

Pivot Engulfing Hedge

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Price-Action Breakout & Hedge

TIMEFRAME

M5 / M15 / M30

WEBSITE

www.algotbot.live

⚠ Important Disclaimer This document is for educational and informational purposes only. It does not constitute financial or investment advice. Trading forex, CFDs, and other leveraged instruments involves substantial risk of loss and is not suitable for all investors. Past backtest performance does not guarantee future results. Never trade with capital you cannot afford to lose.

Overview

Pivot Engulfing Hedge is a pure price-action Expert Advisor — it uses **no indicators** whatsoever (no moving average, RSI, ATR or Bollinger Bands). Instead it fuses five classic discretionary tools into one mechanical system: floor **pivots**, the **engulfing** candle, a momentum **breakout**, a quick **scalp** exit, and a managed **hedge** that flips into a reversal trade when a breakout proves false.

Floor pivots are the reference grid that intraday desks defend. When a full-bodied engulfing candle closes decisively *through* a pivot, it signals that one side has overwhelmed the other right at the level the whole market is watching — a genuine momentum break that tends to follow through. So, unlike a “fade the level” trader, this system **buys** a bullish engulfing that breaks up through a pivot and **sells** a bearish engulfing that breaks down through one.

The classic failure mode of any breakout is the **false break**: price pokes through, traps the breakout crowd, then snaps back. Rather than simply absorbing that loss, when price closes back across the broken pivot the EA deploys an opposite **hedge** leg — now a locked pair that rides the snap-back reversal and offsets the trapped base leg. The hedged basket is then banked the instant net floating profit turns sufficiently green (the scalp).

Zero pip hard-coding. Every distance in the strategy — break tolerance, hedge trigger, stop pad and take-profit — is expressed as a fraction of the pivot *range* ($H - L$, which equals $R1 - S1$). Because the range is recomputed each closed bar, all buffers scale automatically to any symbol or timeframe.

How It Works

1. Floor Pivots

On every freshly closed bar the EA recomputes classic floor pivots from the **primary timeframe only**. Over the last `PivotLookback` closed bars it takes the highest high H , the lowest low L , and the most-recent close C :

```
PP = (H + L + C) / 3
R1 = 2 × PP - L
S1 = 2 × PP - H
range = H - L          (== R1 - S1)
```

The three levels $S1$, PP and $R1$ become the candidate pivots that a breakout can fire against.

2. Engulfing Geometry

The trigger candle must be a true engulfing pattern, measured on raw bodies:

- **Bullish engulfing** — the current candle is bullish, the prior candle is bearish, the current body fully engulfs the prior body ($close \geq prevOpen$ and $open \leq prevClose$), and the current body is at least `EngulfRatio` times the prior body.
- **Bearish engulfing** — the mirror image: current bearish, prior bullish, body engulfs the prior body, same strength filter.

3. Entries (flat only)

The EA only hunts a fresh setup when completely flat, and acts once per closed bar. The two rules are exact mirror images:

- **LONG** — a bullish engulfing where the prior close sat at or below a pivot ($prevClose \leq level$) but this candle *closes clearly above* it ($close > level + BreakFrac \times range$). The strongest break — the highest pivot satisfying the rule — is chosen.
- **SHORT** — a bearish engulfing where the prior close sat at or above a pivot but this candle closes clearly below it. The lowest qualifying pivot is chosen.

Entries are skipped while the spread (in points) exceeds `MaxSpreadPoints` .

4. Base Stop & Take-Profit

For the base leg, the stop-loss is parked a structural pad *beyond* the hedge trigger so that the hedge always engages first; the take-profit is a reward-multiple scalp away from entry:

```
hedgeTrigger = level -/+ max(HedgeFrac × range, minDist)
baseSL       = hedgeTrigger -/+ max(StopFrac × range, minDist)
baseTP       = entry +/- max(RewardFrac × range, minDist)
```

(`minDist` is the broker's minimum stop distance, derived from `SYMBOL_TRADE_STOPS_LEVEL` .)

5. The Hedge (signature mechanic)

While the single base leg is open, the EA watches price intrabar. If price travels `HedgeFrac` of a range *back across* the broken pivot — i.e. the breakout has failed — an opposite market leg is opened. This locked hedge rides the reversal the new way. Its own stop is placed where the breakout would be *re-confirmed* (controlled by `ReclaimFrac`), and its take-profit is a reward distance into the reversal.

⚠ **Hedging account required.** The hedge mechanic needs a **hedging** account so the opposite legs can be held simultaneously. On a **netting** account an opposite order will net against (close) the base leg instead of locking it. The MQL5 build detects this in `OnInit` and logs a warning — but you must use a hedging account for the intended behaviour.

6. Basket Money Management (dominant exit)

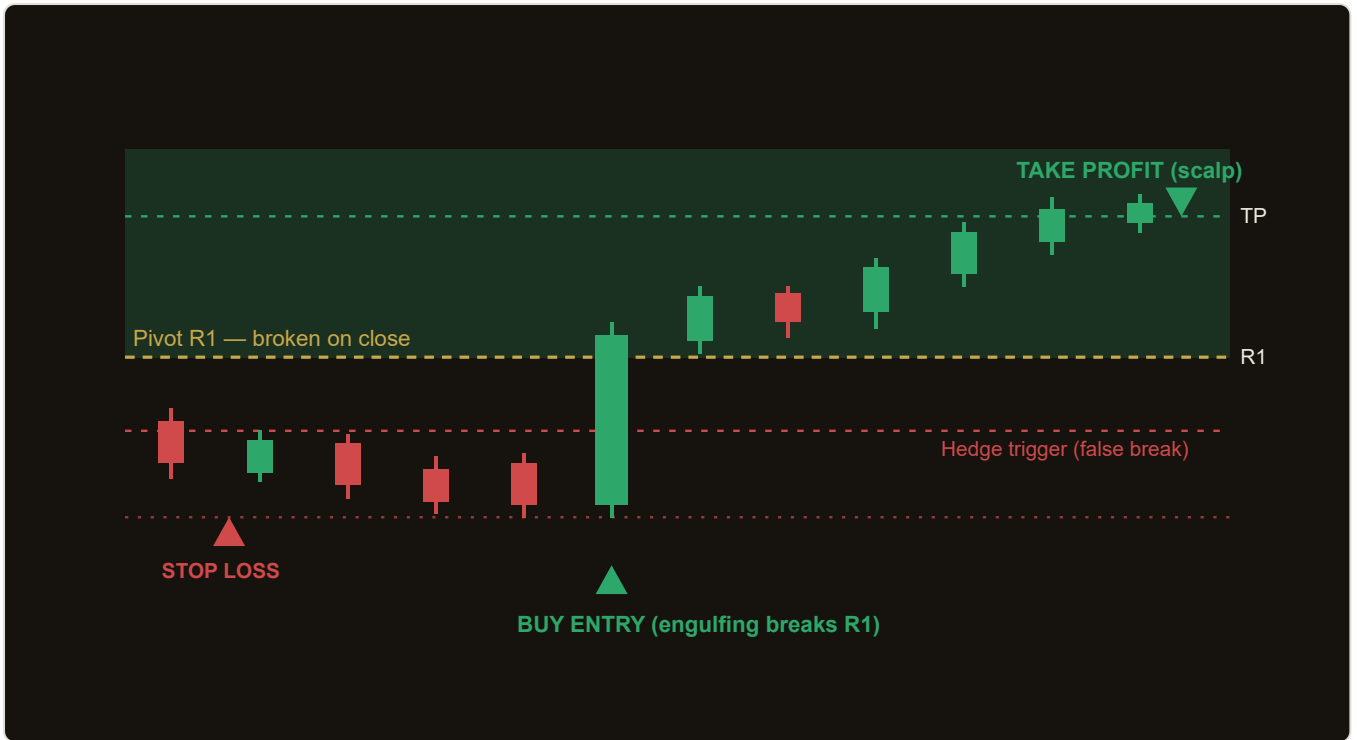
Whenever any exposure is held, net floating profit/loss across all legs governs the exit:

- **Net floating P/L** \geq `BasketTpMoney` → close everything (banks the scalp or recovery).
- **Net floating P/L** \leq $-$ `BasketS1Money` → flatten the whole basket (hard ceiling — a strong one-way trend after the hedge locks is the worst case).

This basket logic is the primary way trades are closed; the individual base/hedge stops act as structural backstops.

Strategy in Action

The illustration below shows an example of how the strategy identifies a setup and triggers its entry and exit. This is a simplified, illustrative example for educational purposes — not real market data.



Illustrative example only. Actual market behaviour varies.

Reading the chart

Price churns below the **R1** pivot, then a large bullish engulfing candle (candle 6) closes decisively above it — the EA buys the breakout. Had price instead snapped back below the dashed red *hedge trigger*, an opposite sell leg would have been deployed to ride the reversal. Here the break follows through and the basket is banked at the take-profit scalp.

Parameters

Parameter	Default	Description
PivotLookback	24	Closed bars whose H/L/C define the floor pivots. Range 5–150, step 1.
BreakFrac	0.10	How far beyond a pivot the engulfing must close to confirm the break, as a fraction of the pivot range. Range 0.00–0.60, step 0.01.
EngulfRatio	1.10	The engulfing body must be at least this multiple of the prior body (strength filter). Range 1.00–4.00, step 0.05.
HedgeFrac	0.25	Pullback back across the broken pivot that confirms a false break and deploys the hedge, as a fraction of range. Range 0.05–1.00, step 0.05.
StopFrac	0.30	Extra base-stop pad placed beyond the hedge trigger, as a fraction of the pivot range. Range 0.05–2.00, step 0.05.
RewardFrac	1.00	Base take-profit scalp distance from entry, as a fraction of the pivot range. Range 0.20–4.00, step 0.10.
ReclaimFrac	0.30	Hedge invalidation pad: if price reclaims the breakout side by this much, the hedge is wrong. Range 0.05–1.50, step 0.05.
BasketTpMoney	25.0	Close the whole basket once net floating profit reaches this (account currency). Range 5.0–2000.0, step 5.0.
BasketSIMoney	300.0	Flatten the whole basket once net floating loss reaches this (account currency). Range 50.0–100000.0, step 50.0.
MaxSpreadPoints	50	Skip new entries while spread (points) exceeds this (0 = off). Range 0–500, step 5.
Lots	0.10	Trade volume per leg, snapped to the symbol's volume step and min/max. Range 0.01–1.00, step 0.05.
Magic	8310	Magic number identifying this EA's positions. Range 0–9,999,999, step 1.

Recommended Settings

The strategy is designed for liquid, level-respecting instruments where pivot breaks and false breaks alternate — the conditions its hedge mechanic is built to exploit.

- **Symbols:** a liquid FX major such as EUR/USD or GBP/USD, or XAU/USD (gold).

- **Timeframes:** M5, M15 or M30 — the EA runs on whatever timeframe the chart is set to at attach/backtest time.
- **Account:** a **hedging** account (mandatory for the hedge leg to lock rather than net).

Tuning the basket targets. `BasketTpMoney` and `BasketSlMoney` are denominated in account currency, so size them to your `Lots` and balance — not to a fixed pip count. A wider `BasketSlMoney` gives the hedge more room to work through a false break, but raises the worst-case loss if price trends hard one way after the hedge locks. Start with the defaults on a demo account and adjust to your risk tolerance.

Conservative starting point (EUR/USD, M15)

Keep `Lots = 0.10` , `BasketTpMoney = 25` , `BasketSlMoney = 300` , `PivotLookback = 24` . Raise `EngulfRatio` toward 1.5–2.0 to demand stronger breakout candles, or raise `BreakFrac` to require a cleaner close beyond the pivot — both reduce trade frequency but improve break quality.

How to Install on MetaTrader 5

- 1 Copy `PivotEngulfingHedge.ex5` to your MT5 `MQL5\Experts\` folder
- 2 Restart MetaTrader 5 and refresh the Navigator panel
- 3 Drag the EA onto a chart matching the recommended symbol and timeframe
- 4 Configure the input parameters and click **OK**
- 5 Enable **Algo Trading** in the MT5 toolbar

Confirm hedging is enabled. Before going live, check that your account is in *hedging* margin mode. On attach, the EA prints a warning to the Experts log if it detects a netting account — review the log after the first tick.

Risk Warning

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