

# Pivot Engulfing Shield

Expert Advisor Documentation

## PLATFORM

MetaTrader 5 (MT5)

## TYPE

Price-Action Breakout & Hedge

## TIMEFRAME

M5 / M15 / M30

## WEBSITE

[www.algotbot.live](http://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 Shield** is a pure price-action Expert Advisor that trades momentum breakouts of floor pivots and protects each trade with an opposite hedge leg — its signature "shield" — whenever a break turns out to be false. It uses *no indicators whatsoever*: no moving averages, RSI, ATR, Bollinger Bands, or VWAP. Every decision is derived directly from raw candle geometry and recomputed floor-pivot levels.

The strategy is deliberately the mirror image of a "fade the level" pivot trader. Instead of selling resistance and buying support — and getting run over on the clean break — Pivot Engulfing Shield **trades the break itself**, but only when a genuine **engulfing** momentum candle commits a close through the pivot. When that break fails and price snaps back across the level (the classic bull/bear trap), the EA raises a protective opposite leg rather than eating a full stop, converting the trapped breakout into a locked hedge that is banked at the basket level once the net float turns green.

**Edge thesis.** Floor pivots are the levels every intraday desk watches, so a close that punches through one on an engulfing candle — where the current body fully swallows the prior body, a visible shift of control — is real order flow committing to a new range, not noise. The dangerous failure mode for any breakout trader is the false break that immediately reverses; this system locks an opposite shield leg the instant price falls back across the broken level, so the trap that normally costs a full stop becomes a hedged pair recovered at the basket target.

Because all distances scale to the pivot range (highest high minus lowest low over the lookback window) and nothing is pip-hard-coded, the EA adapts to whatever symbol and timeframe are selected at backtest or run time. It is best suited to a liquid, breakout-prone FX major (EUR/USD, GBP/USD) or XAU/USD on M5 / M15 / M30, where pivot breaks and false breaks alternate throughout the session.

## How It Works

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### Floor pivots

On every freshly-closed bar the EA recomputes floor pivots on the **primary timeframe only**. Over the `PivotLookback` bars that *precede* the signal candle it takes the highest high `H`, the lowest low `L`, and the preceding bar's close `C`, then derives:

```
PP = (H + L + C) / 3
R1 = 2 × PP - L      (upper pivot)
S1 = 2 × PP - H      (lower pivot)
range = H - L        (sizes every buffer / stop / target)
```

### Engulfing geometry

A trade requires a true body-engulfing candle accompanied by committing momentum:

- **Bullish engulfing** — the prior bar is bearish, the current bar is bullish, and the current body fully swallows the prior body ( `cur.Close ≥ prev.Open` and `cur.Open ≤ prev.Close` ).
- **Bearish engulfing** — the prior bar is bullish, the current bar is bearish, with the body engulfing the prior body in the opposite direction.
- **Body dominance** — the engulfing candle's body must be at least `BodyDomFrac` of its full high-to-low range, ensuring the candle reflects genuine commitment rather than a long-wicked indecision bar.

### Entries (flat only)

Entries are taken only when completely flat, with distinct mirror-image long and short rules:

- **LONG** — a bullish engulfing candle whose prior bar closed at or under an upper pivot (R1 preferred, else PP) and whose own close clears that pivot by a buffer of `BreakoutFrac × range`. Momentum has broken resistance → buy the break.
- **SHORT** — a bearish engulfing candle that breaks a lower pivot (S1 preferred, else PP) to the downside on a committing body. Momentum has broken support → sell the break.

The higher-quality pivot is always tested first (R1 for longs, S1 for shorts); PP is the fallback level. A spread filter ( `MaxSpreadPoints` ) blocks new entries while costs are elevated, and entry logic runs at most once per freshly-closed bar.

## Base stop and take-profit

For the base leg:

- **Take-profit** is a fast, measured-move scalp set at  $\text{RewardFrac} \times \text{range}$  from entry.
- **Stop-loss** is parked structurally *beyond* the shield trigger (an additional  $\text{StopFrac} \times \text{range}$  pad past it), so the hedge always engages before the raw stop is hit.
- All stop/target levels respect the broker's minimum stop distance and are normalised to the symbol's digit precision.

## The shield (hedge) mechanic

While a lone base leg is live, the EA watches intrabar for the broken level to be reclaimed. If price travels  $\text{ShieldFrac} \times \text{range}$  back across the level — the break has *failed* — an opposite market leg is fired immediately:

- A base **long** whose up-break fails raises a **sell shield** to ride the snap-back down.
- A base **short** whose down-break fails raises a **buy shield** to ride the snap-back up.

The shield leg carries its own take-profit (  $\text{RewardFrac} \times \text{range}$  ) and an invalidation stop placed  $\text{ReclaimFrac} \times \text{range}$  on the far side of the level — if price reclaims the broken level again, the snap-back thesis was wrong. With both directions now held, the position is a genuine locked hedge.

## Basket money management

Whenever any exposure is held, net floating profit/loss (profit + swap across all legs) governs the dominant exit:

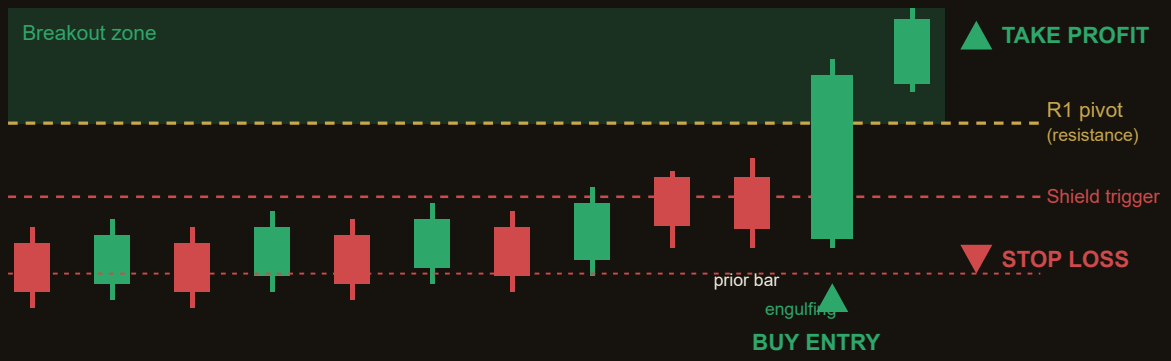
- Net floating P/L  $\geq \text{BasketTpMoney}$  → close everything (banks the scalp or the hedged recovery).
- Net floating P/L  $\leq -\text{BasketS1Money}$  → flatten everything (a hard ceiling against a strong one-way trend after the shield locks).

**Hedging account required.** The shield mechanic holds long and short legs on the same symbol simultaneously. This requires a hedging-enabled MT5 account; on a netting account the opposite leg would close or reduce the base position instead of forming the intended locked pair.

## Strategy in Action

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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.



Bullish engulfing closes above R1 by the breakout buffer → long; shield arms if price falls back to the trigger.

*Illustrative example only. Actual market behaviour varies.*

## Parameters

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Parameter	Default	Description
PivotLookback	20	Closed bars preceding the signal candle whose H/L/C define the floor pivots. Range 5–150, step 1.
BreakoutFrac	0.05	The breakout close must clear the pivot by this fraction of the pivot range. Range 0.00–0.50, step 0.01.
BodyDomFrac	0.50	The engulfing body must be at least this fraction of the candle's full range (momentum filter). Range 0.10–0.90, step 0.05.
ShieldFrac	0.20	Distance back across the broken level (fraction of range) that confirms the break failed → raise the shield. Range 0.05–1.00, step 0.05.
StopFrac	0.30	Extra base-stop pad placed beyond the shield trigger (fraction of range). Range 0.05–2.00, step 0.05.
RewardFrac	0.60	Scalp reward distance for the base (and shield) take-profit (fraction of range). Range 0.20–4.00, step 0.10.
ReclaimFrac	0.40	Shield invalidation pad — if price reclaims the broken level by this (fraction of range), the snap-back is wrong. Range 0.05–1.50, step 0.05.
BasketTpMoney	20.0	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 the spread (points) exceeds this (0 = off). Range 0–500, step 5.
Lots	0.10	Volume per leg, snapped to the symbol's volume step and min/max limits. Range 0.01–1.00, step 0.05.
Magic	5310	Magic number identifying this EA's positions. Range 0–9,999,999, step 1.

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## Recommended Settings

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The EA is symbol- and timeframe-agnostic because every distance scales to the live pivot range. The defaults are a balanced starting point; tune against your instrument and account currency before any live use.

- **Symbols:** liquid, breakout-prone instruments — EUR/USD, GBP/USD, or XAU/USD.

- **Timeframes:** M5, M15, or M30, where pivot breaks and false breaks alternate through the session.
- **Account:** a hedging-enabled MT5 account (required for the shield leg).
- **Pivot lookback:** the default `20` captures a recent intraday range; raise it for wider, slower levels and lower it for faster, tighter ones.
- **Basket sizing:** set `BasketTpMoney` and `BasketSlMoney` relative to your `Lots` and account balance — the basket exit, not the per-leg stop, is the dominant risk control.

#### Example — EUR/USD on M15

With defaults ( `PivotLookback 20` , `BreakoutFrac 0.05` , `BodyDomFrac 0.50` ) and `Lots 0.10` , the EA waits for a bullish engulfing candle to close above R1 by 5% of the pivot range, buys the break, and targets `RewardFrac 0.60` of that range. If price snaps back 20% of the range below R1, a sell shield is added; the locked pair is then banked once the net float reaches `BasketTpMoney` (20.0), or flattened if it falls to `-BasketSlMoney` (300.0).

**Tip.** Because the basket loss ceiling ( `BasketSlMoney` ) defaults to 15× the basket target ( `BasketTpMoney` ), the strategy wins small and often but risks a larger adverse move when a break runs one-way after the shield locks. Size `Lots` conservatively and treat `BasketSlMoney` as your true per-cycle risk.

## How to Install on MetaTrader 5

- 1 Copy `PivotEngulfingShield.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

## Risk Warning

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