

# WitSensing

## Freebie Edition

Idea, project and development by **Jomadev**

**Expert Advisor for MetaTrader 4**

Version 0.5.0 Beta (First Public Release)

Thanks to **Dredding82** for its original trading strategy, at Forex Factory Forum  
The “Freebie Edition” is in respect to his original idea

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**This Guide is**

### **Very Quick and Basic Guide**

Also my english is not so good...

You must remember this before attempt to read this guide and use the EA or ask any question to me: **is not** only a quick guide, **is not** a clear guide, **is not** anything else you think for a detailed description of all functions, features and operations of this EA.

Unfortunately, I'm still very busy in this period (also involved on improve much more WitSensing), but I thought that I could not further delay the release of the EA, so I had to write this kind of very basic guide, obviously not intended for **FOREX NEWBIES** nor **METATRADER NEWBIES**.

**Please, use only if you are an EXPERIENCED TRADER**

I'm sorry, but I hope that more experienced traders can help others,  
at least until I will fulfill a most suitable guide

**ANYWAY, YOU USE THIS GUIDE AND THE EA ONLY AT YOUR OWN RISK**

**EA is BETA VERSION only for testing!**

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## **1. MY AND YOUR EXPECTATIONS**

First of all I would like to make a small premise.

Automated trading isn't probably the key to Forex market. Also the manual trading is dangerous: beyond the training and experience, the “emotional factor” can compromise the whole. So we should use more time to learn how to control the emotions.

I firmly believe that this is the real key.

The automated trading, and then any good EA, can help us to mitigate our early limits and, then, can become an additional tool to risk reduction/diversification. Obviously, only if an EA work very well, but never consider it as the only method to trading the Forex and make you rich in a few days/months!

I worked hard on this EA and of course I hope it works, especially for me ... :-). Hardly to find an EA so comprehensive and totally free, I would say you will not find anything like this without paying something. I share this with you hoping that you share something with me and others traders. Only your experience! Using it and give me any possible information to improve this EA or tell me to throw it out the window. I don't want money, but if you insist.... :p

In the EA, you will find that there are so many possible configurations, so choosing the best way to operate continuously and with good profit. But to achieve this we must do many tests for adjusting and fine tuning the configuration. Finally, some of us may give to all others this valuable informations!

I turn to the experts, who know how dangerous it is when you use an automated trading system. My first tests with the basic configuration of WitSensing (Dredding strategy) were fairly encouraging, gains some pips on a few pairs tested (only M15). But really it takes long time and lot of tests on various pairs, timeframes and periods, with small/big variations in settings and in the core of the trading rules, to confirm the initial positive results and also detect any bug.

I think these are the only our (mine and your) expectations for this project..

Thanks!

***Jomadev (Italy)***

## 2. FEATURES

### Following the main WitSensing features.

- Two operational modes:
  - 1) **Signals** (don't make orders)
  - 2) **Trading** (evaluate signals and make orders)
- Full graphics panel showing real-time all the signals and status of the EA (colors configurables)
- Integration of the following indicators (also visibles on the panel):
  - **Heiken Ashi candles**  
Signals: 1) New formations, 2) Confirmed formations, 3) Candle colors (Old formations)
  - **Common candles** (japanese bars)  
Signals: 1) Current color (bull/bear)
  - **Pivots Fail/Breakout** (all daily pivots are internally managed)  
Signals: 1) New occurrences, 2) Confirmed occurrences
  - **Average Daily Range**  
Signals: 1) Five distance levels from/to daily min and max
  - **3LZZ Semafor**  
Signals: 1) Type 1,2,3, and direction
  - **Stochastic**  
Signals: 1) New formations, 2) Confirmed formations
  - **Price Action** (trend)  
Signals: 1) Price trend on 8 time intervals (from 1h to 5d, and averaging), with 4 bull/bear strength levels
- All indicators are configurable, including the overall form of signal detection
- Multi-Timeframe signal tracking for all indicators (M5, M15, M30, H1, H4, D1, W1)
- **A total of 47 signals on 92 different types of status**
- Decision making based on "**Rules System**", a pseudo language for evaluating STRONG Buy/Sell and REGULAR Buy/Sell:
  - Using a string parameter of the EA, encoded in proper way, you can define a complex set of conditions that WitSensing will use to evaluate signals and trigger the main signal of BUY/SELL  
 eg1: `pStrongRules = "!HA=m15:1;3LZ=m15:1"`  
 symple rules using only the Heiken Ashi and 3LZ Semafor, both estimated only for M15 new formations, with Heiken Ashi as the driving signal.
  - eg2: `pStrongRules = "!HA=m15:1;PIVF=m15:1,m30:-2_PIVB=m15:1,m30:-2;  
3LZ=m15:1,m30:1;!STO=m15:1;TRE=1d :-4;ADR=d1:3"`  
 little more complex string that reflect the Dredding strategy (with a few minor variations ...) by WitSensing point of view
  - Already predefined rules strictly for Dredding base strategy:  
`pStrongRules = "DEFAULT"`  
`pRegularRules = "NULL"`
- Unbalanced operation: you can work on a timeframe, defining signals riding on a different timeframe
- Configuration of trading hours (you can enable/disable hours, one-by-one)

- Configuration of preferred market session (broker midnight, GMT0, midnight EST, 5pm EST)
- Various trading controls:
  - StopLoss and TakeProfit rules for enter/exit policy (SL and TP are automatically calculated)
  - Spread Limit, checked on average, with daily statistics
  - Exit Rules, on opposite signal and on trade duration
- Internal Trailing Stop (don't move original SL but use additional stop internally)
- **Money Management fully configurable**
- Parameters validation and real time messaging in the panel
- System fault tolerance (MT lagging, time in process, errors control, etc.)
- **Day Journal** (full log of all activities and possibles bugs)

**COMING ON... (aka: At the time, WitSensing *DO NOT!*)**

- Manual trading facility (in “**Signal**” mode)
  - Plot horizontal lines in the chart and tell WitSensing your preferred position (eg: close to a signal that is coming)
  - Instruct the EA on the exact way to open in a “pending order” fashion
- Interact with EA by send commands to it and modify “on the fly” its behaviors
- Improve Trailing Stop (add parameters for it) and project a “profit protection” method (already implemented a first command through a “rudder control” label – see Par. 6, WitSensing Panel)
- Make screen shots of trades
- Sent mail
- Manage Weekly and Monthly pivots (very LOW priority – this EA is an INTRADAY project)

### 3. LIMITS

Keep in mind that WitSensing have also **some limits**:

- WitSensing is **ONLY for the FOREX** market. You don't try to use it with other instruments/symbols (commodity, indices, futures, etc.). Also, I advise **not to use it with exotic pairs**.
- WitSensing **don't plot any indicator on the chart**. All indicators are coded internally for display signal in the Panel (see Par. 6 – WitSensing Panel) and evaluates these signals for opening/closing positions. This isn't a very limitation, because I did not feel to **overload** the EA with jobs usually (and normally) performed by separated indicators programs (that I recommend you to have to verify WitSensing behavior).
- **Exit rules are actually limited** on some settings in trading controls parameters. In future I planned to do something similar to logic used for evaluating and opening positions.
- Detection of **Pivots Fail/Break is very complex and WitSensing manage it quite correct**. Around this question there are certainly many schools of thought. Each of us sees things a little differently and obviously I've used my market knowledge to develop the algorithm that I think more correct, but that will be interesting to compare with other points of view.
- Problems with broker data feed (bars lacking) are quite common and at the time WitSensing don't manage properly these conditions. Remember that WitSensing work concurrently with all timeframes of a pair, making a lot of calculation on each. **Make sure that your data is not corrupt and suitable for the system**. Data corruption can cause misinterpretation of the signals.
- **Rallies, volatility and others common market conditions not are fully managed**. In some cases a good signal is anyway treated and position opened. I planned to investigate these situations that is more safer to consider as unclear exposition.

### 4. RECOMMENDATIONS

WitSensing make several calculations and requires a good computer. This does not mean that this EA is a “time wasting” or a “ram leech” program, but if you want to trade seriously experienced traders know that the **PC is one of the KEY!**

If WitSensing tell you that your PC is slow, you believe it. The EA is quite optimized and adopt several strategies to avoid resource consumption, but must be able to do its job. Especially if you plan to use it in many pairs at a time (also recommended, if you want many pips and reduce risk with diversification).

I recommend at least a dual core processor with 2 GB ram (minimum), dedicated only for trading. I used WitSensing in mono core processor on four pairs with no great problems, but the PC becomes slow and a complete refresh of the EA require sometimes over 4 seconds.

Keep in mind that MetaTrader is an excellent platform but fairly resource-hungry, and also its linear programming language is quite limited/essential (probably I will use external DLLs in future).

## 5. TRADING STRATEGY

As you have figured out, WitSensing core strategy is based on **“Freebie Newbie System”**. First of all, you do not think that the word **“newbie”** is also suitable for playing with this EA. At this stage, and with this short documentation, I've already warned that WitSensing should be used by a little more experienced hands, obviously on MT trading platform.

Instead, the strategy itself, followed manually, is very simple. To do this, you have to read with care and attention the first post in the thread opened by its author, Dredding82, at the following address:

<http://www.forexfactory.com/showthread.php?t=276813>

Once you have fully understood the first post, **I strong recommend to read the whole thread**. Sit back and be patience... ;)

Please, **absolutely don't ask me any question about this strategy**. Follow the thread and ask in it your relevant questions, only if these not yet been discussed before (remember: first read the past posts, in many cases you will find already the answer – also use the search!).

Therefore, WitSensing work with this core strategy since it uses all the indicators reported by the author. However, the way in which these indicators are then managed by the EA – on each timeframe – widens the horizons and potential of the base strategy. You have the ability to completely change it, or make only few variations. The only limitation – **and very common point with Dredding strategy** – is just the indicators used by WitSensing and also used in the strategy described above.

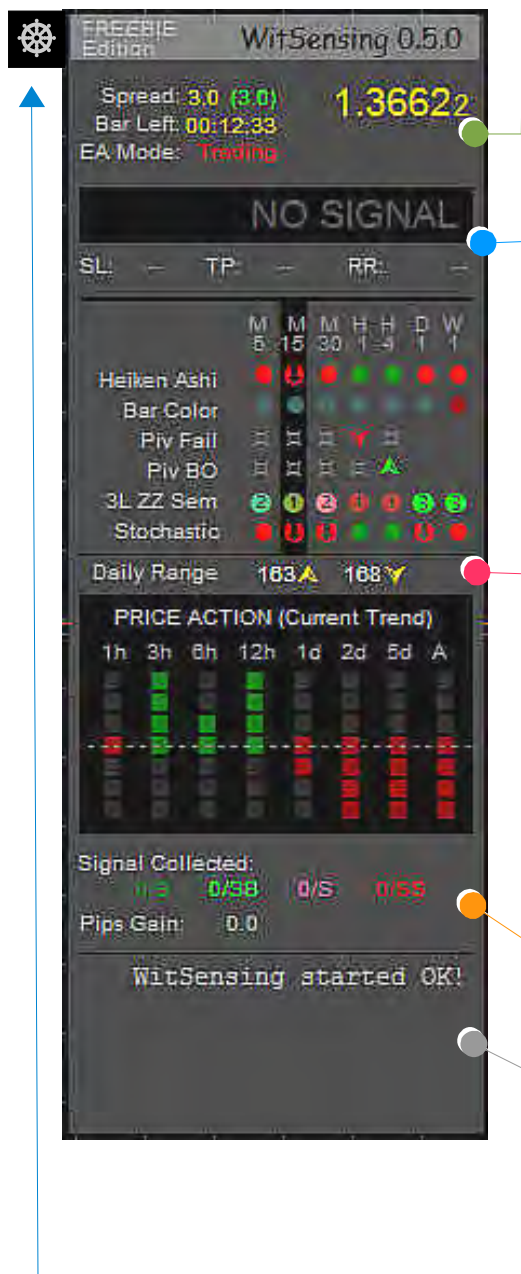
Thanks to this common point, WitSensing default parameters – particularly the string that I've called “Rules Logic” – are coded to work fairly in accordance with “Freebie Newbie System” strategy.

Only if you change these parameters (that I will explain in Par. 7 – Configuration), you effectively get a (completely) different system that may meet your different trading style, or simple to experience a lot of new strategies based on the various indicators available.

## 6. WITSENSING PANEL

Once you have installed WitSensing in your MetaTrader (as usual you put the unique file “WitSensing\_FreebieEd\_0-5-0.mq4” in Expert Advisors directory), and put it in any symbol chart, the panel below will appear.

*A word between <...> indicate an EA parameter*



### INFO AREA.

- **Current symbol Price**
- **Spread level**, the value in brackets is two hours average (Green means that meets you rule <pSpreadLimit>, otherwise is Red)
- **EA Mode**, reflect <pAutoTradingEA>, can be “Signals” or “Trading”
- **Bar Left**, countdown the candle time

### MAIN SIGNAL

- Main signal is raised when all rules are meets: <pStrongRules> for Strong BUY/SELL, or <pRegularRules> for BUY/SELL
- If “EA Mode” is “Trading”, the SL, TP and RR, shows the auto calculated values for a current opened position

### INDICATORS AREA

Display indicators status in various timeframes. GREEN and RED tells respectively the Bull or Bear conditions. Vertical area (black) indicates timeframe in which WitSensing is currently attached.

- **Bar Color**, bullets Green/Red for the color of usual japanese candles (colors dimmed for not to be confused with the main indicators)
- **Heiken Ashi** and **Stochastic**, bullets Green/Red for Confirmed/Old signals; with an Arrow Inside indicates new signals formation.
- **Piv Fail** (bouncing on pivot levels) and **Piv BO** (breakout), Arrows Green/Red for Confirmed/Old formations; shown in Gray for New signals. The sign ✂ means no signal.
- **3L ZZ Sem** (Semafor), bullets with number inside that indicates what is the current semafor level (inverted): in Green for Bullish (Low Semafor, reach a minimum) and Red for Bearish (High semafor, reach a maximum)
- **Average Daily Range**, two Yellow arrows measuring pips distance from current price to High/Low ADR.
- **Price Action**, indicates current trend on various intervals; four states for Bullish and Bearish; one state Orange (centered on histogram) for Range condition.

### STATISTICS

- Total “Main Signals” detected: B(Buy), SB(Strong Buy), S(Sell), SS(Strong Sell)
- Total pips gained (or lost)

### MESSAGING AREA

WitSensing shows in this zone its status and tell you several informations during every stage. Also alerts in case of errors/anomalies (in some urgent cases displays even the alert window of MetaTrader).

All synthetical messages are also **logged in full mode in a “Day Journal”**

### RUDDER CONTROL

“Right click” in the rudder and select “Label Properties” to send commands to WitSensing. Simple append to the “Name” field an accepted command. Eg: “WSCOMM/**swea**”, and click OK. Don't delete/modify the prefix “WSCOMM/” for any reason. **For now, this feature is under development, and you can use safe ONLY the command “swea”, that switch EAMode from Trading to Signals and viceversa.**

## 7. CONFIGURATION

Use the following parameters to configure WitSensing for all trading purposes. Especially the “RULES LOGIC” section allow you to radically change the basic strategy and get many different variations. All settings are parsed on initialization, informing you of any possible error.

Little note on **default** values.

I left these defaults only because I've made some tests in these conditions, for example in the New York session (5pm EST market closing, with a GMT +2 broker). **So there is absolutely no special meaning** to still leave these defaults. Change them as you wish, as well as the “RULES LOGIC”, that I've coded internally if you leave “DEFAULT” on <pStrongRules> and “NULL” on <pRegularRules> (you can see internal rules in Par. 7.2, in which I explain the coding of rules).

### 7.1. List of all Parameters

SECTION	Parameter	Format	Default	Description and Values
“p” GLOBAL SETTINGS	AutoTradingEA	boolean	true	Switch EA Mode true : Auto Trading mode false : Only Signals
	BrokerGMT	numeric	2	Broker GMT Timezone (check any candle time to get this information correctly)
	MarketSession	numeric	3	One of following values 0 : Open/Close Broker midnight 1 : “ “ London midnight 2 : “ “ NewYork midnight 3 : “ “ NewYork 5pm
	TimeToSignalRefresh	numeric	60	WitSensing inactivity time before a complete refresh. However, EA force its refresh if needed (bar completion, market condition). <b>WARNING!</b> Low value implies a good PC!
	OrMagic	numeric	343434	Arbitrary number to mark orders managed by WitSensing. <b>MUST BE different</b> for every instance of the EA (eg: running multiple copies in various pairs)
“p” TRADING CONTROLS	HourlyTrading	boolean	false	Switch hourly trading true : Trade only at the Hourly List false : Trade at any time
	HourlyList	h,h,h,...	0	If pHourlyTrading is true, enable here all your preferred hours for trading, comma “,” separated eg: “9,10,11,12,23,24” Note that midnight must be “24”, and all hours refers to MarketSession chosen, NOT your local time or broker time
	StopLossAdding	numerico	0	Pips to add to auto calculated Stop Loss
	StopLossRules	n1,M1,n2,M2	3,0,60,0	Min/Max acceptable Stop Loss (in pips) n1 : Minimum M1= 0 : Discard position if below min M1= 1 : If below, force at min and open n2 : Maximum



				<b>M2</b> : Same as M1 eg: "3,0,60,0" Discard position if SL is lesser than 3 or greater than 60
	<b>TakeProfitRules</b>	n1,M1,n2,M2	<b>8,0,75,1</b>	Min/max acceptable Take Profit (in pips) Same format as pStopLossRules eg: "8,0,75,1" Discard position if TP is lesser than 8 and force open at max 75 if greater
	<b>SpreadLimit</b>	numeric	<b>3</b>	Max Average Spread. If greater, discard all positions
	<b>ExitOnContrary</b>	numeric	<b>1</b>	Exit rule if get a signal opposite to the current order. 0 : Keeps open 1 : Close if losing 2 : Close if gains
	<b>DurationRules</b>	n,M	<b>20,1</b>	Max acceptable duration for a position n : Numbers of bars from opening M= 0 : Keeps open M= 1 : Close if losing M= 2 : Close if gains eg: "20,1" Close if losing, after 20 bars from open (The "20" value has meaning for M15, change it for other TF)

<b>"p"</b> RULES LOGIC	<b>StrongRules</b>	WSFormat	DEFAULT	See <b>Par. 7.2 – Coding the Rules</b>
	<b>RegularRules</b>	WSFormat	NULL	
	<b>DSTimeframe</b>	TF	CURRENT	

<b>"p"</b> MONEY MANAGEMENT	<b>MyRiskReward</b>	numeric	<b>1.00</b>	Risk/Reward factor. Discard positions below this factor eg: "1.00" mean 1:1 RR "1.50" mean 1:1.5 RR
	<b>OverrideMyRisk</b>	boolean	<b>true</b>	WitSensing attempts to improve your RR <b>true</b> : Try to improve (RECOMMENDED!) <b>false</b> : Keeps always my RR Anyway, the RR never fall below your RR
	<b>MoneyManagement</b>	boolean	<b>true</b>	Switch Money Management using <b>true</b> : Use MM routines (RECOMMENDED!) <b>false</b> : Don't use, stick to your Fixed Lots
	<b>FixedLots</b>	numeric	<b>0.01</b>	Use always this trade volume (if not MM)
	<b>VirtualBalance</b>	numeric	<b>0</b>	Virtual balance (in your account currency) that WitSensing use for risk management, instead of your real account availability and only if it is greater than the virtual
	<b>RiskBalance</b>	numeric	<b>1.00</b>	Risk percentage of your balance (real or virtual) on open any position. Risk between 1.0%/3.0% is normally safe. Greater than, you know very well what you're doing!
	<b>FreeMargin</b>	numeric	<b>0</b>	Absolute value of a Margin amount that you want to preserve. If your Margin becomes lesser, Ea don't make other trades
	<b>FreeEquity</b>	numeric	<b>0</b>	As the previous parameter: amount of Equity that you want to preserve.
	<b>MaxDayProfit</b>	numeric	<b>3.00</b>	Daily percentage gained in your balance to satisfy your profit need. If reached, WitSensing don't make other trades for the day.
	<b>MasDayLoss</b>	numeric	<b>3.00</b>	Daily percentage that you're willing to lose from your balance. If reached, WitSensing don't make

				other trades for the day.
"pHA_" HEIKEN ASHI Indicator	PrevBarsCount	numeric	3	Number of previous bars to evaluate new coming bars with different color eg: at least "3" previous bull bars to evaluate new current bears (or reverse)
	SignBarsCount	numeric	1	Number of new coming bars to validate signal eg: "1" bar of new color validate signal
	SignalSurvive	numeric	2	Number of bars, including the first, that keep the signal as new
"pPIV_" JPIVOTPRO Indicator	SignalSurvive	numeric	3	Number of bars, including the first, that keep the signal as confirmed
	<p>Parameters listed from pPIV_Classic1 to pPIV_Demark, (9 totals) are all boolean and switch the use (true) of a certain pivots family for <b>"Pivot Fail / Breakout" signals</b>.</p> <p>Pivots are calculated and used internally (not plotted on the chart). If you want, use any pivot indicator to display it (as mine JPivotPRO indicator). Also, keep in mind that pivots positions depend on what Market Session you chosen in the relative parameter (see above, in GLOBAL SETTINGS).</p> <p>Default values are for use of the pPIV_Classic1 and pPIV_MidPoints</p> <p>WARNING! Use of many different pivots families, at same time, is very useless and can cause a lot of contrasted signals, because pivot levels overlaps or are too closest.</p>			
	ADRRPeriod	numeric	14	Periods for Average Daily Range calculation (14 is a "standard" value)
"pSEM_" 3 LEVEL ZZ SEMAFOR Indicator	<p>There are the parameters for this kind of indicator. Change these only if you know the indicator behavior.</p> <p>Google to find the original indicator and read its documentation (Now I don't remember the source...)</p>			
"pSTO_" STOCHASTIC Indicator	Stochastic is a well known indicator. There are its main parameters.			
"p" RESERVED	EnableTOR	pwd	NULL	<p>Password to enable trading on live account.</p> <p>You don't need any password nor have any limit to test and trade in real (demo) account. <b>Then, don't ask!</b></p> <p>If you want the password to trading live – and you MUST THINK ABOUT IT VERY WELL (EA is BETA!) – email me. Anyway, I will not give any password before ONE (1) months after the release and only for those who wish to participate in the project (helping with experience, valuation, suggestions, etc.). Also I will not give the password to anyone if I find critical bugs in this version. Maybe next... after corrections.</p> <p>The password limit is only for the current beta stage, and will be removed in the first production release.</p> <p>DON'T ASK ME IF YOU DON'T MEET THESE RULES! I just don't answer.</p>
	EnableADO	---	NULL	Must leave it "NULL" for now
	MTLagging	numeric	300	<p>Max time tolerance (in seconds) without receiving any signal (tick) form the MetaTrader terminal.</p> <p>Over this time WitSensing warns on possibles issues (eg: broken connection)</p>
	TurboBoost	boolean	true	<p>Experimental. Improve WitSensing speed.</p> <p>It is a feature tested enough, so you can safely leave the "true" value. This parameter will certainly be removed in future versions.</p>

	ETT	numeric	5	Execution Time Tolerance (in seconds) WitSensing should not take more than this time for a complete refresh and calculations. Five seconds, as put in default, is already a long time, in fact the EA taking almost 1 second (or less) in a PC correctly dimensioned and multiple copies running (see also Par. 4 – Recommendations). Over this time WitSensing warns you.
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## 7.2. Coding the Rules

Evaluation and decision making is based on rules chosen in EA parameters. There are two sets of rules: each for STRONG Buy/Sell or REGULAR Buy/Sell, and you can choose to use one set or both.

### 7.2.1. WS Format

MAIN RULES **pStrongRules** WS formatted string with rules parameters (signals combinations)

OPTIONAL **pRegularRules** WS formatted string with rules parameters (signals combinations)

The WSF format is simple syntax convention - keyword based - for input rules into WitSensing logic and build a wide range of different trading alternatives based on the WitSensing integrated indicators

The format is:

<{ **i** } **KEY**> [= <**PAR**> : <**VAL**> [ , <**PAR**> : <**VAL**> , . . . ] ] [ \_ <**KEY**> [ \_ <**KEY**> ] ]

{ **i** } Optional operators that define a DS ("Driving Signal"), can be: "!", "%"

**KEY** "Signal Key" for evaluate signal

**PAR** (optional) "Signal Key Parameter": named timeframe or trend period (1)

**VAL** (optional) "Value" for Parameter, usually a signal trigger . System validation operating in both direction (bull/bear), and all values can be inverted

— "OR" operator (underscore). If present, the KEY represent an alternative. If another "\_" is added with another KEY, means the two alternative must be true if the first is false.  
Max 2 alternatives/conditions are allowed for each main key.

(1) "trend period" is not a conventional period like M5, M15, etc., but similarly define a range of periods like 1h(1 hour), 3h(3 hours), and so on. Reason of this is derived from my algorithm to detect trend direction in these intervals.

Some examples:

1. **"HA"**  
Simple string for activation of the signal "HA" (Heiken Ashi candles), using its default rules, on current timeframe
2. **"HA=m15:2,m30:1,m5:-2"**  
More deep string using several rules for HA
  - a) is present on timeframe M15, as a CONFIRMED signal
  - b) is present on timeframe M30, as a NEW or CONFIRMED signal
  - c) is NOT present in reverse direction on M5 timeframe, as a CONFIRMED signal (but new formation is acceptable). You note the negative value "-2" to do this.
3. **"HA=m15:2\_STO=m15:1"**  
Demonstrate the use of OR "\_" operator. if not HA signal but STO signal, then the signal is raised

### 7.2.2. Using {i} operators for Driving Signals

You must use this operator at least in one of the Signal Keys among all used for coding rules. With the {i} you tell WitSensing what is the driving signal that first trigger a BUY or SELL, and once this happen all others "Signal Keys" (included the one with {i}) are evaluated to determine if they follow the DS (driving signal).

Driving Signal is checked on current timeframe or whatever you specify in EA parameter **pDSTimeframe**, you can put from "M5" to "W1", or "CURRENT" for the current timeframe.

Taking the previous 2nd example, the string would be:

**"!HA=m15:2,m30:1,m5:-2"** *Note the "!" operator before the Key*

means that the signal is validated if Heiken Ashi candle:

- a) get a clear Buy or Sell signal: suppose we get a BUY Driving Signal
- b) BUY signal is present on timeframe M15, as a CONFIRMED (a new formation is unacceptable)
- c) BUY signal is present on timeframe M30, as a NEW or CONFIRMED
- d) SELL signal is NOT present on M5, as a CONFIRMED signal (but new formation is acceptable)

DS can be more than one and are evaluated in sequence with this logic (example):

**"!HA=...;!STO=...;%PIVF=...;%SEM=..."**

Tell WitSensing that DS are HA and STO (both trigger same signal buy/sell), but if one of these don't get signal . PIVF and SEM are used both as alternatives DS.

Only three "!" and three "%" (six totals) are allowed. More enters are rejected.

### 7.2.3. All "Signals Key" and their rules

**SPECIAL KEYWORDS** (if you don't want to code the rules)

<b>Key</b>	<b>NULL</b>
<b>Description</b>	Keyword to avoid use of the whole rules set eg: pRegularRules = "NULL" Means that only the pStrongRules are used (which cannot also be "NULL") Only pRegularRules can be "NULL", or they can be used both.
<b>Key</b>	<b>DEFAULT</b>
<b>Description</b>	Keyword only for pStrongRules eg: pStrongRules = "DEFAULT" Tell WitSensing to use default presets for Strong Rules (for these defaults see Par. 7.2.4)

## SIGNAL KEYS (if you are happy to coding rules ; )

<b>Key</b>	Keyword to define a Signal - in short: Signal Key
<b>Description</b>	Description/Type of Signal Key
<b>Def Behavior</b>	Default rules and behavior for Signal Key, if you don't specify any "Parameter:Value" after the Signal Key
<b>Global Rules</b>	Main Signal Key parameters, valid for all timeframes (usually are in a dedicated section of EA parameters)
<b>Synopsis</b>	Formal expression and syntax to define rules for Signal Key
<b>Key Param</b>	Accepted Parameters
<b>Key Values</b>	Accepted Values
<b>Reverse Val</b>	Reversible Values (as negative from accepted ones) to catch inverse signal

**Key**                    **HA**  
**Description**        Heiken Ashi candles  
**Def Behavior**        "HA=<CurrentTF>:2" Triggered when a NEW HA color come from a previous sequences of opposite colors  
**Global Rules**        See EA parameters for "Heiken Ashi"  
**Synopsis**                "HA[=<TF>:<VAL>[,<TF:VAL>,...]]"  
**Key Param**            TF = m5,m15,m30,h1,h4,d1,w1  
**Key Values**           VAL = 1 (new|confirmed signal), 2 (only confirmed signal)  
**Reverse Val**          Yes, as negative VAL

**Key**                    **BAR**  
**Description**        Japanese candles (regular candles)  
**Def Behavior**        No defaults. If enter only the Key not signal triggered  
**Global Rules**        None  
**Synopsis**                "BAR[=<TF>:<VAL>[,<TF:VAL>,...]]"  
**Key Param**            TF = m5,m15,m30,h1,h4,d1,w1  
**Key Values**           VAL = 1 (follow other signals), 2 (counter other signals)  
**Reverse Val**          Yes, as negative VAL

**Key**                    **PIVF**  
**Description**        Pivot Levels. Price failing near a pivot level  
**Def Behavior**        "PIVF=<CurrentTF>:1" Triggered when the price bounce up or down near a pivot level  
**Global Rules**        See EA parameters for "JPivotsPRO"  
**Synopsis**                "PIVF[=<TF>:<VAL>[,<TF:VAL>,...]]"  
**Key Param**            TF = m5,m15,m30,h1  
**Key Values**           VAL = 1 (new|confirmed signal), 2 (only confirmed signal)  
**Reverse Val**          Yes, as negative VAL

**Key**                    **PIVB**  
**Description**        Pviot Levels. Price break a pivot level  
**Def Behavior**        "PIVB=<CurrentTF>:1" Triggered when the NEW price break up or down through a pivot level  
**Global Rules**        See EA parameters for "JPivotsPRO"  
**Synopsis**                "PIVB[=<TF>:<VAL>[,<TF:VAL>,...]]"  
**Key Param**            TF = m5,m15,m30,h1,h4  
**Key Values**           VAL = 1 (new|confirmed signal), 2 (only confirmed signal)  
**Reverse Val**          Yes, as negative VAL

**Key**                    **3LZ**  
**Description**        3 Level ZigZag Semafor  
**Def Behavior**        "3LZ=<CurrentTF>:1" Triggered on any type of wave  
**Global Rules**        See EA parameters for "3L ZZ Semafor"  
**Synopsis**                "3LZ[=<TF>:<VAL>[,<TF:VAL>,...]]"  
**Key Param**            TF = m5,m15,m30,h1,h4,d1,w1  
**Key Values**           VAL = 1 (H/L 1-to-3 wave - all waves), 2 (H/L 2-to-3 wave), 3 (H/L only 3 wave)  
**Reverse Val**          Yes, as negative VAL

<b>Key</b>	<b>STO</b>
<b>Description</b>	Stochastic oscillator
<b>Def Behavior</b>	"STO=<CurrentTF>:1" Triggered when NEW stochastic crossing occur
<b>Global Rules</b>	See EA parameters for "Stochastic Oscillator"
<b>Synopsis</b>	"STO[=<TF>:<VAL>[,<TF:VAL>, ...]]"
<b>Key Param</b>	TF = m5,m15,m30,h1,h4,d1,w1
<b>Key Values</b>	VAL = 1 (new confirmed signal), 2 (only confirmed signal)
<b>Reverse Val</b>	Yes, as negative VAL

<b>Key</b>	<b>ADR</b>
<b>Description</b>	Average Daily Range
<b>Def Behavior</b>	"ADR=<CurrentTF>:2" Triggered if ADR is at least -33% from its max/min in signals direction
<b>Global Rules</b>	None
<b>Synopsis</b>	"ADR[=d1:<VAL>]"
<b>Key Param</b>	TimeFrame "d1" is the unique param accepted (ADR id daily based)
<b>Key Values</b>	VAL = 1 (-50%), 2 (-33%), 3 (-20%), 4 (-15%), 5 (-10%)
<b>Reverse Val</b>	None, useless

<b>Key</b>	<b>TRE</b>
<b>Description</b>	Trend Price Action
<b>Def Behavior</b>	"TRE=1d:1" Triggered if trend direction (from range to strong trend) follow other signals
<b>Global Rules</b>	None
<b>Synopsis</b>	"TRE[=<INT>:<VAL>[,<INT:VAL>, ...]]"
<b>Key Param</b>	INT = 1h, 3h, 6h, 12h, 1d, 2d, 5d, A
<b>Key Values</b>	VAL = 1 (if range-to-strong), 2 (if weak-to-strong), 3 (if low-to-strong), 4 (if good-to-strong), 5 (only if strong)
<b>Reverse Val</b>	Yes, as negative VAL

Once write your own rules - pStrongRules or pRegularRules, or both - the WSF strings look like these: (long or short strings depend on how many rules you defines)

```
pStrongRules = "HA;PIVF_PIVB;3LZ;STO;TRE;ADR"
pRegularRules = "HA;PIVF"
```

#### 7.2.4. Default Rules

Finally, following are (currently) the WitSensing defaults internal coded, for the "Freebie Newbie System", only if pStrongRules = "DEFAULT", while the pRegularRules is "NULL" (unused).

```
M5:      "!HA=m5:1;PIVF=m5:1,m15:-2_PIVB=m5:1,m15:-2;3LZ=m5:1,m15:1;!STO=m5:1;TRE=1d:-4;ADR=d1:4"
M15:     "!HA=m15:1;PIVF=m15:1,m30:-2_PIVB=m15:1,m30:-2;3LZ=m15:1,m30:1;!STO=m15:1;TRE=1d:-4;ADR=d1:3"
M30:     "!HA=m30:1;PIVF=m30:1,h1:-2_PIVB=m30:1,h1:-2;3LZ=m30:1,h1:1;!STO=m30:1;TRE=1d:-4;ADR=d1:2"
H1:      "!HA=h1:1;PIVF=h1:1,h4:-2_PIVB=h1:1,h4:-2;3LZ=h1:1,h4:1;!STO=h1:1;TRE=1d:-4;ADR=d1:2"
H4:      "!HA=h4:1;PIVF=h4:1_PIVB=h4:1;3LZ=h4:1,d1:1;!STO=h4:1;TRE=2d:-4;ADR=d1:1"
D1:      "!HA=d1:1;3LZ=d1:1,w1:1;!STO=d1:1;TRE=A:-4"
W1:      "!HA=d1:1,w1:1;3LZ=d1:1,w1:1;!STO=d1:1,w1:1"
```

**NOTE** – Except for M15, in which I've performed some tests with good results, for the rest **I haven't done any test nor verified adherence with the "Freebie" system**. So if you can, code your own rules and send me the corrected string for the "Freebie". This is useful for the newbie that use defaults.

Also you note that in D1/W1 some signals are missed due to the INTRADAY nature of WitSensing (eg: ADR, Pivots, are only daily).



## 8. OPENING AND CLOSING TRADES

When EA running in “Trading” mode all trades operations is fully automatized. As you have seen, WitSensing makes decisions following your coded rules and others trade settings. However, some logic is hard coded and not configurable for now.

First, we can observe the EA flow when opens any position:

- |   |                    |
|---|--------------------|
| 1. Signals Evaluation (Rules applied to Signals)          | FULLY CUSTOMIZABLE |
| 2. Spread Limit checking                                  | FULLY CUSTOMIZABLE |
| 3. Main signal detection, then:                           |                    |
| a) <b>calc Stop Loss, stick always to “3L ZZ Semafor”</b> | <b>HARD CODED</b>  |
| b) <b>calc Take Profit at “PIV Area” (Fail or Break)</b>  | <b>HARD CODED</b>  |
| If : 1) have PIV in your rules; 2) exists a fail/break;   |                    |
| 3) pOvverideMyRisk is true                                |                    |
| c) calc Take Profit at fixed pMyRiskReward, if b) fail    | FULLY CUSTOMIZABLE |
| 4. Adjust SL and TP, following your settings              | FULLY CUSTOMIZABLE |
| 5. Money Management calculation/checking                  | FULLY CUSTOMIZABLE |
| 6. Open position!   |                    |

And on Follows/Close positions:

- |   |                    |
|---|--------------------|
| 1. <b>Calc and check Trailing Stop</b>  | <b>HARD CODED</b>  |
| For now, <b>TS move 5 pips every 10 pips gained</b> . Also, you can move it manually, writing in the “Description” field of the HLine plotted in the chart, the word “ <b>Manual</b> ”, and then move the TS around. Delete word “Manual” to regain TS control to WitSensing.<br>WARNING! When move TS manually, if you move it over the price the position will be closed immediately. |                    |
| 2. Closing if your settings are meets   | FULLY CUSTOMIZABLE |
| Note that <b>you have also the complete control to adjust SL/TP</b> after/during position, but the info on the panel stick always on original SL/TP calculated (simple ignore they)<br>However, WitSensing execute correct calculations (statistics) after any order (even modified) is closed on any event.  |                    |

Other few (remarkable) logic are hardcoded. You discovers by using the EA and look constantly at messages and mostly at the “Day Journal”, to be discussed in next section.

As I says, this is a “very quick and basic guide”, and right now I don't have the time to explain in detail all internal logic.



## 9. LOGGING, THE “Day Journal”

Go back to the Par. 6 (WitSensing Panel) and you already see that we have a message area in the panel. This area report all Log statistics (how many and which messages are logged), when no important messages coming, and a concise exposition of any important message when it coming.

All these messages – fully explained – are written in a log file that I called “Day Journal” (rotate every day with new file creation).

This kind of file have the name/format:

**WS\_DayJournal\_<pair>\_<tf>\_<date>.txt**

For example: **WS\_DayJournal\_EURUSD\_M15\_.txt**

You can find the file in your MetaTrader folder under "*experts\files\WitSensing\_<pair>\_<tf>*"

You see an example of this file in the next page.

```

WitSensing - (c) 2011 Jomadev (john.madev@gmail.com)
EA originally inspired on Dredding82 strategy "Freebie Newbie System" at Forex Factory Forum

EA version: 0.5.0 "Freebie Edition"
Starting: WitSensing starting at 2011 Sept 13, Tuesday (0 days ago) on EURUSD
Journal Day: 2011 Sept 13, Tuesday
Symbol: EURUSD - TF:M15

*****
***** LEAVE UNTOUCHED THIS FILE *****
***** AND DO NOT MODIFY IT MANUALLY *****
*****

PLEASE NOTE: All time refer to YOUR BROKER TIME, to simplify your tracing in symbol chart
(this don't affect any parameters settings on operating session, timezone and hours)

***** DAILY PARAMETERS *****
=====
Changes Tracking: | Until this time you haven't making changes
=====

-----/ RULES LOGIC (p)
| StrongRules "DEFAULT" (Freebie for M15)
| RegularRules "NULL"
| DSTimeframe "CURRENT" (M15)
- See also: WitSensing_GBPUSD_M15/WS_RulesTables_GBPUSD_M15.txt, for detailed view of the above rules (file reflects last changes)

-----/ GLOBAL SETTINGS (p)
| AutoTradingEA true (Eval signals and make orders)
| BrokerGMT 2 (GMT 2)
| MarketSession 3 (EST 5pm close, NY market)
| TimeToSignalRefresh 60 (every 60 seconds)
| OrMagic 343434

-----/ INDICATOR: HEIKEN ASHI (pHA_)
| PrevBarsCount 3 (3 old bars before new color)
| SignBarsCount 1 (1 new color trigger signal)
| SignalSurvive 2 (signal valid until 2 bars)

-----/ INDICATOR: JPIVOTS PRO (pPIV_)
| SignalSurvive 3 (signal valid until 3 bars)
| Classic1 true (Used)
| Classic2 false
| MidPoints true (Used)
| Fibonacci false
| Cam1 false
| Cam2 false
| Cam3 false
| Woodie false
| DeMark false
| ADRPeriod 14 (Average Daily Range)

-----/ TRADING CONTROLS (p)
| HourlyTrading false (Trades at all hours)
| HourlyList "0" (Not applied)
| StopLossAdding 0 (Only auto calculated)
| StopLossRules "3,0,60,0" (Discard trade under 3 p.SL)
| TakeProfitRules "8,0,75,1" (Discard trade over 60 p.SL)
| SpreadLimit 3 (Discard trade under 8 p.TP)
| ExitOnContrary 1 (Fix trade 75 p.TP, if over)
| DurationRules "20,1" (Trade if Spread 3p. or less)
| (Exit if lose)
| (If Lose, exit >=20 bars opening)

-----/ INDICATOR: 3L ZZ SEMAFOR (pSEM_)
| Period1 5
| Period2 13
| Period3 34
| Dev_Step_1 "1,3"
| Dev_Step_2 "8,5"
| Dev_Step_3 "13,8"

-----/ MONEY MANAGEMENT (p)
| MyRiskReward 1.00 (Risk/Reward factor)
| OverrideMyRisk true (TP/SL auto calc, if possible)
| MoneyManagement true (MM applied!)
| FixedLots 0.01 (Lots used, if not MM applied)
| BalanceThreshold 0.00 (no threshold)
| RiskBalance 1.00 (risk 1.0% of your balance)
| FreeMargin 0.00 (use all free margin)
| FreeEquity 0.00 (use all free equity)
| MaxDayProfit 3.00 (stop at 3.00%)
| MaxDayLoss 3.00 (stop at 3.00%)

-----/ INDICATOR: STOCHASTIC (pSTO_)
| KPeriod 10
| DPeriod 3
| Slowing 3
| SignalSurvive 3 (signal valid until 3 bars)

***** LOGGING TABLE *****
| Time | MsgType | Code | Bid / Ask | Message
|-----|-----|-----|-----|-----|
| 00:00:00 | NOTICE | PIO | 1.36597 / 1.36627 | [1] New pivots calculation on "EST, 5PM, NY Market Close", Broker time GMT2
| | | | | Previous session: 2011.09.09 23:00 to 2011.09.12 22:59
| | | | | OHLC Prices: Open[1.35775] High[1.36942] Low[1.34982] Close[1.36773]
| | | | | Current session: 2011.09.12 23:00 to 2011.09.13 22:59
| 00:00:00 | _flow_ | IO | 1.36597 / 1.36627 | [1] First Time EA Init - Attached to EURUSD:M15 chart
| 03:00:00 | NOTICE | NSIG | 1.36364 / 1.36394 | [1] New MAIN SIGNAL detected for "Strong BUY"
| 03:00:00 | NOTICE | OKROK | 1.36364 / 1.36394 | ===== New Strong BUY - Order _S_U_C_C_E_E_D_E_D_ =====
| | | | | Order 1 has been successful performed!
| | | | | Following the flow validation (F), and data (D), of the order:
| | | | | (F) SL calculated on 3LZ Semafor
| | | | | (F) Attempt to calc TP overriding your risk...SUCCESS on PivFail area!
| | | | | (D) PRICE 1.36394 - SL 19 - TP 36 - LOTS 0.53
| | | | | (D) Money risk USD: 100.00 (1.00% of yours 10000.00 availability)
| | | | | (D) Max potential Loss/Profit on money risk: 99.11/190.27(RR 1:1.92)
| 04:05:39 | NOTICE | WIN1 | 1.36755 / 1.36785 | ***** CONGRATULATIONS! *****
| | | | | You gain +35.9 Pips! (now pips balance is: +35.9)
| | | | | *****
| | | | | BUY Order 1 at 1.36394 - 2011.09.13 00:00:00 - 0.53 lots
| | | | | Closed by TAKE PROFIT at 1.36753 - 2011.09.13 00:00:00
| 04:13:43 | _flow_ | DO | 1.36686 / 1.36716 | [1] EA DeInit - Removed from EURUSD:M15 chart

WitSensing detached from chart (Day Journal resume if EA restart - Or ENDS HERE, if restart on another day)

```

## 10. BACKTESTING (if you want)

Of course, I don't explain how to make a backtest in MetaTrader 4. This procedure is well known by any experienced trader (to which this guide is addressed). Sorry, but the newbie are be warned that the testing procedure with MetaTrader **IS NOT** a very simple thing; you have to do some settings and preparing correctly the environment (eg: good past data!), otherwise will never get a fair results.

However, what I have to say – and to warn – even the experts, is the right way to back test this EA. Its peculiarity is a little complexity, that complies only with an accurate method and a slow testing time. Therefore:

- **Use ONLY “Every tick (based on all available least timeframes)”**  
Never use “Control points” or “Open prices only”
- **MUST check “Visualization”** and display real-time chart
- **Adjust the “Playback Speed”** (the slider) so that the tick sequence on the chart **don't exceed** a max of 300% (four times) compared to normal (real) data feed from the broker  
This adjustment vary according to the speed of your PC, but you see visually the speed which the candles are drawn on the chart, and adjust according the slider to slow down
- **Leave the chart opened** (don't switch in other chart windows) and MetaTrader maximized, possibly with your monitor turned on  
If you don't do this, you know that when switch in any other chart or iconify MT, the test speeds up and makes vain our previous speed adjustments

All this because we have to give the necessary calculation time to WitSensing. If this “time” is not provided, the EA delay continuously and open/close erroneous positions, with a totally unreliable test results. This is a limitation of MetaTrader for which I can't do anything.

## 11. YOUR QUESTIONS

I'm very busy. Already said...?

I wish to invest more time ONLY on the relevant questions and development of the EA, without distraction by too obvious questions whose answers can be found already in this guide, reading it several times and very carefully! But I also hope that those experts can help others, with spirit of cooperation needed for any project of this kind.

When I've announced WitSensing many have offered their help, and this is their occasion. Now – that is in your hands – I think also that others will be involved. So there should be no problems... perhaps... ;)

Anyway, I apologize from now but I will not answer any questions that is for me trivial, simple, obvious, useless, etc.

Hope everything's going well for all of you!

Italy, Oct 3, 2011

*Jomadev*