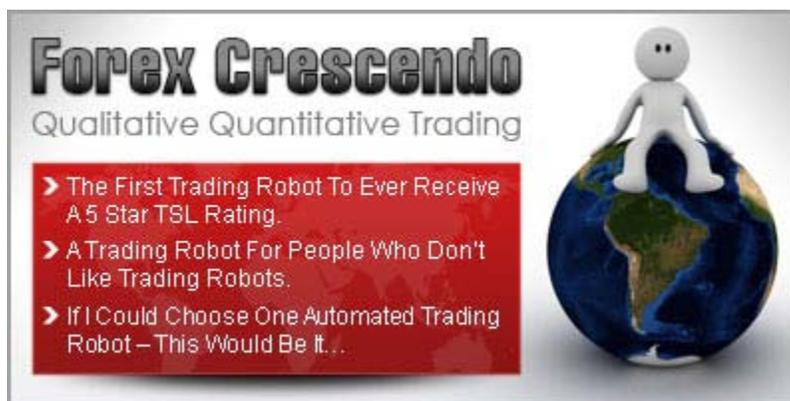


# Forex Crescendo

## *User Guide & Installation Manual*

*Brought to you by:*



**Forex Crescendo**  
Qualitative Quantitative Trading

- The First Trading Robot To Ever Receive A 5 Star TSL Rating.
- A Trading Robot For People Who Don't Like Trading Robots.
- If I Could Choose One Automated Trading Robot – This Would Be It...

The graphic features a white 3D humanoid figure sitting on a globe of the Earth. The text is presented in a clean, professional layout with a red background for the bullet points.

*Written by: Andrea Salvatore*

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## CRESCENDO EA v1 User Manual

### INTRODUCTION

The Crescendo EA is a piece of software made to make your life as an automatic trader, easier and more profitable. It is a very special EA as it can be used in two ways or modes. Both of which are profitable.



The first mode is **fully automatic**. Most of you will choose this option as it the option that is easier to setup and manage. It requires almost no time to install (less than 10 minutes to complete the entire process) and no time to manage. You only need to monitor your machine to ensure that it is running properly every once in a while.

That is how we tested it over the past few months with very good results. We achieved an average monthly gain of around 15%... without even touching it!



The second mode is **semi-automatic**. That means that you can use Crescendo EA as an automatic trading tool. In the *How to use Crescendo EA* section you'll find more details on that, based on my last year's experience trading it. In general, using this mode means that you'll make part of the decisions that are made by Crescendo automatically

in the "fully automatic" mode. You have the option to change almost every parameter of the Crescendo EA strategy as well as force it to trade in the direction that you think is more profitable.

Whichever mode you decide to use (either **fully automatic** or **semi-automatic**), I'm sure it will be profitable. So let the journey begin!



## HOW IT WORKS

The Crescendo EA trades on two currency pairs: the GBPUSD and the GBPJPY.

Based on the **frequency** setting (look the *Configuration Process* chapter), at specific times of the day, the Crescendo EA checks if the conditions to open an order are met. It does that for both the currency pairs used for trading.



If there are no previous open orders, it opens one in the direction suggested by the trend algorithm. If there are already other open orders, and if the distance from the last open order is greater than the number of pips set in the **order\_step** setting, it opens a new order in the same direction with the same lot size.

As soon as the profit of all the open orders for each pair is equal to or greater than the **target\_profit**, it closes all the open orders for that pair.

On average, around 2 trades a day are opened and closed. But you can usually expect between 0 up to 4 trades a day with the default **frequency** setting (4 = every 12 hours).

If the total \$ value of all the open orders (both the currency pairs) is in loss of more than the **max\_total\_DD** percentage value, all the orders are closed.

This is a "safety net" in case of a huge sudden change of trend.

This has already happened during the demo and live testing periods but the **max\_total\_DD** has never been reached, thanks to the fact that the lot size used for each order was small enough. The Crescendo EA also recovers from those situations very quickly, usually within a few days.

In the "counter trend" phases it is crucial to have enough margin to be able to withstand even the largest moves.

For example, during the big drop during the first few days of May 2010, the EA suffered a temporary max draw down of around 20% and it didn't even touch our initial investment as it was the 3rd month of trading and we were already in profit of about 40%.



Note that the profit check and the draw down check are made in real time. The **frequency** setting determines only how often Crescendo EA will check the market for conditions to open new trades.

## WHAT CAN YOU EXPECT FROM THE CRESCENDO EA

### Summary:

Deposit/Withdrawal:	7 958.70	Credit Facility:	0.00		
Closed Trade P/L:	10 531.90	Floating P/L:	-191.26	Margin:	93.64
Balance:	18 490.60	Equity:	18 299.34	Free Margin:	18 205.70

### Details:



Gross Profit:	17 357.33	Gross Loss:	6 825.43	Total Net Profit:	10 531.90
Profit Factor:	2.54	Expected Payoff:	29.09		
Absolute Drawdown:	0.00	Maximal Drawdown:	638.88 (4.92%)	Relative Drawdown:	5.02% (521.02)
Total Trades:	362	Short Positions (won %):	127 (81.89%)	Long Positions (won %):	235 (74.89%)
		Profit Trades (% of total):	280 (77.35%)	Loss trades (% of total):	82 (22.65%)
Largest		profit trade:	450.22	loss trade:	-379.35
Average		profit trade:	61.99	loss trade:	-83.24
Maximum		consecutive wins (\$):	23 (958.48)	consecutive losses (\$):	4 (-638.88)
Maximal		consecutive profit (count):	958.48 (23)	consecutive loss (count):	-638.88 (4)
Average		consecutive wins:	4	consecutive losses:	1

The average return with the default settings should be between 5-15% a month with a maximum temporary draw down of around 25% of the balance. The closed order draw down shouldn't be larger than 5-6%.

This is not a "stop loss" in the traditional sense. This is the "worst case scenario" maximum loss. This is something that CAN be hit only on "Black Swan" days like, September 11th or something similar.

Usually the temporary draw down will be much lower than 10%. During the first days of May when a huge, sudden drop occurred (this was a greater than a thousand pip drop in a very short time) we reached a maximum draw down level of around 20%.

On average the EA should open and close around 2 orders a day. But that ranges from 0 to 4 (with the EA's frequency parameter set to 4).

The Crescendo EA will at times place counter-trend trades, especially usually during periods when the long term market trend is changing direction. That means that it can open a number of orders for each pair above the usual average of 1-3 orders per currency pair.

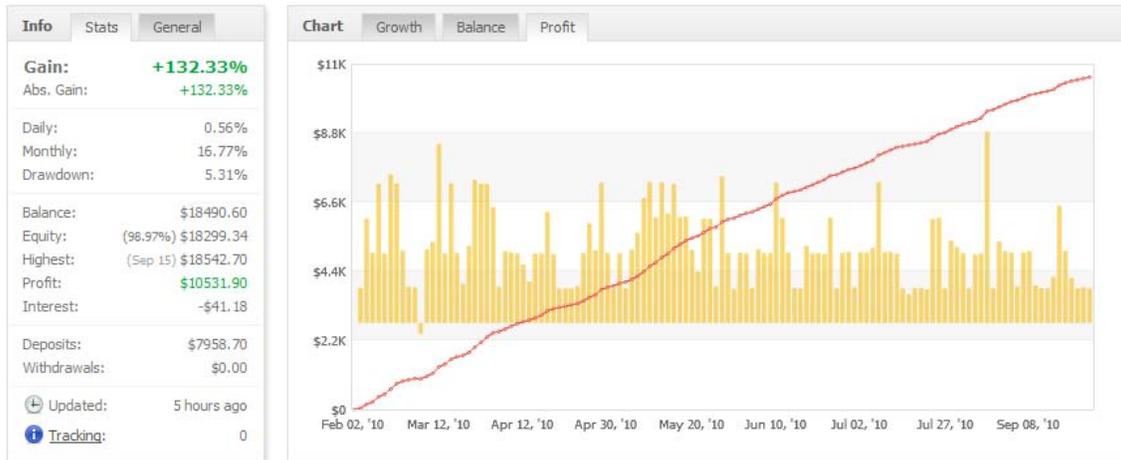
If you set the lots used to open trades to the suggested size you should not have any problem. It is only a matter of time before everything is closed in profit (usually within a few days).

Here you can see further performance statistics from Crescendo on our live trading account:



**Advanced Statistics** Trades Summary Hourly Daily

Total Trades:	362	Long Trades:	235	Best Trade(\$):	(May 10) 450.30
Trades Won:	<div style="width: 66%;"></div>	Short Trades:	127	Worst Trade(\$):	(Aug 30) -379.86
Trades Lost:	<div style="width: 34%;"></div>	Longs Won:	<div style="width: 50%;"></div>	Best Trade(pips):	(May 10) 450.3
Total Pips:	10003.0	Shorts Won:	<div style="width: 50%;"></div>	Worst Trade(pips):	(Apr 27) -326.4
Total Profit:	\$10531.90	Average Win:	58.64 pips / \$62.06	Average Loss:	-78.25 pips / -\$82.96
Total Lots:	36.2	Profit Factor:	2.55	Commissions:	\$0.00



**Advanced Statistics** Trades Summary Hourly Daily More

Currency	Longs			Shorts			Total			Won (%)	Lost (%)	
	Trades	Pips	Profit(\$)	Trades	Pips	Profit(\$)	Trades	Pips	Profit(\$)			
GBPJPY	120	3100.7	3426.08	73	2068.8	2313.50	193	5169.5	5739.58	151 (78%)	42 (22%)	📄
GBPUSD	115	3148.7	3148.70	54	1684.8	1684.80	169	4833.5	4833.50	129 (76%)	40 (24%)	📄

## INSTALLATION PROCESS

The Crescendo EA comes with an easy installer. The installation process shouldn't take longer than 5 minutes to be accomplished.

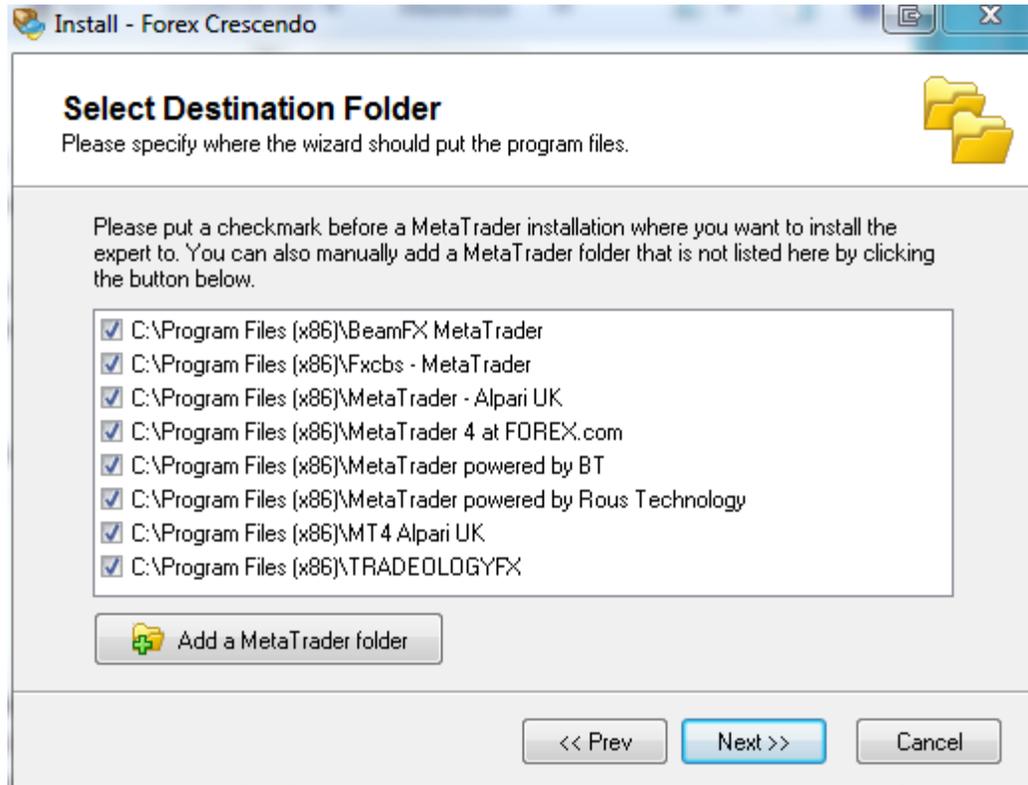
1. Close all MT4 platforms if open
2. Run the installer.



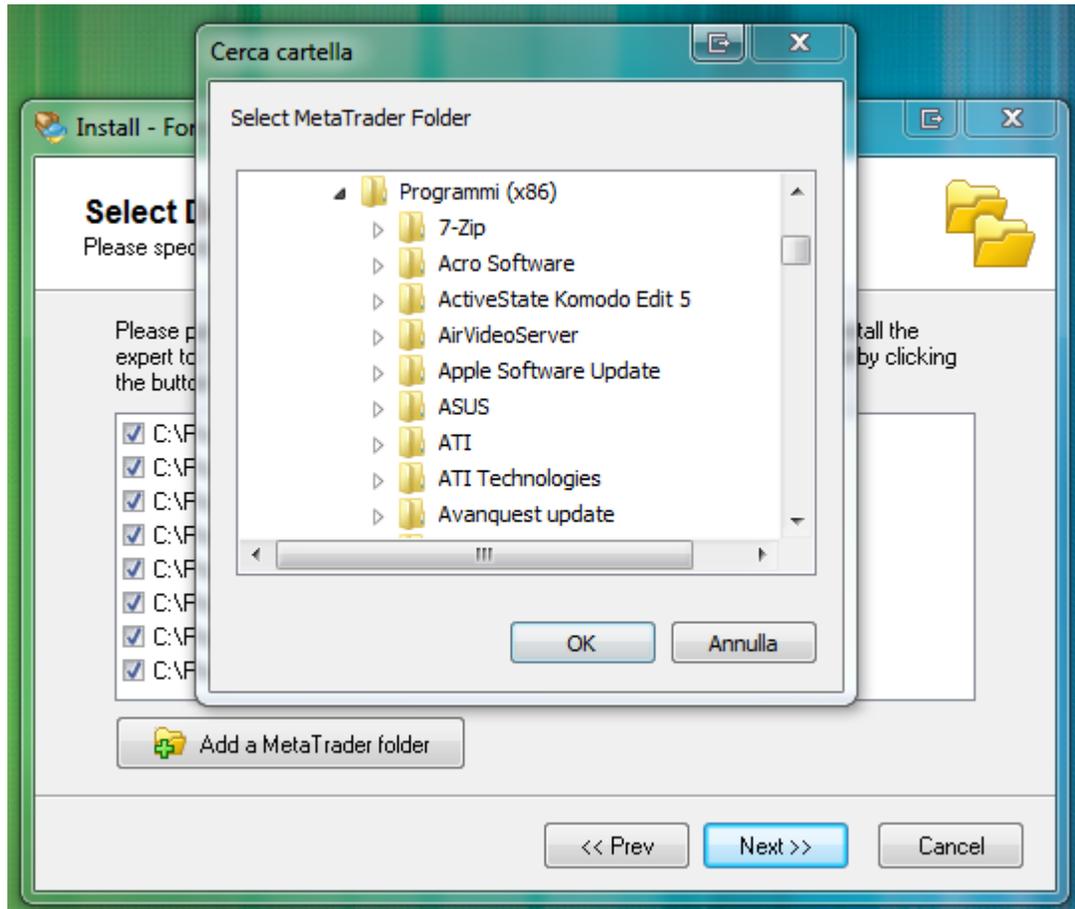
3. Accept the agreement.



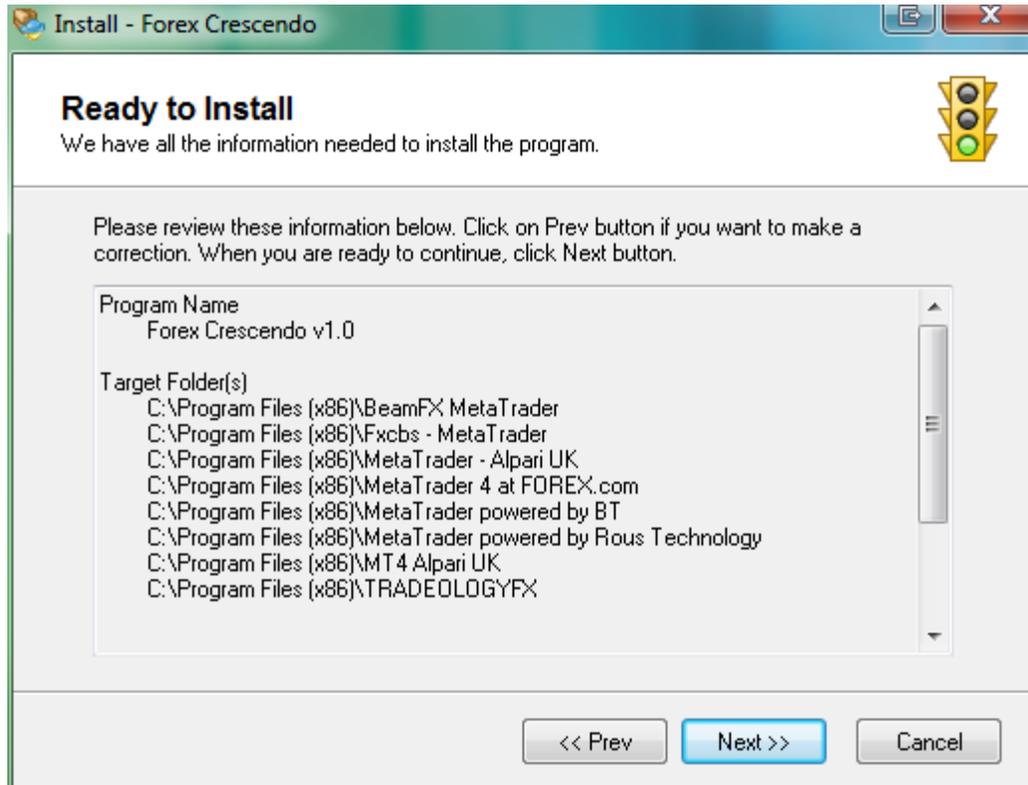
4. Select the MT4 platforms where you want Crescendo EA to be installed.



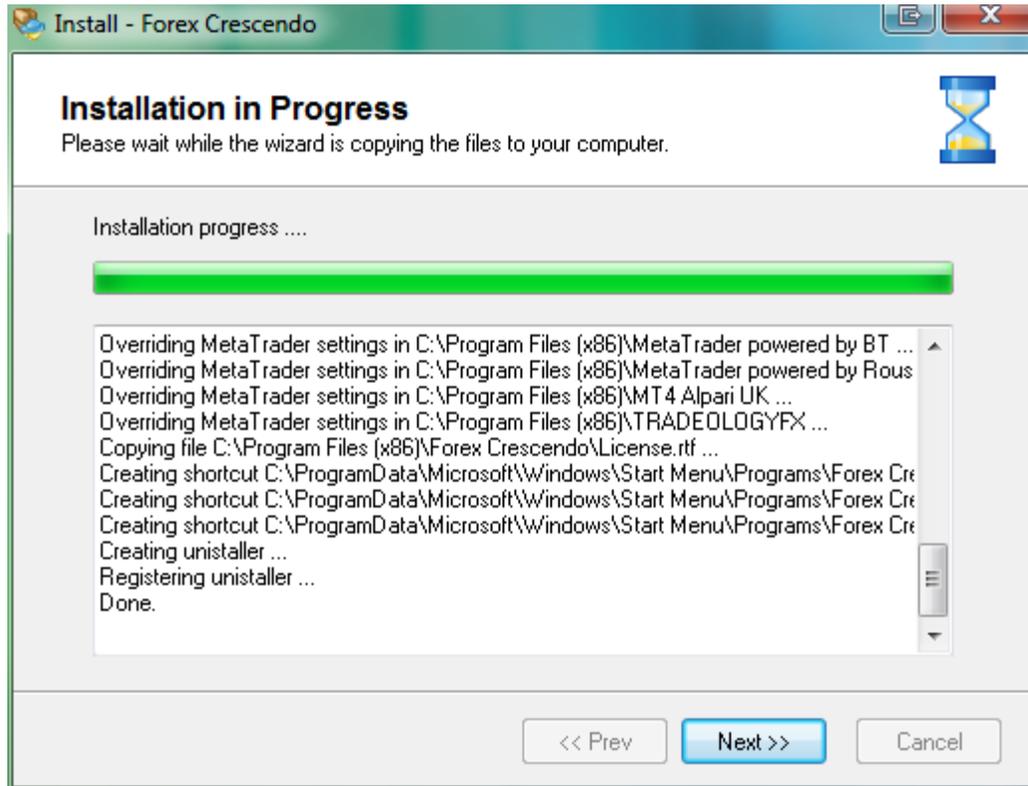
5. If the MT4 directory is not listed, you can add it using the "Add a MetaTrader folder" button.



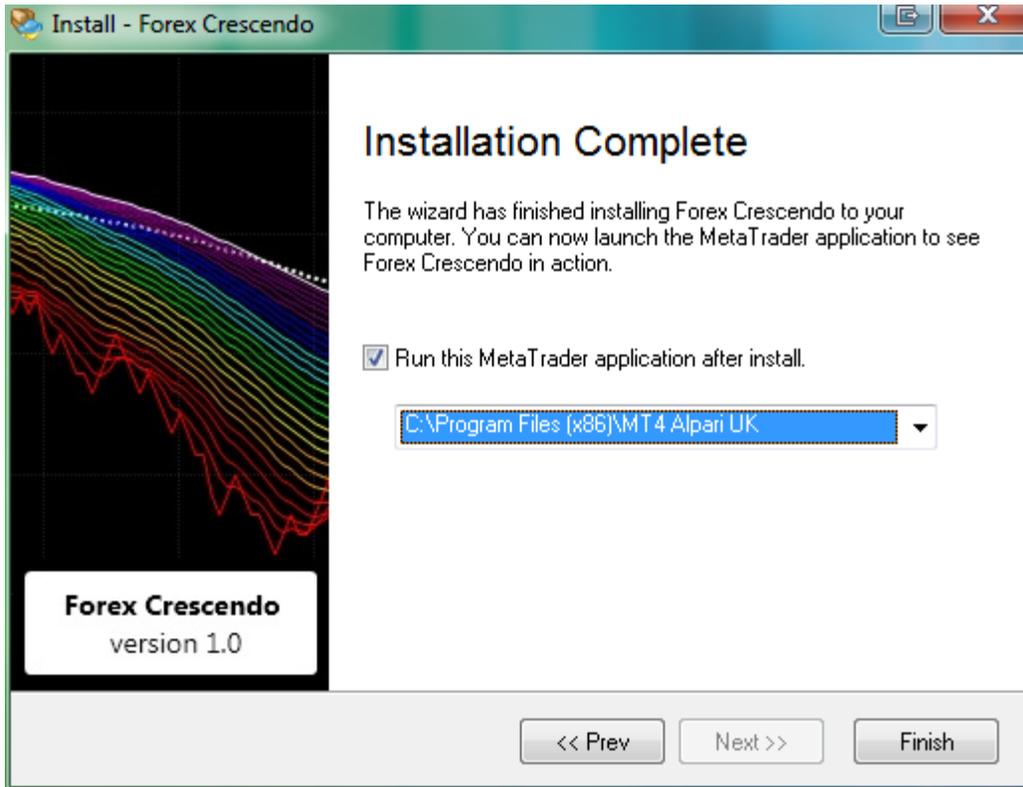
6. Review the information.



7. Wait for the installation progress to arrive to the end (it should display "Done." in the text window).



8. Run the MetaTrader 4 platform.

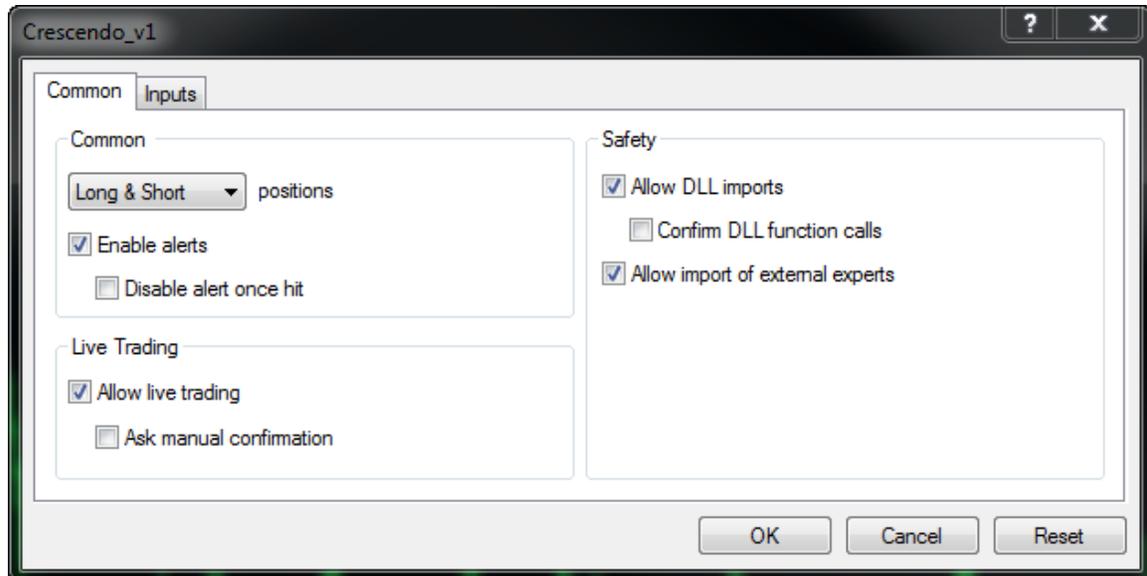


Once the MT4 platform is running, open a GBPUSD chart. No preference for the timeframe, choose any time frame you want. **The Crescendo EA can be applied to any timeframe.**

Set all the options and then do the same for the GBPJPY pair. Open a GBPJPY chart (any timeframe) and apply the Crescendo EA to it just like you have done with the other currency pair.

## CONFIGURATION PROCESS

Once you apply the EA to the chart you should see a window as shown below. On the **Common** tab make sure that you have the following options ticked:



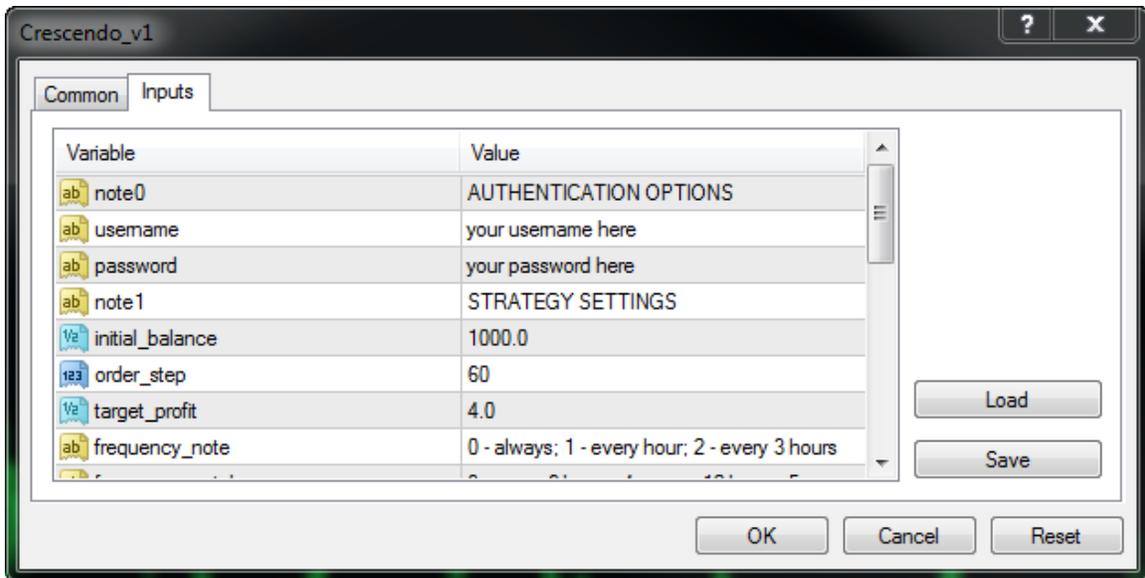
- Enable Alerts
- Allow live trading
- Allow DLL imports
- Allow import of external experts

All these options must be checked.

The installer should have set them automatically but in case they are not, make sure that they are checked or the Crescendo EA won't work properly and won't be able to place any trades.

Now click on the **Inputs** tab.

The Crescendo EA has the following options (see the image on the following page):



### AUTHENTICATION OPTIONS

**username** (Enter your email address here)

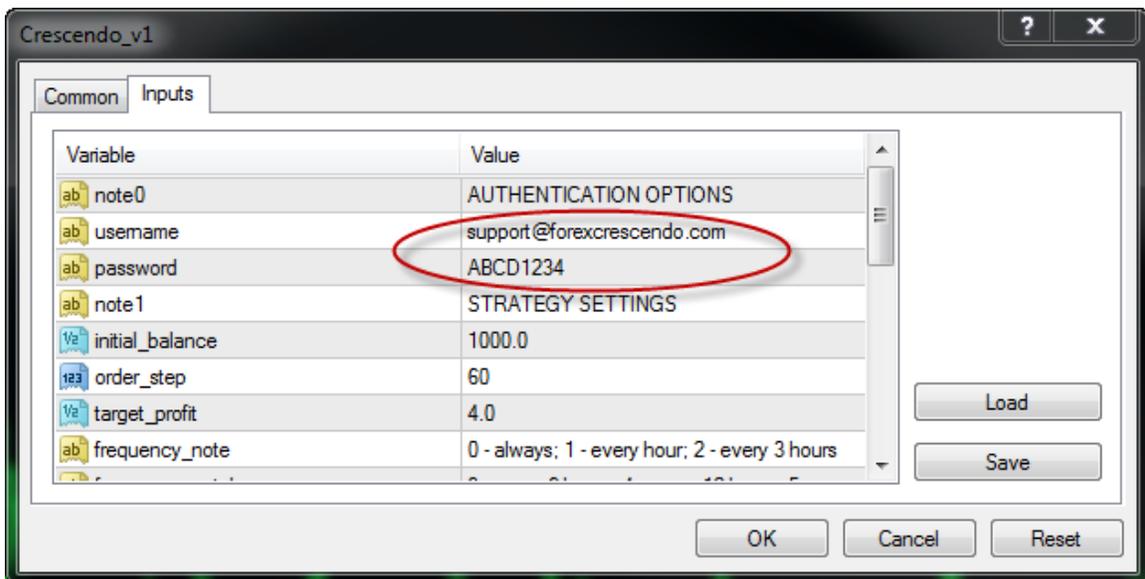
This is the email address you enter in the "Login ID" box to login to the download page.

**Your login ID is the email address you used during the purchase.**

**password** (Enter your password here)

This is the Clickbank receipt number you enter in the "Password" box to login to the download page.

**Your password is your Clickbank receipt number.**



## STRATEGY SETTINGS

### **initial\_balance** (1000)

This is the balance the EA will consider as available for trading. Many of the money management settings depend on this value so it is important that you set it the right way.

This should be a value **equal to or lower** than your account balance.

**Don't use values higher than your account balance, otherwise, the lot size used to open your orders and the maximum draw down value won't be calculated in the right way and you will end up risking more than you should.**

### **order\_step** (60)

This is the minimum amount of pips between the last open order and the current that is used for Crescendo EA to open a new order.

### **target\_profit** (4)

This is the target profit in dollar for the group of orders for each single currency pair. The target should be based on the initial\_balance value and on the lot size (you can read more about this in the upcoming chapter). So by default the take profit target on a \$1000 account using 0.01 lots is 4\$.

### **frequency** (4)

This is the frequency the Crescendo EA will use to check if the conditions to open new trades have been met. They frequency can go from 0 to 5:

- 0 - check is always on
- 1 - check is made every 1 hour
- 2 - check is made every 3 hours
- 3 - check is made every 6 hours
- 4 - check is made every 12 hours (default)
- 5 - check is made every 24 hours

We suggest you to use the default value of 4 (every 12 hours) as this is the setting that works best in almost all market conditions.

### **dd\_based\_frequency** (false)

With this strategy, the "frequency" setting is AUTOMATIC. The Crescendo will adapt its trades based on the level of draw down of the SINGLE currency pair. This will allow us to have two pairs trading with different frequencies. It works based on the "dd\_step".

The pair will start with a frequency 0 (so real time). So it'll open a new trade immediately when the conditions are met. Remember that if you set a trend magnitude filter, the trend should be of that magnitude or more to open the trade. As soon as the first trade is open, the frequency switches to 1 (1 hour), and it'll automatically adapt based on the "dd\_step".

**dd\_step (1)**

This is the percentage step that will be used to calculate the frequency.

So if for example, we set a dd\_step of 2 (%), the frequency will be 1 for the total orders' draw down between 0%-2%; frequency 2 for a draw down between 2%-4%; frequency 3 for a draw down between 4%-6%; frequency 4 for a draw down between 6%-8%; and frequency 5 for a draw down higher than 8%.

**use\_mtf\_trend (true)**

This option enables the multi time frame based trend algorithm. Read more about that in its specific chapter of the manual.

**trend\_threshold (3)**

This is the minimum "magnitude" used for filtering entries.

**trend\_period\_1 (60)**

**trend\_period\_2 (240)**

**trend\_period\_3 (1440)**

**trend\_period\_4 (10080)**

**trend\_period\_5 (43200)**

Those are the 5 MT4 time frames used to calculate the multi time frames based trend. This value is in minutes and by default is: 1 hour (60), 4 hours (240), daily (1440), weekly (10080) and monthly (43200). We suggest that you do not modify them.

**close\_on\_counter\_trend (false)**

If set to "true", we instruct the Crescendo to close all the open trades and open a new one in the opposite direction if it spots that the trend has changed. This means that the trend score is above the set value but in the opposite direction of the initial trend upon entry.

For example, if you set the "close on counter trend" magnitude threshold to 5 then you were entered long with a +3 trend, it'll close all the open long orders and will open a new short order as soon as it spots a -5 trend. Vice versa, if you entered short with a -3 trend, it'll close all the open short orders and will open a new long order if it spots a +5 trend.

You can read more on that in the specific chapter.

**counter\_trend\_threshold (5)**

This is the magnitude level used to filter counter-trends.

**manual\_trend (false)**

If this is set to "false" (default), the EA will open trades in the direction given by the internal trend algorithm.

If set to "true" you will force the EA to open trades only in a specific direction. The direction is given by the **trend\_direction** options.

Variable	Value
 initial_balance	1000.0
 order_step	60
 target_profit	4.0
 frequency_note	0 - always; 1 - every hour; 2 - every 3 hours
 frequency_noteb	3 - every 6 hours; 4 - every 12 hours; 5 - e...
 frequency	4
 manual_trend	false
 trendnote	1 - long; -1 short

**trend\_direction (0)**

If the **manual\_trend** option is set to "true" then the EA will open new trades in the direction given here.

A value of "1" means that it will open only long trades. A value of "-1" means that it will only open short trades. If you put a value different from "1" or "-1" the EA won't open any new trades.

**trend\_following (false)**

If this parameter is set to "true", the Crescendo will open a new order as soon as a set of orders is closed. This can increase the gains a lot in situations where there are strong trends because orders are opened and closed in profit one after the other without waiting for the next check to occur based on the frequency setting. This option is not needed in case the frequency is automatically determined, based on the DD level (dd\_based\_frequency).

**use\_stop\_loss (false)**

If set to "true", the Crescendo will add a hard stop loss to every order sent. This is against the strategy, so we strongly suggest that you do not enable it.

**stop\_loss (500)**

This is the amount of pips for the hard stop loss.

**MONEY MANAGEMENT****lot\_size (0.01)**

This is the lot size used for opening trades. The suggested lot size is 0.01 lots for each \$ 1.000 in the account.

So for example, if you have a \$ 1.000 account you should leave it to the default value of 0.01 lots. If you have a \$ 2.000 account you can change it to 0.02. On a \$10.000 account you can change this value to 0.1 lots.

**We strongly suggest for you to use the suggested lot size (or less) as this is the setting with the right balance between risk and**

**performance. If you want to risk less, use a lower lot size and everything will be scaled accordingly.**

#### **risk\_percent (0)**

If you want the lot size to be automatically adjusted based on the available equity value you can change this setting to a non-0 value. For example: 1.

**The suggested value is "1" as it is the value that we have tested, and that is the best balance between risk and performance.**

Note: This does not mean that you are risking 1% (or n%) of you account but that you're using 1% (or n%) of the available equity to open an order.

#### **max\_total\_DD (30)**

As described in the *How it Works* section of the manual, Crescendo EA uses global risk management. This percentage is the maximum loss of the actual balance (**initial\_balance** + profits made until then) that the EA can stand before closing all the orders for all the pairs.

#### **slippage (5)**

This is the maximum deviation allowed between the price that the Crescendo EA is using to open the order, and the price that the broker is giving to open the order.

Variable	Value
lot_size	0.01
risk_percent	0.0
max_total_DD	30.0
slippage	5.0
note3	EA SETTINGS
GBPUSD_Magic_Number	130907
GBPJPY_Magic_Number	300610
suffix	

#### **linear\_martingale (false)**

If you set this parameter to "true", the additional orders will be opened with increasing lot sizes based on a linear sequence. So if you set the lot\_size to 0.01, additional orders will be opened with 0.02 lots, then 0.03 lots, 0.04 lots, etc.

#### **fibonacci\_martingale (false)**

If you set it to "true", additional orders are opened with increasing lot sizes based on the Fibonacci sequence. So if you set the lot\_size to 0.01, additional orders will be opened with 0.02 lots, then 0.03 lots, 0.05 lots, 0.08 lots, 0.13 lots, etc.

**exponential\_martingale (false)**

If you set it to "true", additional orders are opened with increasing lot sizes based on an exponential sequence, depending on the "exponential\_factor" (see below). So if the exponential\_factor is 2 and you set the lot\_size to 0.01, additional orders will be opened with 0.02 lots, then 0.04 lots, 0.08 lots, 0,16 lots etc.

**exponential\_factor (2)**

This is the multiplication factor used by the "exponential\_martingale" option. By default, it is 2 (so every time, the lot size is doubled) but can be any number like 1.1 (so every additional order's lot size is 10% more than the previous one), or 1.5 (so every additional order's lot size is 50% more than the previous one).

## EA SETTINGS

**GMT\_time\_shift**

This is the shift in hours from the GMT time. It can go from -11 to +11, and it will shift all the entries by the amount of hours. If you leave it to 0, it'll use GMT time. If you put 1, for example, it'll add one hour to the actual GMT time.

**GBPUSD\_Magic\_Number (130907)**

This is a sort of "id number" used to identify all the orders sent for the GBPUSD currency pair. It is important that no other EA is running on the same account with the same magic number. If so, change one of them.

**GBPJPY\_Magic\_Number (300610)**

This is a sort of "id number" used to identify all the orders sent for the GBPJPY currency pair. It is important that no other EA is running on the same account with the same magic number. If so, change one of them.

**You don't need to edit those two numbers unless you want to make sure that they are the same for both currencies on the two charts. This allows the money management to work by calculating profits/losses for both.**

**randomize\_entry\_minute (false)**

If set to "true", this parameter will let the Crescendo add a random number of minutes (up to 10) to the beginning of the hour so that its behaviours are a little more "disguised".

**comment**

This is the comment added to every order made by Crescendo EA. To this comment the EA automatically adds the Magic Number.

### hide\_comment

If you want Crescendo EA not to send any comment along with orders set that option to "true". This way the trades made by Crescendo EA are more difficult to be distinguished from any manual trades.

## CRESCENDO EA INTERFACE

Once you apply the Crescendo EA to a chart, after the authentication process, you should see a text interface explaining what's happening. Let's go through it and see what it tells us:

```
=====  
Crescendo EA v1.0  
www.forexcrescendo.com  
=====  
Authentication: OK  
Status: RUNNING .....  
=====  
Initial balance: $ 1000.00  
Closed Orders Profit: $ 0.00  
EA Balance: $ 1000.00  
Max DD: 30.00% ($ 300.00)  
=====  
GBPUSD Orders: 0  
GBPJPY Orders: 0  
GBPUSD Target: $ 4.00  
GBPJPY Target: $ 4.00  
GBPUSD Orders Value: $ 0.00  
GBPJPY Orders Value: $ 0.00  
TOTAL Open Orders Value: $ 0.00  
=====  
Lot Size: 0.01 lots  
Slippage: 5.00 pips  
=====  
Trend: AUTOMATIC  
=====  
Frequency: 4 (12H)  
Server time: 22:59:59  
01:01 to next market check  
=====
```

The first section shows us the authentication status (it should display "OK") and the EA status (should display "RUNNING"). In the status you should also see a set of dots moving so that you have feedback about the EA that is running.

```
=====  
Authentication: OK  
Status: RUNNING .....  
=====
```

The second section is the one dedicated to the balance/gain/max loss information. Here you'll see the **initial\_balance** value and the profit that all the closed orders have made. The "EA balance" is the sum of the initial\_balance plus the "Closed Orders Profit".

The "Max DD" shows you the max loss that Crescendo EA has to reach before closing all the orders.

```
=====
Initial balance: $ 1000.00
Closed Orders Profit: $ 0.00
EA Balance: $ 1000.00
Max DD: 30.00% ($ 300.00)
=====
```

The third section is dedicated to the currency pair information. Here you can see how many orders are open for each of the two currency pairs, what's the target profit for the open orders. You can also see what the value of the total open orders for each currency pair is at any given time and also see the value of the total open orders for both the currencies together.

```
=====
GBPUSD Orders: 0
GBPJPY Orders: 0
GBPUSD Target: $ 4.00
GBPJPY Target: $ 4.00
GBPUSD Orders Value: $ 0.00
GBPJPY Orders Value: $ 0.00
TOTAL Open Orders Value: $ 0.00
=====
```

The fourth section is a simple review of the lot size used to open new orders and the maximum slippage allowed but the EA.

```
=====
Lot Size: 0.01 lots
Slippage: 5.00 pips
=====
```

The fifth section tells you if the EA calculates the trend automatically or if the trend has been manually set by the trader.

```
=====
Trend: AUTOMATIC
=====
```

The sixth and last section is dedicated to the frequency setting. It shows you the server time and how much time is needed before the EA scans the market to open a new trade.

```
=====
Frequency: 4 (12H)
Server time: 22:59:59
01:01 to next market check
=====
```

## MORE ABOUT FREQUENCY

The frequency setting is probably the most important for the Crescendo EA strategy. It can change the performances of the EA quite a bit. We strongly suggest you to leave it to the default value (4) but in the later chapters I'll explain how to optionally adapt this setting to the market conditions.

The following table details the time of the day that the EA will use for scanning the market to open new positions.

Frequency	Base GMT Time Hours
0	Always
1	Every Hour
2	12 AM - 03 AM - 06 AM - 09 AM- 12 PM - 3 PM - 6 PM - 9 PM
3	12 AM - 06 AM - 12 PM - 6 PM
4	12 AM - 12 PM
5	12 AM

Setting values below 4 will make the Crescendo EA open orders more frequently. This may increase the profits but also increases the risk.

Using a more conservative setting (5) will instruct Crescendo EA to open orders only once a day and can lead to lower performances but also lower risks.

Again, based on our backtests and forward tests the setting of 4 has proved to be the best balance between performance and risk. Only when you start to become familiar with the market's behaviour and how the Crescendo EA should you think of changing and adapting the frequency setting to suit the market conditions (read more on that in the Semi-Automatic section of the manual).

Below are the results of the optimization process made on the "frequency" setting, made using GBPJPY tick by tick data for 2010.

Pass	Profit	Total trades	Profit factor	Expected Pay...	Drawdown \$	Drawdown %	Inputs /
1	-1015.85	297	0.60	-3.42	1830.98	100.87	frequency=0; initial_balance=10...
2	1691.50	589	2.19	2.87	1366.80	68.62	frequency=1; initial_balance=10...
3	1087.87	392	1.77	2.78	993.65	53.97	frequency=2; initial_balance=10...
4	1231.44	349	2.24	3.53	801.42	46.73	frequency=3; initial_balance=10...
5	911.19	280	2.14	3.25	333.86	19.25	frequency=4; initial_balance=10...
6	649.41	195	2.04	3.33	305.13	24.67	frequency=5; initial_balance=10...

As you can see, the value of 4 (the actual default) is the best one in terms of draw down and the second best as Profit Factor. It's 4th in terms of pure profit but if you relate DD and profit you'll see that frequency 4 is still the best one by far.

## SETTING THE RIGHT TARGET AND LOT SIZE BASED ON ACCOUNT BALANCE

This is probably the most important chapter of the manual as it is crucial that you set these 3 options correctly!

The general rule is:

For every \$ 1000 in your account (initial\_balance) you should use 0.01 lots for each order (lot\_size or enter 1 as the risk\_percent value).

This lot size is the maximum size you should use. Do NOT use lot sizes larger than that!

So, for example on a \$ 2000 account you should use a maximum lot size of 0.02 lots. On a \$ 10 000 account you should use a maximum lot size of 0.1, and so on.

The target profit in \$ is calculated based on the initial balance and on the lot size. The rule is that it should be \$ 4 for each \$ 1000 on your account, if you are using 0.01 lots per order.

Here's an table showing you how to set these 3 settings with different account sizes:

Account Balance	initial_balance	lot_size	target_profit
\$ 1.000	1000	0.01	4
\$ 2.000	2000	0.02	8
\$ 3 000	3000	0.03	12
\$ 4 000	4000	0.04	16
\$ 5 000	5000	0.05	20
\$ 10 000	10000	0.10	40
\$ 15 000	15000	0.15	60
\$ 20 000	20000	0.20	80
\$ 50 000	50000	0.50	200

It is really crucial for maintaining the right balance between profit and risk that you don't "over-leverage" these settings.

If your account is below \$ 10 000 and your account balance is not a round number (for example \$ 2550) simply round this number off to the nearest, lower number (in this example that would be \$ 2000).

## THE CRESCENDO's SAFETY STRATEGIES

The Crescendo has been coded with 3 safety strategies:

- Trend Filter Magnitude
- Close On Counter Trend Filter Magnitude
- Max DD (the same as for the previous versions)

### Trend Filter Magnitude

This new trend algorithm calculates the trend using 5 timeframes instead of the default which is 1.

The trend is determined only for the first trade of the set of trades that is going to be opened to reach the target\_profit. So, all the (optional) additional orders will be opened in the same direction as the first one.

To reach that target gain (the target\_profit), it may be necessary to open multiple orders. Most of the time, one or two orders are enough. But, we have all experienced situations when more than 2 orders have been opened to close the trades in profit, leading to a larger draw down and lower profits due to the fact that you will have to wait longer for the trades to be closed in one currency.

The default algorithm could give only two options: buy and sell.

The MTF (multi time frames) algorithm calculates the trend, applying the same indicator (Hull Moving Average) to 5 timeframes (monthly, weekly, daily, 4 hours and 1 hour) instead of just one timeframe. Each timeframe gives a buy(+1)/sell(-1) score. The 5 scores are then summed up, and you got an overall score going from -5 (all timeframes are short) to +5 (all timeframes are long). There are 6 possible score values, and they are: -5, -3, -1, +1, +3, +5. So, you have 3 possible "magnitudes" or score levels that are 1 (+-1), 3 (+-3) and 5 (+-5).

The Crescendo's settings are based on the "magnitude" of the trend. A magnitude 1 trend is a weak trend, a magnitude 3 trend is a strong trend, and a magnitude 5 trend is a very strong one.

As you can easily guess, the larger the magnitude, the more rare the trend is. This means that we'll have many trends with magnitude 1, less with magnitude 3, and only very few with magnitude 5.

Using the MTF trend algorithm, the Crescendo is able to "filter" entries based on trend magnitude. We can set the Crescendo to enter only in the trends with magnitude 3 or more, or only with magnitude 5.

This leads the Crescendo to take fewer trades. For example, we won't enter on trades with magnitude 1 that are not "strong" enough to guarantee that the trend won't reverse before the target\_profit is hit. When taking trades with a higher magnitude, the trades will

be closed in a shorter time and with fewer orders needed, which also means that we will have an average lower draw down. We are dealing with the average draw down. It is still possible that a trend reversal will happen. To solve that, read more about the "Close On Trend Reverse" feature.

We have 3 levels of "scoring" the trend (1 - weak, 3 - medium, 5 - strong), and we filter entries based on that score. By default, we'll enter only on trends with magnitude 3 (so we'll enter long only when the trend score is +3 or more, and enter short only when the trend score is -3 or less).

It is important to stress the fact that by filtering, we lower the number of trades, so don't expect Crescendo to open orders immediately. Check for the trend score first to see if it is strong enough based on your setting.

This first level is important as it lowers the average draw down as we'll trade in the trend. So, it'll be easier to reach the target\_profit with a much lower number of orders. But it may happen that after our first entry, the trend strongly reverses. That's where the second strategy comes in.

### **Close On Counter Trend Filter Magnitude**

The second strategy tells Crescendo to close all the open trades and open a new one in the opposite direction if it spots that the trend has changed, meaning that the trend score is above the set value but in the opposite direction of the initial trend upon entry.

So for example, if you set the "close on counter trend" magnitude to 5 then you're entered long with a +3 trend, it'll close all the open long orders and will open a new short order if it spots a -5 trend. Vice Versa, if you entered short with a -3 trend, it'll close all the open short orders and will open a new long order if it spots a +5 trend.

In this case, it is important to stress that this is done when the Crescendo checks for opening new orders (not in real time but only upon market check, so depending on the "frequency" setting, by default every 12 hours). In case of a huge drop due to some big event, this strategy won't work unless that happens close to the 12 hours check. What can we do in those dramatic situations? We still have our Max\_DD, that is the third safety strategy.

With the second strategy, we'll cut possible losses, avoid larger draw downs, and thus, avoid having the currency locked into a position waiting for days or weeks them to be closed. If it's evident that the trend has changed, it may be better to take the loss and have the EA restart trading in the new trend direction.

### **Max DD**

The third level is the "Max\_DD". It is still set by default at 30%, but you can decide to set it to lower values now, like 20% for example. The above strategy should prevent the maximum DD to increase to worrying levels, but it won't work in real time. The MaxDD

monitors for the DD level in real time. It stops all the orders and the EA from trading if the set % value is reached. This is a real safety net.

But there's another strategy that somehow relates to safety, and it's something that some of you are already doing "manually" somehow: the draw down level based frequency.

### **Draw Down Level Based Frequency**

With this strategy the "frequency" setting is AUTOMATIC. So Crescendo will adapt its frequency based on the draw down level of a SINGLE currency pair. So, we'll have two pairs trading with different frequencies. It works based on a "dd\_step". This is the percentage step that will be used to calculate the frequency.

The pair will start with a frequency 0 (real time). So it'll open a new trade immediately when the conditions are met. Remember that if you set a trend magnitude filter, the trend should be of that magnitude or greater to open a trade. As soon as the first trade is open, the frequency switches to 1 (1 hour), and it'll automatically adapt based on the "dd\_step". So if for example, we set a dd\_step of 2 (%) the frequency will be 1 for a total orders draw down between 0%-2%; frequency 2 for a draw down between 2%-4%; frequency 3 for a draw down between 4%-6%; frequency 4 for a draw down between 6%-8%; and frequency 5 for a draw down higher than 8%.

This option is not enabled by default as it can cause the Crescendo to open more trades at the beginning and less later, making it more difficult to close "large" sets of orders.

## HOW TO USE THE CRESCENDO EA

You can use the Crescendo EA in two ways: **fully automatic** (this is how we used it in our live forward testing with very good results), or as a trading tool in "**semi-automatic**".

### FULLY AUTOMATIC

In the first case you don't have to do anything other than edit the initial settings. I strongly suggest you to use the default settings and only adjust the **initial\_balance** and the money management setting accordingly to match your account size.

Those are the settings that proved to be the best. When we spot a change in the market behaviour, we will update them. But for now the Crescendo EA has been very consistent with those settings so it's better not to change them.

Remember that the minimum account size for microlots (0.01 lots) is \$ 1.000 and \$ 10.000 for minilots (0.1 lots). That way you'll have enough margin to withstand even the largest drops.

Variable	Value
note0	AUTHENTICATION OPTIONS
username	your username here
password	your password here
note 1	STRATEGY SETTINGS
initial_balance	1000.0
order_step	60
target_profit	4.0
frequency_note	0 - always; 1 - every hour; 2 - every 3 hours

### SEMI-AUTOMATIC

For those who want to also use the Crescendo EA as an automatic trading tool here are my suggestions about that.

There are a few parameters you can play with to adapt the Crescendo EA to the market conditions based on your analysis as a trader. Let's go more in depth on each of them and see how to use them best.

#### **order\_step & target\_profit**

These two variables define how the Crescendo EA should behave with respect to the "price". The default values have been tested and in my opinion they are a very good balanced setting, which works most of the time.

But there are also periods of lower volatility, or higher volatility where you can decide to lower or increase their values. When volatility is lower you can decide to decrease them and when it's greater you can decide to increase them.

Variable	Value
ab note0	AUTHENTICATION OPTIONS
ab username	your username here
ab password	your password here
ab note 1	STRATEGY SETTINGS
123 initial_balance	1000.0
123 order_step	60
123 target_profit	4.0
ab frequency_note	0 - always; 1 - every hour; 2 - every 3 hours

One of my preferred "indicators" for volatility is the Average Daily Range (ADR). The Average Daily Range is the average distance from the daily high and the daily low of the last N days, in pips. You can decide how many N days to use.

If, for example, you want to calculate the weekly ADR, you'll use 5 days (because there are 5 days of trading in a week). If you want to calculate a monthly ADR you'll use around 20 days. For the quarter, you'll use 60 or 70 days. And so on.

Variable	Value
ab note0	AUTHENTICATION OPTIONS
ab username	your username here
ab password	your password here
ab note 1	STRATEGY SETTINGS
123 initial_balance	1000.0
123 order_step	60
123 target_profit	4.0
ab frequency_note	0 - always; 1 - every hour; 2 - every 3 hours

If you compare the weekly, monthly and quarterly ADRs you will have important information about the market "trend". You will be able to determine if it is increasing or decreasing based on this information. You can then decide to increase or decrease the "order\_step" and "target\_profit" accordingly.

This is just one of the many "volatility" indicators that you can use. Standard Deviation and ATR are a couple of other commonly used ones.

## frequency

This variable defines the Crescendo EA's behaviour with respect to "time". Like we did for the "order\_step" we can strongly modify the way the Crescendo EA behaves setting this variable to one of the 6 possible values: from 0 to 5.

- 0 - check always on
- 1 - check is made every 1 hour
- 2 - check is made every 3 hours
- 3 - check is made every 6 hours
- 4 - check is made every 12 hours (default)
- 5 - check is made every 24 hours

How should you decide to modify it? Your decision should be based on trend strength. The stronger the trend the lower the number of the frequency option. That way the Crescendo EA will open orders more frequently and you'll be able to "scalp" the trend in further depth.

So when you see that the trend strength is increasing, lower that number. You can even use the "0" setting and you'll see the Crescendo EA open a new order as soon as one is closed.

You can greatly increase profitability using this technique. But use it cautiously because if the trend suddenly and strongly reverses you can find yourself with many open orders in the wrong direction.

How to measure the strength of a trend? Again, there are many methods to do so, but if you bought the Crescendo EA you should also have my Cruscotto indicator.

The Cruscotto indicator is a very good tool to help you in finding out if the trend on pairs is weak or strong. I won't go in depth about how to use the Cruscotto in this document because you will find a comprehensive manual on the download page and videos that will explain everything.

Variable	Value
note 1	STRATEGY SETTINGS
initial_balance	1000.0
order_step	60
target_profit	4.0
frequency_note	0 - always; 1 - every hour; 2 - every 3 hours
frequency_noteb	3 - every 6 hours; 4 - every 12 hours; 5 - e...
frequency	4
manual_trend	false

But you can also use the "frequency" to lower the risks and draw downs by letting Crescendo EA open fewer trades. Let's say for example that you are in a counter-trend. I mean that you are opening long positions, while the trend turned down. To wait for the trend to come back to long

and close all the open orders, with the minimum number of orders possible, you can decide to increase "frequency" to 5 (daily). That means that the Crescendo EA will check for conditions to open new orders only once a day.

**manual\_trend & trend\_direction**

The algorithm behind the trend direction resolution is one of the best that I've ever come across. But it doesn't take into account many external aspects that may influence currencies. For that reason I wanted to leave you the opportunity for you to decide the direction that Crescendo has to use for trading.

Variable	Value
frequency_noteb	3 - every 6 hours; 4 - every 12 hours; 5 - e...
frequency	4
manual_trend	false
trendnote	1 - long; -1 short
trend_direction	0
note2	MONEY MANAGEMENT
lot_size	0.01
risk_percent	0.0

Doing that is very easy: set "manual\_trend" to true and then set the "trend\_direction" to "1" if you want it to go long only, or "-1" if you want it to go short only.

Variable	Value
frequency_noteb	3 - every 6 hours; 4 - every 12 hours; 5 - e...
frequency	4
manual_trend	false
trendnote	1 - long; -1 short
trend_direction	0
note2	MONEY MANAGEMENT
lot_size	0.01
risk_percent	0.0

**max\_total\_DD**

In my opinion this is one of the real key concepts of the Crescendo EA. I've heard traders always saying that you should not trade without using stop losses. That is true if you look at each single trade.

But think about that...

Every time you open a trade, let's say a long trade, what is the probability that, the next day, at the same time your trade is in profit? I'd say 50%. Nothing, not even technical analysis, can give you a different percentage from that. But if you put a stop loss on your trade you are cutting your

50% chance of being profitable to less, because you are not giving your trade the chance to come back in to profit.

Variable	Value
ab note2	MONEY MANAGEMENT
1/2 lot_size	0.01
1/2 risk_percent	0.0
1/2 max_total_DD	30.0
1/2 slippage	5.0
ab note3	EA SETTINGS
123 GBPUSD_Magic_Number	130907
123 GBPJPY_Magic_Number	300610

But we also have to "protect" our money. How do we protect our money without cutting our chances of our trades ending in profit? By thinking globally! The Crescendo EA manages risks looking at the global picture of all the trades it is managing and not by looking at just one single trade.

## BACKTESTING THE EA

As explained, the Crescendo EA uses a multi-currency approach to trading the markets. The Metatrader 4 platform strategy tester is not able to backtest an EA using multiple currencies (this feature has been added to MetaTrader 5).

So doing a backtest has no real meaning as the strategy works using the two pairs at the same time.

Most of all the data coming with the MT4 platform are really poor and are not good to do a reliable backtest for Crescendo.

**LIVE ACCOUNT PERFORMANCES**

Gross Profit:	17 357.33	Gross Loss:	6 825.43	Total Net Profit:	10 531.90
Profit Factor:	2.54	Expected Payoff:	29.09		
Absolute Drawdown:	0.00	Maximal Drawdown:	638.88 (4.92%)	Relative Drawdown:	5.02% (521.02)
Total Trades:	362	Short Positions (won %):	127 (81.89%)	Long Positions (won %):	235 (74.89%)
		Profit Trades (% of total):	280 (77.35%)	Loss trades (% of total):	82 (22.65%)
Largest profit trade:	450.22	loss trade:	-379.35		
Average profit trade:	61.99	loss trade:	-83.24		
Maximum consecutive wins (\$):	23 (958.48)	consecutive losses (\$):	4 (-638.88)		
Maximal consecutive profit (count):	958.48 (23)	consecutive loss (count):	-638.88 (4)		
Average consecutive wins:	4	consecutive losses:	1		

**BACKTEST PERFORMANCES for the same period**

Symbol	GBPU5D, GBPJPY				
Period	2010.02.22 00:00 - 2010.09.24 22:59				
Initial deposit	7959.00				
Total net profit	3437.48	Gross profit	9871.86	Gross loss	-6434.38
Profit factor	1.534	Expected payoff	21.484		
Absolute drawdown	0.00	Maximal drawdown	887.38 (8.894%)	relative drawdown	8.894% (887.38)
Total trades	160	Short positions (won %)	78 (74.359%)	Long positions (won %)	82 (69.512%)
		Profit trades (% of total)	115 (71.875%)	Loss trades (% of total)	45 (28.125%)
Largest profit trade	442.41	loss trade	-581.41		
Average profit trade	85.842	loss trade	-142.986		
Maximum consecutive wins (profit in money)	19 (1289.06)	consecutive losses (loss in money)	4 (-845.55)		
Maximal consecutive profit (count of wins)	1289.06 (19)	consecutive loss (count of losses)	-887.38 (3)		
Average consecutive wins	4	consecutive losses	2		

On our website (<http://www.forexcrescendo.com>) you'll find backtests made using a particular technique and tick by tick data from Dukascopy (<http://www.dukascopy.com/>).

They are very reliable (99% quality) and these are the backtests we used to develop and optimize the strategy behind Crescendo EA.

## **TROUBLESHOOTING**

### **The installer doesn't work.**

If your computer is running Microsoft Windows 7 or Windows Vista, you should run the installer with administrative privileges. To do that simply right click on it and choose "run as administrator".

### **Can't find Crescendo EA in the list of Expert Advisors**

To find the Crescendo EA to be applied to the charts, you have to open the "Navigator" window in your MT4 platform. To do so, go to the "View" menu and choose Navigator (or press CTRL+N). Double click the "Expert Advisors" section so that the list of EAs will be shown.

If "Crescendo\_v1" is not in that list, it means that something went wrong with the installation. Close the MT4 platform, run the "Crescendo\_v1.exe" installer again and make sure that your broker platform is in the list of those automatically found. If not, simply add the directory manually (as described in point 5 of the Installation Process).

### **Crescendo EA only shows the "authenticating" message**

This usually happens during the weekend when the Forex market is closed. At that time no new data is sent to the platform and new data is what makes EAs and indicators work. As soon as the market opens again on Sunday (the time depends on where you live), the Crescendo EA will start working again and it will authenticate.

If the market is open and the Crescendo EA still doesn't show any message other than "authenticating", simply remove it from the chart (right click on the chart, "Expert Advisors > Remove") and re-apply it.

### **My Crescendo EA authentication failed**

There may be two reasons for that:

- You did not enter any values in the username and password fields of the Crescendo EA.
- You entered the wrong values in the username and password fields of the Crescendo EA.

To re-authenticate you have to remove the Crescendo EA from the chart (right click on the chart, "Expert Advisors > Remove") and re-apply it. Make sure you enter the correct values in the username and password options on the EA's "Input" tab.

### **Crescendo doesn't place any orders**

The Crescendo EA's trades are based on a frequency setting. The default setting (4) makes the EA trade every 12 hours, or twice a day. The very last line of the

Crescendo EA text interface, shows a countdown to the next market scan. When the countdown reaches the 00:00 mark, it will check the conditions to open a trade and if they are met it will open a new order.

To make sure that everything is OK, also check that the “HullMA” is listed under the “Custom Indicators” section of the Navigator window, as this is the indicator used to automatically check the trend of the market. If it’s not there, close MT4 and run the Crescendo installer again.

Another possible reason for that is if your broker uses suffixes for the symbol names. If so you have to set the “suffix” option accordingly.

### **Crescendo places orders only on GBPUSD (or only on GBPJPY)**

To trade both GBPUSD and GBPJPY, you have to open two charts (one for the GBPUSD and one for the GBPJPY, the timeframe is not important) and apply the Crescendo EA on each of them. If you apply it to only one chart there will be no trades placed on the other pair.

If you are unable to resolve any problems simply write an email to me using the following email address and we’ll be happy to help out in any way possible:

[support@forexcrescendo.com](mailto:support@forexcrescendo.com)