

KG RelativeStrength Original and Range trading EA

For those new to this, the terminology can be confusing. The terms 'Strong' and 'Weak' refer to the trigger currency, originally the Japanese Yen (JPY), so:

- 'Strong' means the Yen is going to rise. We sell xxxJPY.
- 'Weak' means the Yen is going to fall. We buy xxxJPY.
- 'Trigger' currency is the currency whose strength is being measured against the other currencies shown in the indicator. If you do not understand *this*, then go back to the beginning of KG's thread and read it until you do.

This EA allows us to trade:

- KG's original strategy
- The range trading strategy that we have developed.

Important note: this EA will trade only one strategy at a time. If you wish to use the EA to trade multiple strategies on the same account, you will need multiple instances of it running.

Getting started

- Extract all the indicators to the Indicators folder of your mt4 platform. You do not need them on a chart.
- Unzip the EA to the Experts folder of your mt4 platform.
- Decide which strategy you want to adopt – Original or Range. Each instance of the EA can trade only one strategy. If you want to trade more than one at a time, you have to use multiple instances of the EA on multiple charts.

Original Strategy

This involves the JPY as the only trigger. It requires KG RS GROUP V1.1 and RS_GROUP_JPY V1.1 to be present on your chart as indicators to help you decide when to trade. Simplified, here is how it works:

- Go Strong when:
 - RS_GROUP_JPY V1.1 said 'Strong'.
 - KG RS GROUP V1.1 is over 50.
- Go Weak when:
 - RS_GROUP_JPY V1.1 said 'Weak'.
 - KG RS GROUP V1.1 is under 50.

Eddie noticed that a difference of 10 or more between the red and white line values invariably led to a successful trade, so we added this into the mix.

The EA uses indicators written by KG that apply the algorithm in RS_GROUP_JPY V1.1 to the other currencies in the basket, so they can all be triggers, for example RS_GROUP_USD V1.1 etc.

The EA settings specific to this strategy are:

- TradeOriginalMethod=true;
- WeakUpperBound=50;
- WeakLowerBound=35;
- StrongUpperBound=65;
- StrongLowerBound=50;
- MinDiff=0;

Upper and Lower bound effectively mark the trading area as indicated by KG RS GROUP V1.1. For example, there seems to me little point in going Weak if the trigger strength is already approaching 30 or so, hence the default. This needs experimenting with in order to find the best settings. MinDiff is effectively 'Eddie's rule', so set it to 10 if you want to follow this. **The lower this setting is**, the more likely you are to get caught by a 'whipsaw' when a trigger's strength abruptly reverses direction and you end up with both a Strong and a Weak basket open at the same time.

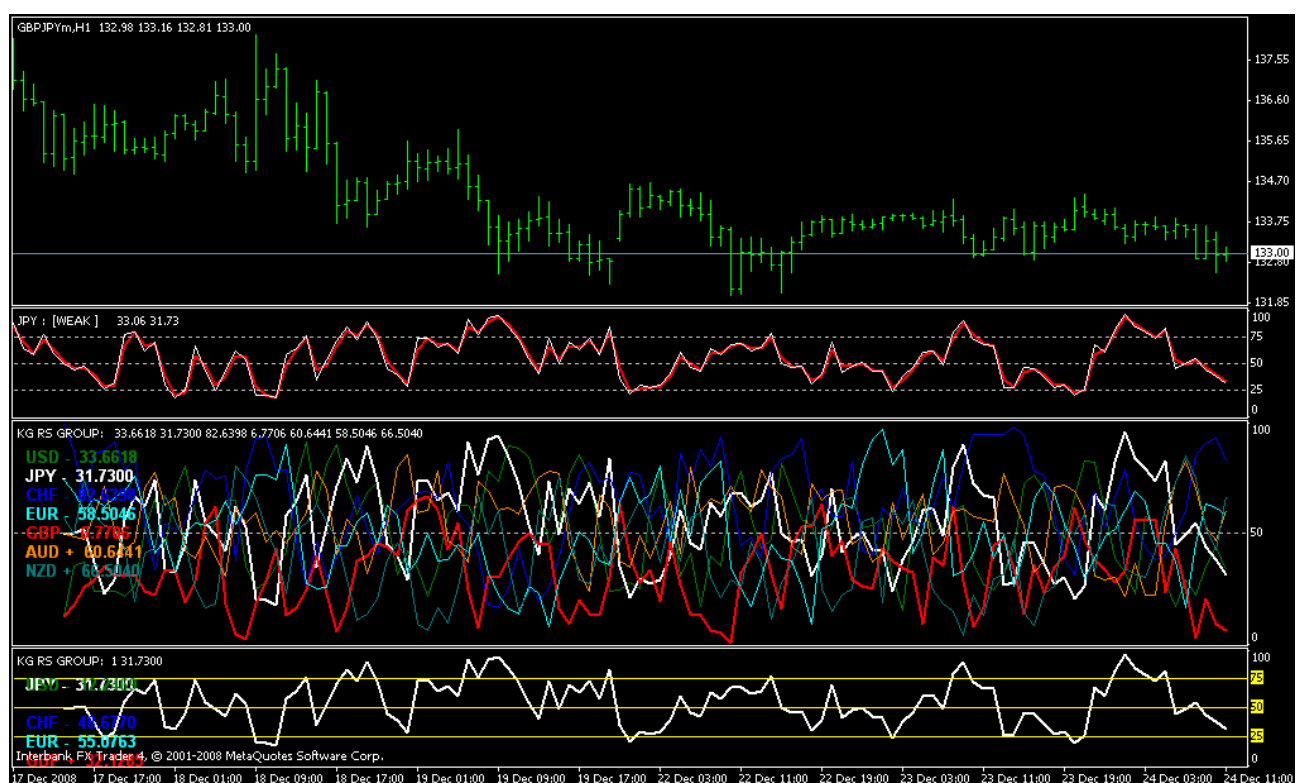
A tiny point to note about the screen displays of the red and white line values is, they are truncated to two decimal places for readability. They are actually numbers with four decimal places. The numbers can occasionally *appear* to be the same; in fact, they will be different but you cannot see the difference because the final two decimal places are not displayed.

Set up a GBPJPY 1 hour chart, drag the ea onto it, load the 'kg original basket set' and sit back and watch.

Range Strategy

A few of us noticed that the relative strength of the Yen tended to travel between roughly the 75 and 25 levels on KG's indicator. We started trading this, taking out a Weak basket at the 75 level, and a Strong basket at the 25 level. The picture highlights this. Look at the bottom band, where you can see a second instance of KG RS GROUP with only the JPY strength indicated. The yellow lines represent the 75, 50 and 25 levels respectively. Elchoco advocated 80\20; the EA adopts this by default.

By waiting until the strength passed the 'trigger' level then started to retrace so that we could see the white line starting to curve back, we could enter profitable baskets.



The EA automates the process of monitoring the relative strength of the trigger currency

and placing the trades when appropriate. The trigger currencies are:

- JPY
- USD
- GBP
- EUR
- CHF
- AUD
- NZD (think carefully before trading this on IBFX – lethal spreads).
- CAD (not available to IBFX users).

The EA is a full auto-trader. It has the facility to close a basket that hits take profit and stop loss settings. For more flexibility, you need either to monitor the trades manually, or use my multi purpose trade manager.

To use the EA for basket range trading:

- You need KG RS GROUP V1.1 copied into the Indicators folder of you mt4 platform. You do not need it on the chart.
- Drag the EA onto a 1h GBPJPY chart. Any chart will do, but this one is the most volatile, so the EA will consult the relative strength index more often.
- Change the settings to suit yourself.
- Sit back and enjoy.

Specific settings for range trading:

- **TradeRangeMethod=true;**
- **WeakEntryPending=80:** the entry level on KG's indi that tells the EA that a Weak basket is pending. It will wait for a retrace to place the trades.
- **StrongEntryPending=20:** the entry level on KG's indi that tells the EA that a Weak basket is pending. It will wait for a retrace to place the trades.
- **RetraceDistance=5:** this is the distance the trigger currency strength must retrace into the area in between 20 and 80, so:
 1. Weak baskets will be placed at 75 ($\text{WeakEntryPending} - \text{RetraceDistance}$).
 2. Strong baskets will be placed at 25 ($\text{WeakEntryPending} + \text{RetraceDistance}$).
- **ValidatingTimeFilterMins:** This is a filter invented by Eddie to try to avoid the situation where the EA sends a basket, then the trigger's strength immediately retraces sending the basket into heavy draw down. Sending a basket becomes a 3 stage process easiest to understand with an example. Take a Strong basket, with the EA set to the defaults; the stages are:
 1. Waiting for the strength to pass 80. This sets the EA to Pending.
 2. Pending: the EA is waiting for the strength to drop to or below 75. This sets the EA to Validating.
 3. Validating involves waiting for 3 minutes before taking sending the basket.
 - During the three minutes:
 - Strength rises back above 85, so the EA cancels the pending trade and returns to stage 1.
 - After three minutes:
 - Strength is still below 75, so the EA sends the basket if all the other criteria are met (spread, max trades etc).
 - The default of 3 minutes is open to experimentation; it is based on Eddie's observations.

- **EndValidationPoints:** during Validation, if the trigger strength moves by this figure (default 10) in favour of opening the basket, the EA cancels Validation and sends the basket. Set it to a ridiculous figure like 40000 if you do not want to use this feature.
- **StrengthInProfitClose:** set this to 'true' to enable this function (see the explanation that follows).
- **StrengthProfitDollarTarget:** the minimum profit you will accept from the closure.
- **StrengthInLossClose:** imagine a Weak basket has been open for a long time without becoming profitable. Its relative strength index travels all the way to the point at which a Strong basket becomes pending. Experience has shown me that the best thing to do is to close the basket; it will be a long time, if ever, before the basket becomes profitable. In the meantime, it is deepening the drawdown on the upl. Three or four of these can kill an account. This setting will allow the EA to close such a losing basket if the loss on the basket is greater than the figure in StrengthInLossDollar..
- **StrengthInLossDollar:** the losing upl on the basket after which you want StrengthInLossClose to kick in.

StrengthInProfitClose

The easiest way to explain this is to give an example:

- You have a Strong JPY basket open.
- Jpy strength passes your WeakEntryPending value (default of 80) and the EA prepares to open a Weak basket. Your Strong basket has not yet hit its take profit, but its upl will fall if the strength of JPY starts to fall.
- Rather than letting this happen, the EA will close the basket so long as it has passed the profit point you set in StrengthProfitDollarTarget (default of 0 means breakeven).

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Select the currencies you want to act as triggers for basket trading, by setting, for example, JpyIsTrigger to 'true'.

You tell the EA to manage its own baskets by setting the **xxxManagedByThisEA** inputs to 'true' – for example JpyManagedByThisEA, EurManagedByThisEA etc.

The EA offers to option to suspend trading in individual pairs. This feature should become more useful as we become more sophisticated in our basket trading. IBFX do not offer CADxxx, so non-IBFX users need to remember to turn CADJPY to 'true', as the default is 'false'.

General EA settings

- **MaxTradesAllowed=24:** if the EA discovers that there are more than this number of trades already open, it will not open a new basket. This is to avoid over-trading as new trigger currencies are added to the EA. If this figure is exceeded during a basket opening, the EA will complete the basket.
 - **MaxBasketsAllowed:** The robot calculates the number of baskets already open and will not open a fresh one if this is equal to MaxBasketsAllowed. This is probably a more useful way of limiting trades than the MaxTradesAllowed input. The default of 4 is purely for my own use; you should decide for yourself how many baskets you are happy to have open at any one time.
 - **Lot=0.01:**
 - **RobotCalculatesLotSize:** when set to true, the robot will calculate the lot size using this formula: $(\text{Account balance} / \text{CurrencyUnit}) * \text{LotsPerCurrencyUnit}$. It checks that the result is acceptable to the criminal and adjusts to the minimum\maximum as necessary. The defaults reflect my IBFX mini account settings and are set at 0.01 (**LotsPerCurrencyUnit**) per \$100 (**CurrencyUnit**) of the account balance or equity, depending on which you chose. These are my recommendations:
 - Criminal allows nano-lots i.e. 1 cent per pip:
 - 0.01 lots per \$100.
 - Criminal allows micro-lots i.e. 10 cents per pip:
 - 0.01 lots per \$1000.
- UseBalance:** set this to true to calculate the lot size using the account balance – more profitable but more dangerous..
- UseEquity:** set this to true to calculate the lot size using the account equity – less profitable but safer.
- **TradeWeak=true:** tells the EA to place Weak baskets.
 - **TradeStrong=true:** tells the EA to place Strong baskets.
 - **MinTradesPerBasket:** this setting tells the EA how many trades constitute a 'basket'. It checks the broker spread of each pair in the basket and aborts the send if there are not enough pairs with acceptable spreads. This is not total protection because:
 - The spread might have changed by the time the EA sends an individual trade. The EA will not send the trade if the spread has become unacceptable.
 - Mt4 platform problems might result in a trade not being sent.
 - **OneBasketPerTriggerOnly:** this has been forced on me by those super-crooked brokers who no longer allow hedging. It stops the robot from trying to open an opposite direction basket to one already opened, and being left with just a single trade because of the no-hedging rules.
 - **CriminalIsUS:** set this to true if your account is held by a US criminal. The robot will not consider as part of the basket, any trade that would be disallowed by the no-hedging rule; ditto *any* trade that would cause chaos because of FIFO.
 - **PairSuffix="m":** use this if yours is an IBFX mini account. Change it to "" if not. If your broker uses a different suffix, then change PairSuffix to this setting.
 - **ShowAlerts=true:**
 - **MaximumSpread=20:** matrixebis's indi highlighted some horrible spreads on occasions. If the broker's spread exceeds this, the EA will not place the individual trade. It will continue to place the remaining trades in the basket. If your broker quotes 5 decimal places, then you need to multiply this number by 10.
 - **DisplayGapSize:** this indents the screen feedback. It is useful if your broker puts messages on the left of the chart that clash with the feedback.

- **ShowMagicNumbersOnScreen:** set this to 'false' and the EA will not show the magic numbers. This frees up a lot of screen space and is useful if you are using the EA to manage the trades.
- **WatchTradesOnly:** set this to 'true' if you want to use the EA purely for trade display. It will perform no basket trading\management functions.
- **CurrencySymbol:** a present for Eddie. Change this to the currency you use for trading if it is not the \$.

Trading time filters

- **SleepMinsAtStartup=2:** this is a *really* important setting. On first starting your mt4 platform, or loading up KG's indi, the indi has a lot of work to do. The values you first see on screen are incorrect and can lead the EA to place trades incorrectly. This figure tells the EA how long to wait before starting up, and gives the indi time to sort out the correct values.
- **TradeSundayCandle:** set this to 'true' to tell the EA to trade on Sunday, if you live in a part of the world where this is possible. Experienced traders say not to do this, so best to leave it set to 'false'.
- **MondayStartHour:** the hour at which you want the EA to start trading on Monday.
- **StopTradingOnFriday=true:** tells the EA not to trade after FridayStopHour on Fridays – an attempt to enter the weekend without an open position. I live in the UK, so 2.00 pm still leaves about 7 hours of trading before New York knocks off for the weekend. US residents will need to adjust this to suit themselves.
- **FridayStopHour=14:**
- **Session time trade filters:** these apply to the Range and Original trading methods. We are indebted to cybernet69 for suggesting we use them. The EA works on you computer's local time, so you need to make sure this is correct. Default settings are for my computer; you might need slightly different ones. These filters will stop the EA sending trades during the hours you specify. The settings are:
 - **UseAsiaTimeFilter:** filters out JPY, AUD, & NZD triggers.
 - **AsiaStartTime:** the hour at which the Asian markets open.
 - **AsiaEndTime:** the hour at which the Asian markets close.
 - **UseLondonTimeFilter:** filters out EUR, GBP, CHF & CAD triggers
 - **UseNewYorkTimeFilter:** filters out the USD trigger.
- **Individual basket trade filters**
 - **UseKgGroupFilter:** set this to 'true' to use this filter. The EA examines the relative strength of the currencies in the basket on the next highest time frame, and allows the individual trade if the higher triggers are also heading in the right direction. For example, imagine a Strong JPY basket, ie sell xxxJPY:
 - the EA examines, say, GBPJPY relative strength indices, and discovers that GBP is higher than JPY. To take out a sell GBPJPY would be a poor trading decision, so the EA will not take the trade.
 - If sufficient individual trades are rejected by this, and/or by the maximum spread filter, for the available trades to fall below your MinTradesPerBasket then you will see the 'xxxxxx basket cancelled - insufficient individual trades available' Alert.
 - **KgFilterMins:** this should represent the next time frame up from the one you are trading. The default 240 minutes is correct if you are trading a 60 minute (1H) chart.
 - **BasketReverseNotCancel:** this applies to the individual trades that make up a Range or Original basket. If set to true, this setting reverses the direction of the individual trade, if the decision returned by UseKgGroupFilter would

otherwise result in it being cancelled. This leads to far fewer basket cancellations. Here is how it works. Imagine the EA wants to send a Strong JPY basket I,e, sell xxxJPY. Suppose it is examining the state of GBPJPY, and finds that:

- The GBP trigger index is lower than that of JPY. Here, the strength of GBP is in decline against JPY, so it allows the sell GBPJPY to go ahead.
- The GBP trigger is higher than that of JPY. Here, the strength of GBP is in ascent against JPY even though the JPY trigger is rising in strength generally. GBP must be rising strongly, so it cancels the sell GBPJPY and takes out a buy GBPJPY instead..

Management inputs

- **BasketClosureTP:** set this to 'true' to tell the EA to manage open baskets to a take profit setting, Related inputs are:
 - **BasketStrongDollarTP:** the take profit in dollars for Strong baskets. The best appears to be whatever value equates to 100 pips.
 - **BasketWeakDollarTP:** the take profit in dollars for Weak baskets.
- **Basket stop loss:** works in the same way as the take profit routine.
- **Basket jumping stop settings:**
 - **UseJumpingStop:** set this to 'true' to use this feature.
 - **JumpingStopDollars:** profit points in dollars at which the EA should lock in the basket $UPL - JumpingStopDollars$,
 - **LockInDollars:** the profit to lock in at the first jump. Leave this at 0 to simply set a break even point. Make sure this is less than JumpingStopDollars, or the EA will immediately close the basket, as it is below the take profit.
 - Here is how a jumping stop works. Imagine you have it set to \$3: LockInDollars = 1:
 - Basket profit hits \$3: EA locks in \$1 and will close the basket if the profit falls to this.
 - Basket profit hits \$6: EA locks in \$4 profit and will close the basket if the profit falls to \$4.
 - And so on until the basket is closed by a change of strength direction.

I have imported and modified a couple of functions from the multi purpose trade manager – Global Order Closure and Shirt Protection. Use them with care, because if triggered they close **all** open trades, not merely those opened by this EA.

Global order closure settings

This offers the facility to close all open positions when the trading profit reaches your target. By default, the settings are all either false or ridiculous profit targets for safety. Remember this is different to the Daily Cross global closure; this function closes ALL trades The settings are:

- 1) **GlobalOrderClosureEnabled:** set this to 'true' to enable this feature, 'false' to disable.
- 2) **IncludePendingOrdersInClosure:** will close pending orders if 'true' but will ignore them if 'false'.
- 3) **DollarProfit:** The profit at which you want the EA to close all your trades. The

default of 100,000 is for safety.

Shirt Protection Settings

"Losing your shirt" is a slang expression to describe losing everything - money, home etc. Here, it applies to a margin call.

- 1) **ShirtProtectionEnabled**: set this to 'true' if you wish to enable this feature.
- 2) **MaxLoss**: set this to the dollars loss at which you want the ea to close all open trades (it will leave pending orders in place). For example, imagine you have an account with a balance of \$1,000. You can stand up to 80% upl but no more. You would set MaxLoss to -800. **MaxLoss must be a negative number.**

Really important point:

This routine should be irrelevant to you. If you think you might need it, they your trades are over-leveraged and ridiculously risky. Re-examine your trading techniques.

IBFX users

IBFX routinely puts criminal spreads on some of their pairs – I have seen GBPNZD at 105, for example. I think this practice makes NZD and AUD unusable as triggers for IBFX account holders.

Robot does not run when dragged onto a chart

As I have released the source code, your platform has to compile it from an .mq4 file into an .ex4 form that it can use. Sometimes the platform loses contact with the compiling process; how or why, I have no idea. When this happens, the robot shows up in the navigation window but cannot actually run.

Try this:

1. Left click on the robot and select Modify from the menu. After a few seconds, the mql editor window should appear with the source code open.
2. Press the F5 key to compile the code.
3. After a few seconds, you will get a message at the bottom of your screen saying, "0 errors, 2 warnings" and some stuff about OrderReliable functions being deleted from the compiled file because they are not called. Ignore them.
4. Press the F4 key to call back your trading platform. The robot should work now.
5. Close the mql4 editor.

If stage 1 does not work, it means your platform has lost contact with the editor. In this case: shut down the platform; navigate to the Experts folder using Windows Explorer or my Computer; double click on the source code file and follow steps 2-5.

And finally

If you are new to it, demo this EA for a few days to get a feel for how it works. **DO NOT** rush straight into live trading with it – only an idiot does this.

You can lose a *lot* of money trading Forex. Use of this EA does not guarantee you will profit from its use. Default settings are provided to get you started and do not constitute trading recommendations.