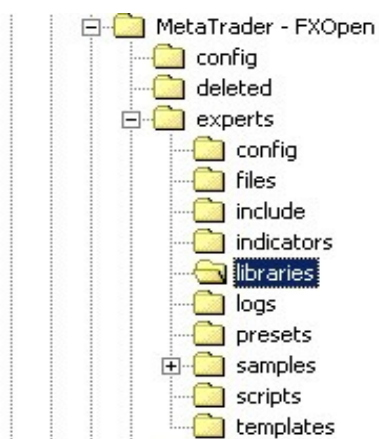


fig 1.2

In fig 1.2 the libraries folder has been selected.

MetaTrader Settings

To enable FlexiCharts to work the following settings must be enabled.

First open the options settings form by selecting *Tools* and then *Options* from the Menu. Then select the *Expert Advisors* tab.

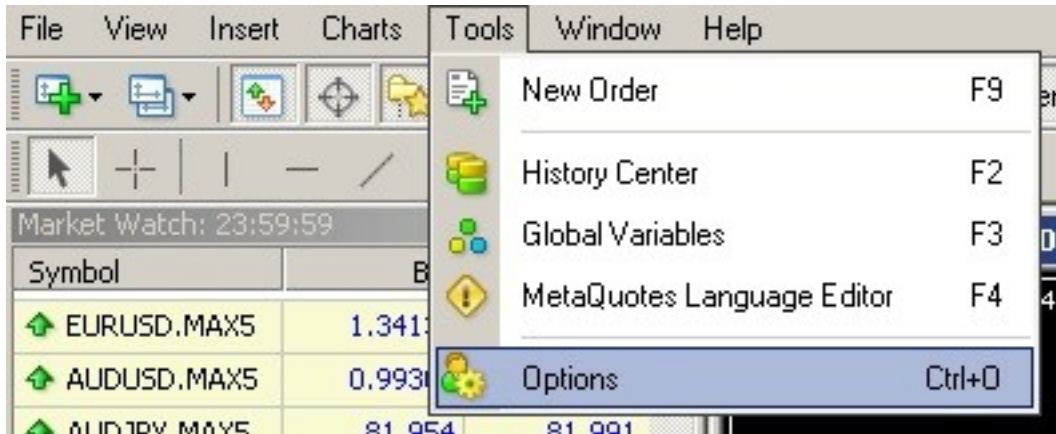


fig 2.3 Tools/Options

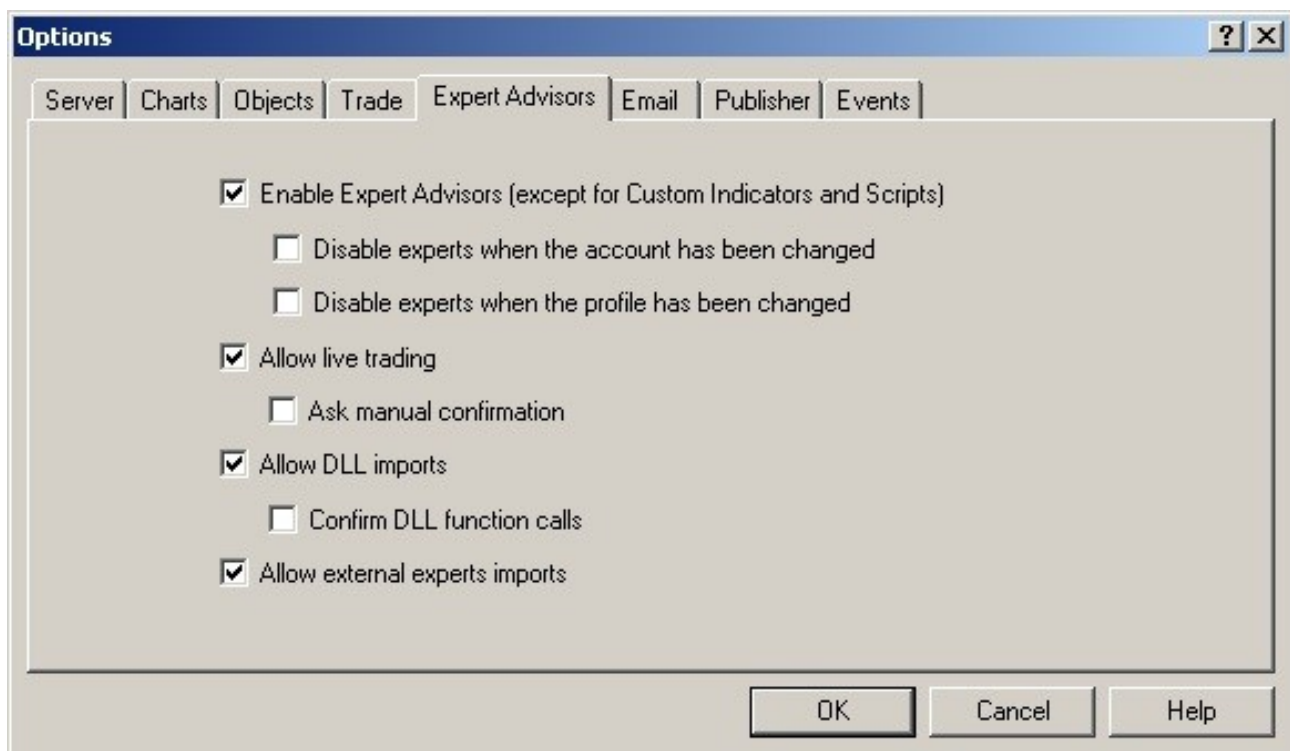


fig 2.4

Set all of the check boxes as per fig 2.4.

Setting Up a Data Feed Chart

MetaTrader 4 only enables a few time frames and chart types. FlexiChart offers an extended set by creating its own chart files. To create these files a chart is opened, the Flexichart EA is placed onto it and the options are chosen by the user. This chart is called the Data Feed Chart (DFM). This creates the offline history file and a chart of this file can now be opened. Note that a MetaTrader Expert Advisor (EA) is not a trading robot. It is a program that responds to various events within MT4. FlexiChart is NOT a trading robot.

The first step is to open a chart of the currency or market you wish to use. It does not matter what the time frame is. Since the purpose of this chart is to act as a data feed for our FlexiChart we do not need to waste our viewing space by having it large or in the foreground. You can ignore these property settings if you wish. In fig 3.1 a daily chart of EURUSD is opened and is reduced to a small size and an almost blank screen by having the following properties set. To open the properties for the chart right click on it and select properties.

Now set the properties of the chart as follows. The data feed chart must not be closed and if you choose a different profile then the EA will cease to function. This is a feature of MT4 and cannot be avoided. Provided the

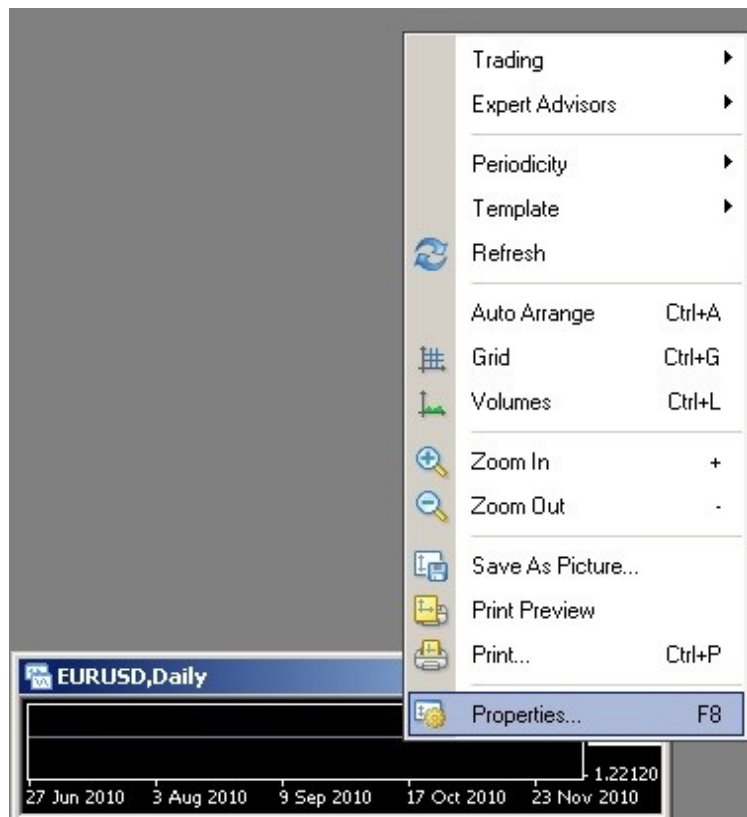


fig 3.1

Then select the *Common* tab and set as per fig 3.2

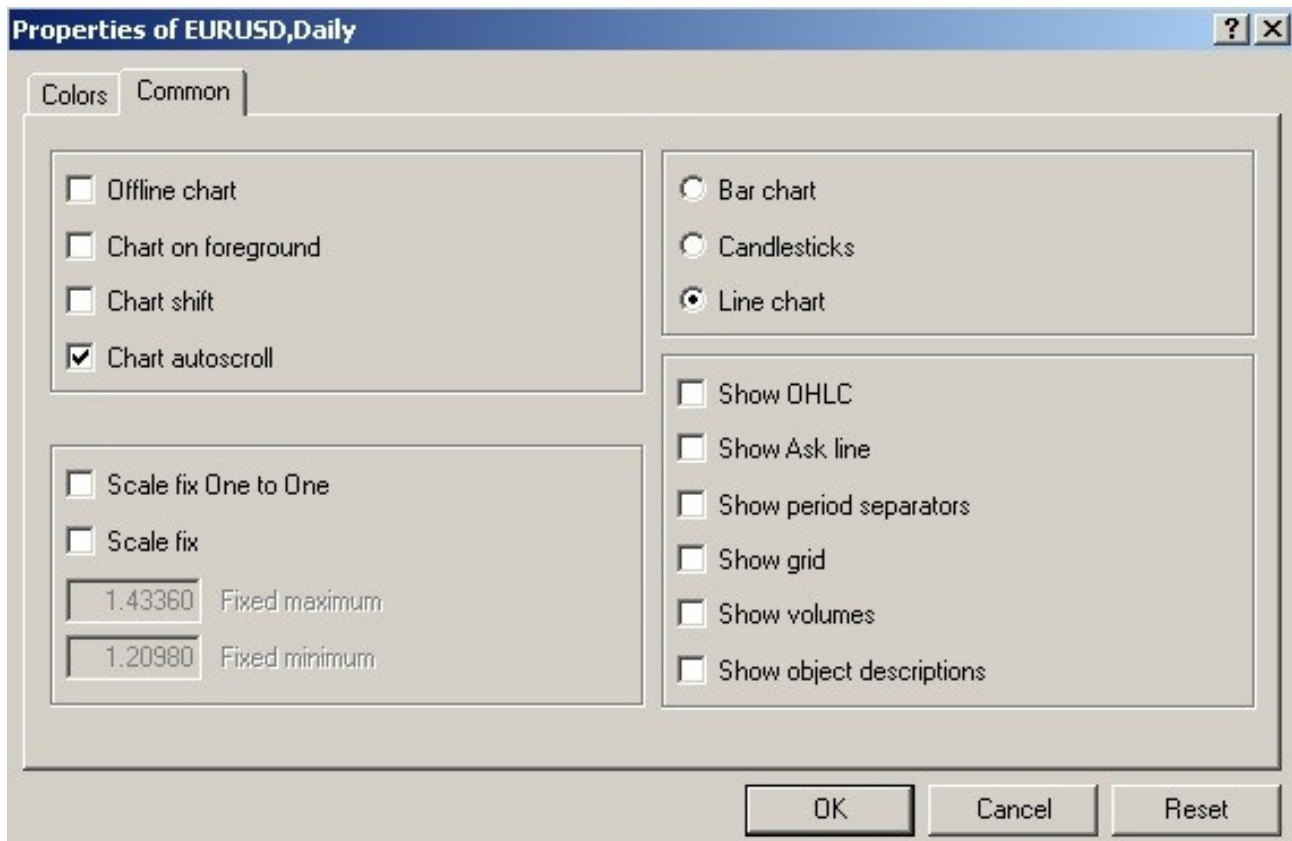


fig 3.2

Select the *Colors* tab and set the *Line graph*: property color to *None* as per figure 3.3 then close the properties form.

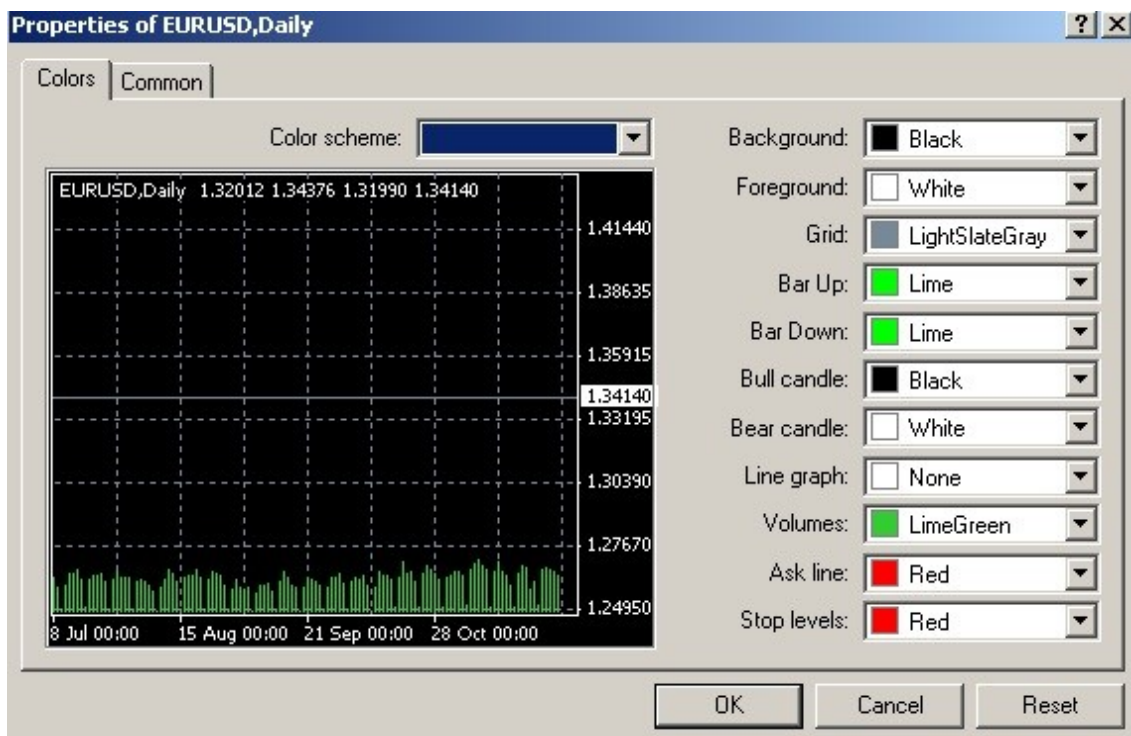


fig 3.3

Running the FlexiCharts EA

Check that there is an Expert Advisor named FlexiCharts in the Expert Advisors section in your Navigator window. If you cannot see it try closing MetaTrader and reopening it.

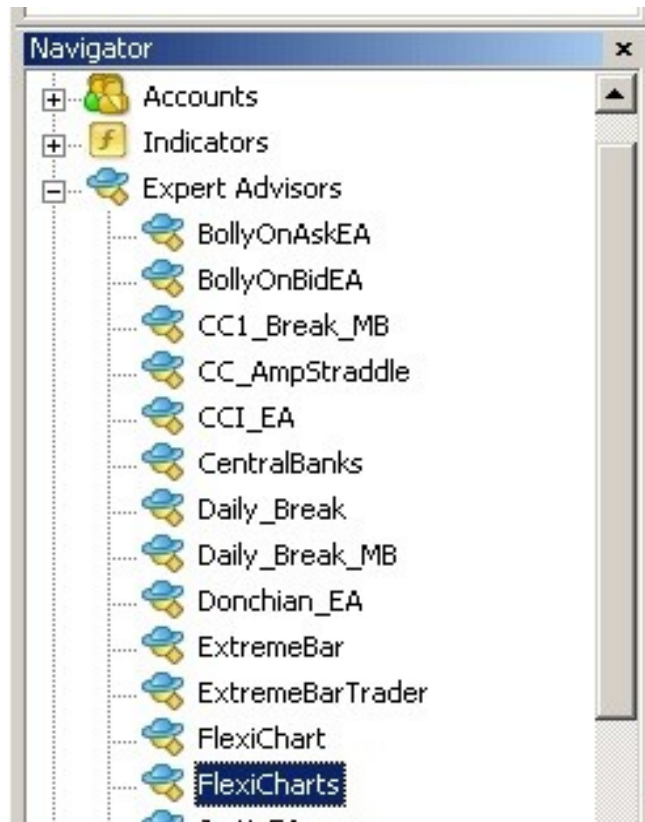


fig 4.1

In *fig 4.1* the FlexiCharts EA has been selected. It will be colored grey in your MT4 application. It is blue on mine as I have the source code.

The next step is to drag and drop the FlexiCharts EA onto the chart that we have opened. Upon doing so a properties form will open. Set the common tab as follows.

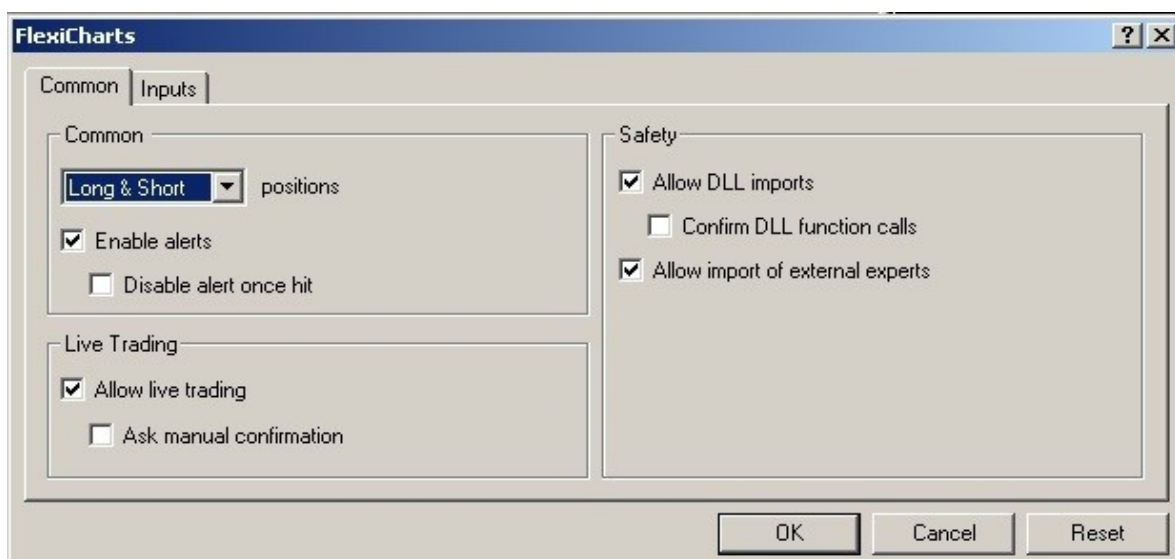
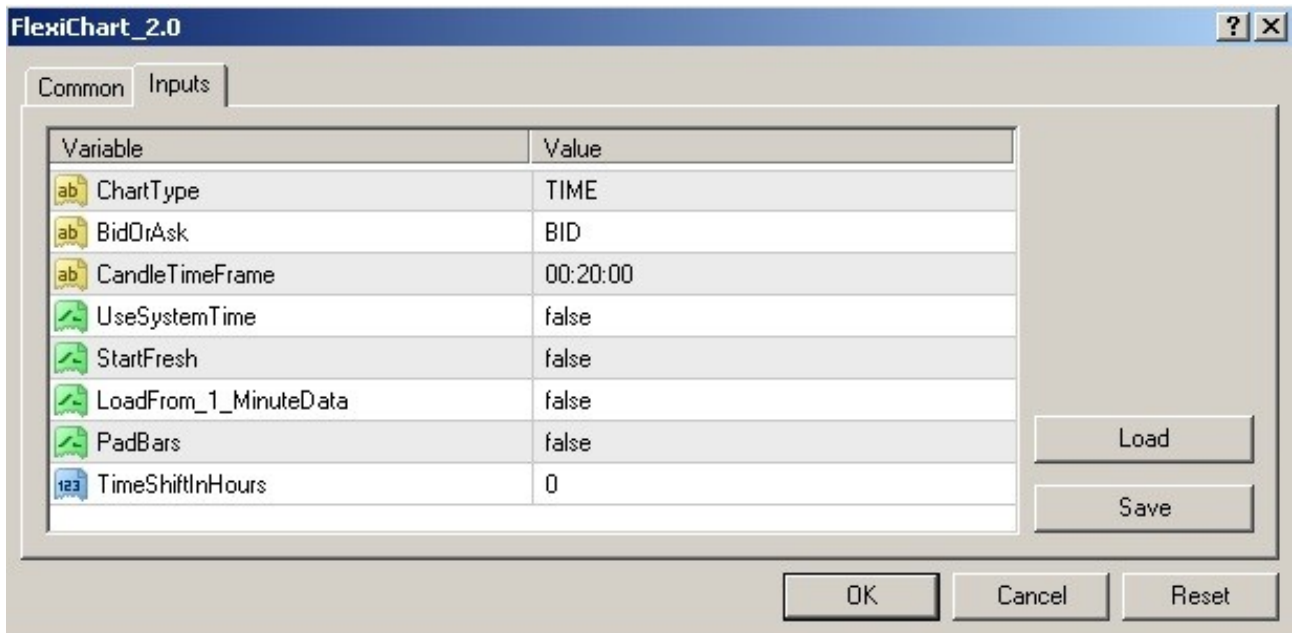


fig 4.2

FlexiCharts Options

The next step is to select the Inputs tab of the properties form.



Each property defines its own subset of inputs so you do not have to have all of the inputs set to the correct value. The following pages describe the chart types and detail their options.

TIME CHARTS:

Time charts are available in time frames that are a divisor of the number of seconds in one day. Thus there are 96 possibilities and these are listed at the end of this document. The following list the other options to be set for time charts. A time of 00:00:00 is a tick chart. When running a tick chart MetaTrader will show errors in the Experts tab. These can be ignored.

Variable	Options and Details
ChartType	TIME
BidOrAsk	Options = BID or ASK Default = BID This will draw the chart using the bid or the ask.
CandleTimeFrame	Must be in the form hh:mm:ss and be one of the allowed values.
UseSystemTime	Options are true or false This will use the computers system time as the time stamp for the data if set to true, or the incoming time stamp from your broker's MT4 server if set to false.
StartFresh	Options are true or false If set to true this will overwrite your existing FlexiChart history file for this setting and start a new one. Default is false.
LoadFrom_1_MinuteData	Options are true or false Read the detailed explanation
PadBars	Options are true or false UseSystemTime must also be set to true. When false no empty bars will be created. When true if there is no trading during that time a bar will be created using the close of the previous bar as the only price.
TimeShiftInHours	Options are an integer from a minimum of -23 to a maximum of +23 This will adjust the timestamp of the data in the history file. If you wanted to have no Saturday or Sunday bars on your chart then most users would need to adjust the time to achieve this.

C_TIME CHARTS:

C_Time (Combined_Time) charts are a combination of the bid and the ask. The open and close of the bar are the bid, the High is the maximum of the bid and ask and the Low is the minimum of the bid and ask. They are available in the same time frames as time charts that are a divisor of the number of seconds in one day. Thus there are 96 possibilities and these are listed at the end of this document. The following list the other options to be set for time charts.

These charts are good for scalpers who need to see the complete picture of price action on the screen. With combined charts you can see where to accurately place stops and they can be a very useful tool.

Variable	Options and Details
ChartType	C_TIME
BidOrAsk	ignored
CandleTimeFrame	Must be in the form hh:mm:ss and be one of the allowed values.
UseSystemTime	Options are true or false This will use the computers system time as the time stamp for the data if set to true, or the incoming time stamp from your broker's MT4 server if set to false.
StartFresh	Options are true or false If set to true this will destroy your existing flexichart history file for this setting and start a new one. Default is false.
PadBars	Options are true or false UseSystemTime must also be set to true. When false no empty bars will be created. When true if there is no trading during that time a bar will be created using the close of the previous bar as the only price.
TimeShiftInHours	Options are an integer from a minimum of -16 to a maximum of 16 This will adjust the timestamp of the data in the history file. If you wanted to have no Saturday or Sunday bars on your chart then most users would need to adjust the time to achieve this.

Loading History from One Minute Data

In order to fill your new file with data it is possible to use the MT4 one minute file as the source. When choosing a time frame greater or equal to one minute the open, high, low and close of the one minute bar will be used to build your history file. If the time frame is less than one minute then only the close of the one minute bars will be used.

Step 1: In order to ensure that your history is as complete as possible it is necessary to close MT4 and then reopen it. This will flush the file memory and bring the one minute files up to date.

Step 2: Set your ChartType, BidorAsk, CandleTimeFrame, UseSystemTime and TimeShiftInHours as required.

Step 3: Set the Start Fresh option to true;

Step 4: Set the “LoadFrom_1_MinuteData” option to true.

Please note the for time frames less than one minute the bars created do not accurately represent the price history as they were only built from the close of the minute. When using the smaller time frames it is better to let FlexiCharts build the file from scratch.

Padding Bars/Candles

If you want the chart to contain padded bars then the following options must be set.

UseSystemTime = true

PadBars = true

It is strongly recommended that you set your computers system time to be the same as your brokers server time. Then you do not have to calculate and change the value for TimeShiftInHours if you want the chart time to match the server time.



fig 9.1 a padded 5 second chart

Possible Time Frames

00:00:00	00:00:01	00:00:02	00:00:03
00:00:04	00:00:05	00:00:06	00:00:08
00:00:09	00:00:10	00:00:12	00:00:15
00:00:16	00:00:18	00:00:20	00:00:24
00:00:25	00:00:27	00:00:30	00:00:32
00:00:36	00:00:40	00:00:45	00:00:48
00:00:50	00:01:00	00:01:04	00:01:12
00:01:15	00:01:20	00:01:30	00:01:36
00:01:40	00:01:48	00:02:00	00:02:08
00:02:15	00:02:24	00:02:30	00:02:40
00:03:00	00:03:12	00:03:20	00:03:36
00:03:45	00:04:00	00:04:30	00:04:48
00:05:00	00:05:20	00:06:00	00:06:24
00:06:40	00:07:12	00:07:30	00:08:00
00:09:00	00:09:36	00:10:00	00:10:40
00:11:15	00:12:00	00:13:20	00:14:24
00:15:00	00:16:00	00:18:00	00:19:12
00:20:00	00:22:30	00:24:00	00:26:40
00:28:48	00:30:00	00:32:00	00:36:00
00:40:00	00:45:00	00:48:00	00:53:20
00:57:36	01:00:00	01:10:30	01:20:00
01:30:00	01:36:00	02:00:00	02:24:00
02:40:00	03:00:00	04:00:00	04:48:00
06:00:00	08:00:00	12:00:00	24:00:00